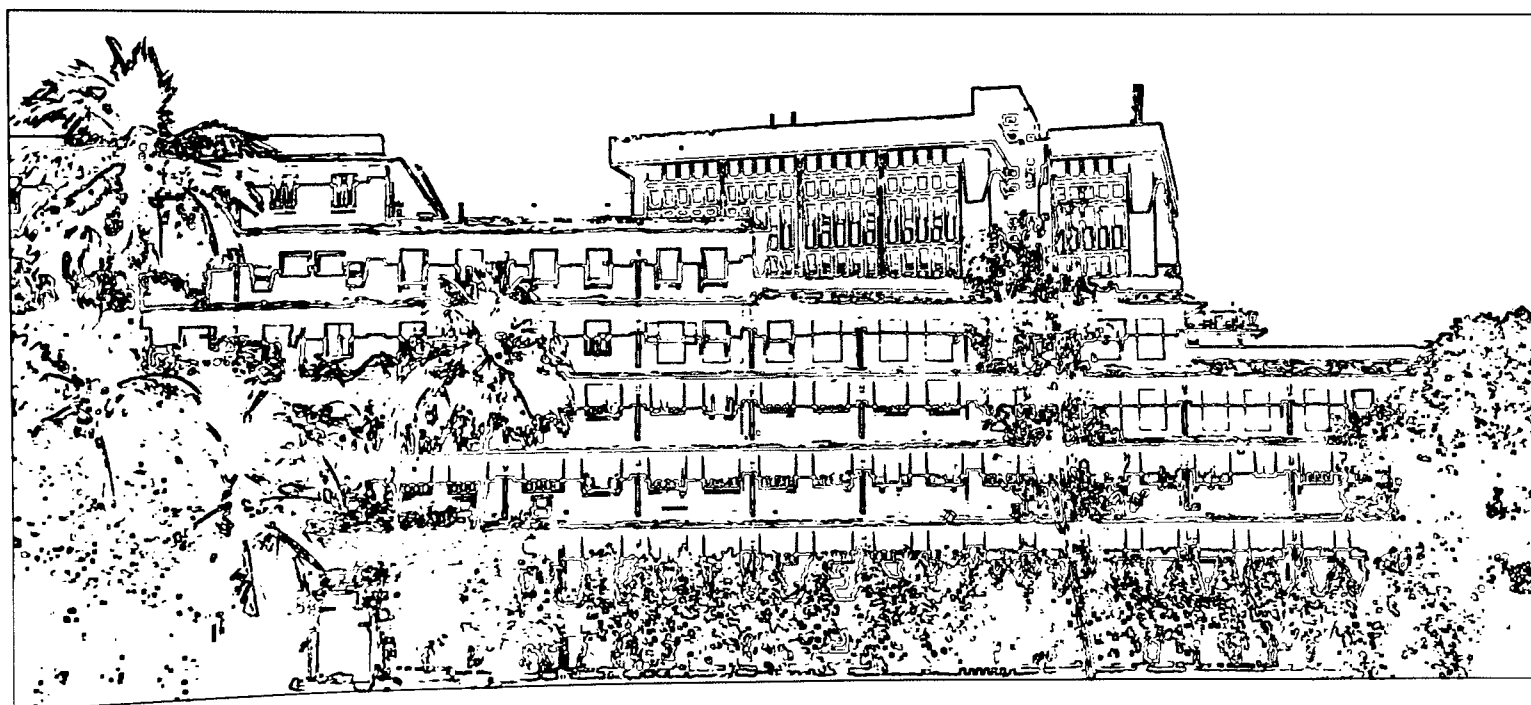


# ANNUAL REPORT

## 2016-2017



INDIAN STATISTICAL INSTITUTE

# **PRESIDENT OF THE INSTITUTE, CHAIRMAN AND OTHER MEMBERS OF THE COUNCIL AS ON MARCH 31, 2017**

President: Dr. Vijay Kelkar, Padma Vibhushan

1. Chairman: Prof. Goverdhan Mehta, FNA, FRS, Dr. Kallam Anji Reddy Chair School of Chemistry, University of Hyderabad, Central University, Gachibowli, Hyderabad - 500 046, Telangana.
2. Director: Prof. Sanghamitra Bandyopadhyay.

## Representatives of the Government of India

3. Shri S.K. Singh, Additional Secretary and Financial Advisor, Govt. of India, Ministry of Statistics and Programme Implementation, New Delhi.
4. Dr. G.C. Manna, DG, CSO, Govt. of India, Ministry of Statistics & P.I., New Delhi.
5. Shri Pramod Kumar Das, Additional Secretary, Govt. of India, Ministry of Finance, Department of Expenditure, New Delhi.
6. Dr. Praveer Asthana, Adviser/Scientist-G, Head (AI and Mega Science Divisions), Govt. of India, Ministry of Science and Technology, New Delhi.
7. Dr. M.D. Patra, Executive Director, Reserve Bank of India, Mumbai.
8. Shri R. Subrahmanyam, Additional Secretary (T), Govt. of India, Ministry of Human Resource Development, New Delhi.

## Representative of the ICSSR

9. Dr. V.K. Malhotra, Member-Secretary, Indian Council of Social Science Research, New Delhi.

## Representatives of the INSA

10. Dr. Manindra Agrawal, Indian Institute of Technology, Kanpur.
11. Prof. B.L.S. Prakasa Rao, Ph. D, FNA, FASc, FNASc., FAPAS, Former Director ISI, Ramanujan Chair Prof., CR Rao Advance Institute of Mathematics, Statistics and Computer Science, Hyderabad.
12. Dr. Baldev Raj, President, PSG Institutions, Tamil Nadu.
13. Prof. Yadati Narahari, Department of Computer Science and Automation, Indian Institute of Science, Bangalore.

## Representative of the NITI Aayog/ Planning Commission

14. Ms. Anna Roy, Adviser (DM&A), Govt. of India, NITI Aayog, New Delhi.

## Representative of the University Grants Commission

15. Prof. J.P. Singh Joorel, Former Dean, Faculty of Mathematical Sciences, University of Jammu, Jammu and Kashmir.

## Scientists co-opted by the Council

16. Prof. Rohini M. Godbole, FNA, Centre for High Energy Physics, Indian Institute of Science, Bengaluru.
17. Prof. Mihir K Chaudhuri, Vice-Chancellor, Tezpur University, Assam.

## Elected representatives of the Institute members not employed in the Institute

18. Prof. Shibdas Bandyopadhyay, Kolkata.
19. Prof. Atis Kr. Dasgupta, Kolkata.
20. Dr. I.K. Ravichandra Rao, Bangalore.

## Elected representatives of the employees of the Institute

21. Dr. Partha Pratim Mohanta, Representative of the Scientific Workers.
22. Shri Gouri Sankar Acharya, Representative of the Non-scientific Workers.

## Officers of the Institute

23. Prof. Arup Bose, Professor-in-Charge, Theoretical Statistics and Mathematics Division.
24. Prof. Ayanendranath Basu, Professor-in-Charge, Applied Statistics Division.
25. Prof. Arunava Sen, Professor-in-Charge, Social Sciences Division.
26. Dr. Tapan Chakraborty, Professor-in-Charge, Physics and Earth Sciences Division.
27. Prof. Pabitra Banik, Professor-in-Charge, Biological Sciences Division.
28. Prof. Susmita Sur-Kolay, Professor-in-Charge, Computer and Communication Sciences Division.
29. Shri Somnath Ray, Head, SQC & OR Division.
30. Prof. Abhay G. Bhatt, Head, Delhi Centre.
31. Prof. T.S.S.R.K. Rao, Head, Bangalore Centre.
32. Prof. S. Ponnusamy, Acting Head, Chennai Centre.
33. Dr. Amita Pal, Dean of Studies.

## Non-Member Secretary

Col. S. Chakraborty, Chief Executive (Administration & Finance).

# INDIAN STATISTICAL INSTITUTE

## Annual Report April 2016 – March 2017



203 Barrackpore Trunk Road  
Kolkata – 700 108  
(<http://www.isical.ac.in>)

**INDIAN STATISTICAL INSTITUTE  
EIGHTY FIFTH ANNUAL REPORT  
April 2016 – March 2017**

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## Director's Report

It is my proud privilege and pleasure to present the Annual Report 2016-17 of the Indian Statistical Institute. This Institute, established by P.C. Mahalanobis in a small laboratory of Presidency College, Calcutta in 1931, has grown into a unique institution of higher learning spread over several cities of the country. As in the past, the Institute continues its glorious tradition of disseminating knowledge in Statistics, Mathematics, Computer Science, Quantitative Economics and related subjects. The year 2016 saw the reconstitution of the Council of the Institute for the term 2016-2018. We are happy to inform you that Dr. Vijay Kelkar has taken over as the President of the Institute succeeding Dr. C. Rangarajan and Professor Goverdhan Mehta has taken over as the Chairman of the Council succeeding Dr. Arun Shourie. We firmly believe that the Institute will continue to flourish under their able guidance.

The Institute celebrated its 51<sup>st</sup> Convocation in January 2017. Professor Leslie Gabriel Valiant, T. Jefferson Coolidge Professor of Computer Science and Applied Mathematics, Harvard University, USA, and A.M. Turing Award Winner delivered the convocation address as the Chief Guest. The year 2017 also marks the beginning of 125<sup>th</sup> birth anniversary year of Professor P.C. Mahalanobis.

The Post Graduate Diploma course in Business Analytics conducted jointly with Indian Institute of Management, Kolkata and Indian Institute of Technology Kharagpur, saw its first outgoing batch this year. This course has been designed keeping in mind the global requirement for professionals in Business Analytics in the coming years. The Post-Graduate Diploma in Statistical Methods and Analytics (PGDSMA) course has been running successfully at the N-E Centre, Tezpur. All the students of the 2016-17 batch passed out with First Division, including six with distinction, and as per the Memorandum of Agreement with Tata Consultancy Services (TCS), all of them will be absorbed by TCS.

A large number of prestigious awards and honours was bestowed upon the Scientists of our Institute for their significant contributions in various fields. Chetan Ghate was appointed to the Monetary Policy Committee, Reserve Bank of India, Nikhil R. Pal was elected Fellow of the Third World Academy of Sciences, Ritabrata Munshi was elected Fellow of the Indian Academy of Sciences, Rajendra Bhatia received the prestigious Hans Schneider Prize, 2016. B. V. Rajarama Bhat and Debasish Goswami have received the J.C. Bose Fellowship, Bhargab B. Bhattacharyya was selected for the Indian National Academy of Engineering (INAE) Chair Professorship, Arunava Sen received the Economic Theory Fellowship of the Society for Advancement of Economic Theory, Probal Roy Choudhury received the Indian Council of Social Science Research National Fellowship, Neena Gupta received the B. M. Birla Science Prize in Mathematics, Supratik Pal received the Humboldt Fellowship of the Alexander Von Humboldt Foundation, Rajat Subhra Hazra received the Indian National Science Academy Young Scientist Award, Joydev Sarkar received the NASI Scopus Young Scientist Award, Sushmita Mitra was selected Fellow of International Association of Pattern Recognition (IAPR), Ashish Ghosh was selected Fellow of West Bengal Academy of Science and Technology. B. Sury was appointed as the National Coordinator for the Mathematics Olympiad of India and was also elected as the Secretary of Ramanujan Mathematical Society. Jogeswaran D. received the Associateship of Indian Academy of Sciences, Pradipta Maji was selected for Visvesvaraya Young Faculty Research Fellowship, Susmita Ruj received the NetAppFaculty Fellowship for NetApp Inc, USA, Rajat De was awarded the Fulbright-Nehru Academic and Professional Excellence Award, and Antar Bandyopadhyay received the IISA young Scientist Award. Sankar K. Pal was selected as Fellow of the International Rough Sets Society. Abhirup Banerjee, Research Scholar, received the Young Scientist Award of the Indian Science Congress. The Reprography and Photography Unit received several international awards, and our Gardeners got horticulture prizes. The Institute is proud of them.

A Cell was setup in order to enhance academy-industry collaborative activities of the Institute. Through this Cell a large number of stakeholders, including research labs, academic organizations and industry are approaching the Institute for joint activities at different levels. Memorandum of Understanding (MOUs) and contracts were signed between the Indian Statistical Institute and various

## Director's Report

other Organizations. Some of these are with Airport Authority of India, National Highway Authority of India, Silicon Valley Community Foundation, Ericsson India, Networks Specified, GE, University of Gothenburg, American Society for Quality India (ASQ India) and Duphine Université. An umbrella MoU was signed with the Tata Consultancy Services. Many more are in the offing.

The Institute undertook a large number of externally funded projects as a part of its academic activity. At present there are about 174 ongoing externally funded projects in the Institute. The major funding agencies are Government of West Bengal, DST, DGCIS, DAE, DBT, RBI, UGC, DRDO, Metro Rail, Kolkata, Ministry of Tourism, Government of India, IBM (USA), GE, Intel Corporation (USA), Samsung (Korea), London School of Economics, International Growth Centre and European Union Commission. The Institute also conducted training programmes and certificate courses for RBI Officers, ISS Probationers, as well as participants from academia and industry.

The Institute collaborated with Bose Institute, IICB, IISER and Tata Memorial Centre to set up the Systems Medicine Biocluster under the overall coordination of NIBMG and funded by DBT. Under this, a High Computing Data Centre will soon be set up in the Institute.

Major construction and renovation activities are lined up at Kolkata, Chennai, Tezpur and Bangalore. In particular, constructions of the main campus is expected to start soon in Tezpur. Construction of the boundary wall has already been completed in Chennai. Construction for the R.C. Bose Centre for Cryptology & Security is going on in full swing in Kolkata. New laboratories and a class room has been constructed in the Giridih branch of the Institute. We also plan to renovate Amrapali, the historic residence of our founder Prasanta Chandra Mahalanobis, and modernize the Museum and Archives.

I am extremely grateful to Dr. Vijay Kelkar, Padma Vibhusan, President of the Institute and Prof. Goverdhan Mehta, Chairman of the Institute for providing valuable advice at various stages for the smooth functioning of the Institute. I am thankful to Dr. T.C.A. Anant, Secretary, Ministry of Statistics and Programme Implementation and all other officials of the Ministry of Statistics and Programme Implementation, Government of India and Members of the Section 8(1) Committee for their active support. I also thank Dr. C. Rangarajan and Dr. Arun Shourie for their guidance. Finally, I thank all the scientific and non-scientific workers, students and well-wishers of the Institute for extending their cooperation for the all-round development of the Institute.

March 31, 2017

Sanghamitra Bandyopadhyay





# INDIAN STATISTICAL INSTITUTE

203 B. T. Road Kolkata 700108.



Founder

**Professor Prasanta Chandra Mahalanobis**

The Indian Statistical Institute, a premier and internationally acclaimed research, teaching and training institute, founded in 1931, is recognized as an institute of national importance by an act of Parliament in 1959.

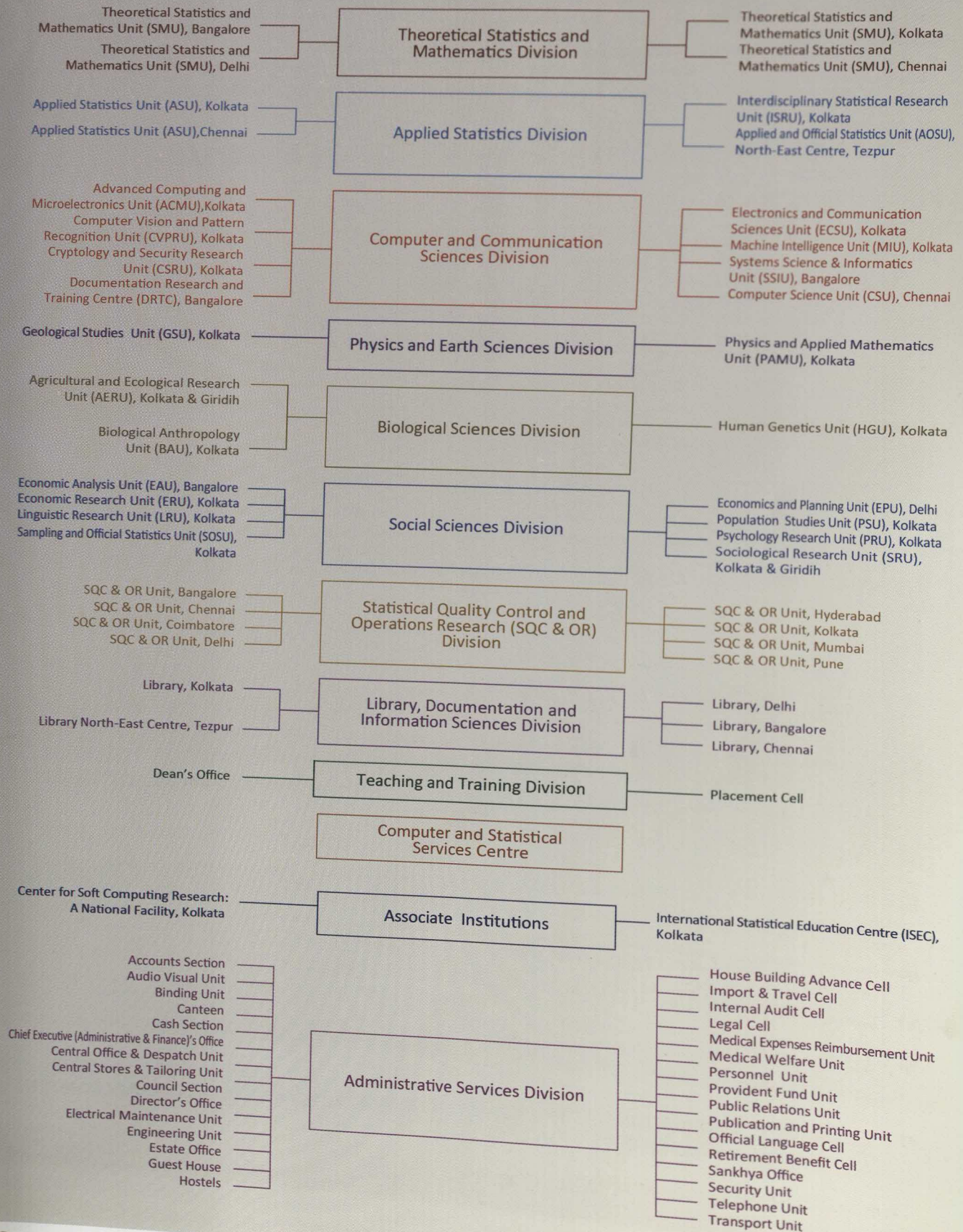
The Institute has distinguished faculty in statistics, mathematics, computer science, economics and other disciplines of natural and social sciences. Many of them are fellows of Indian National Science Academy, Indian Academy of Sciences, Indian National Academy of Engineering, National Academy of Sciences, India, Institute of Electrical & Electronics Engineers (IEEE) and many other distinguished scientific societies in India and abroad, and also recipients of prestigious awards like S.S. Bhatnagar Prize, Homi Bhaba Award etc.

The Institute offers -

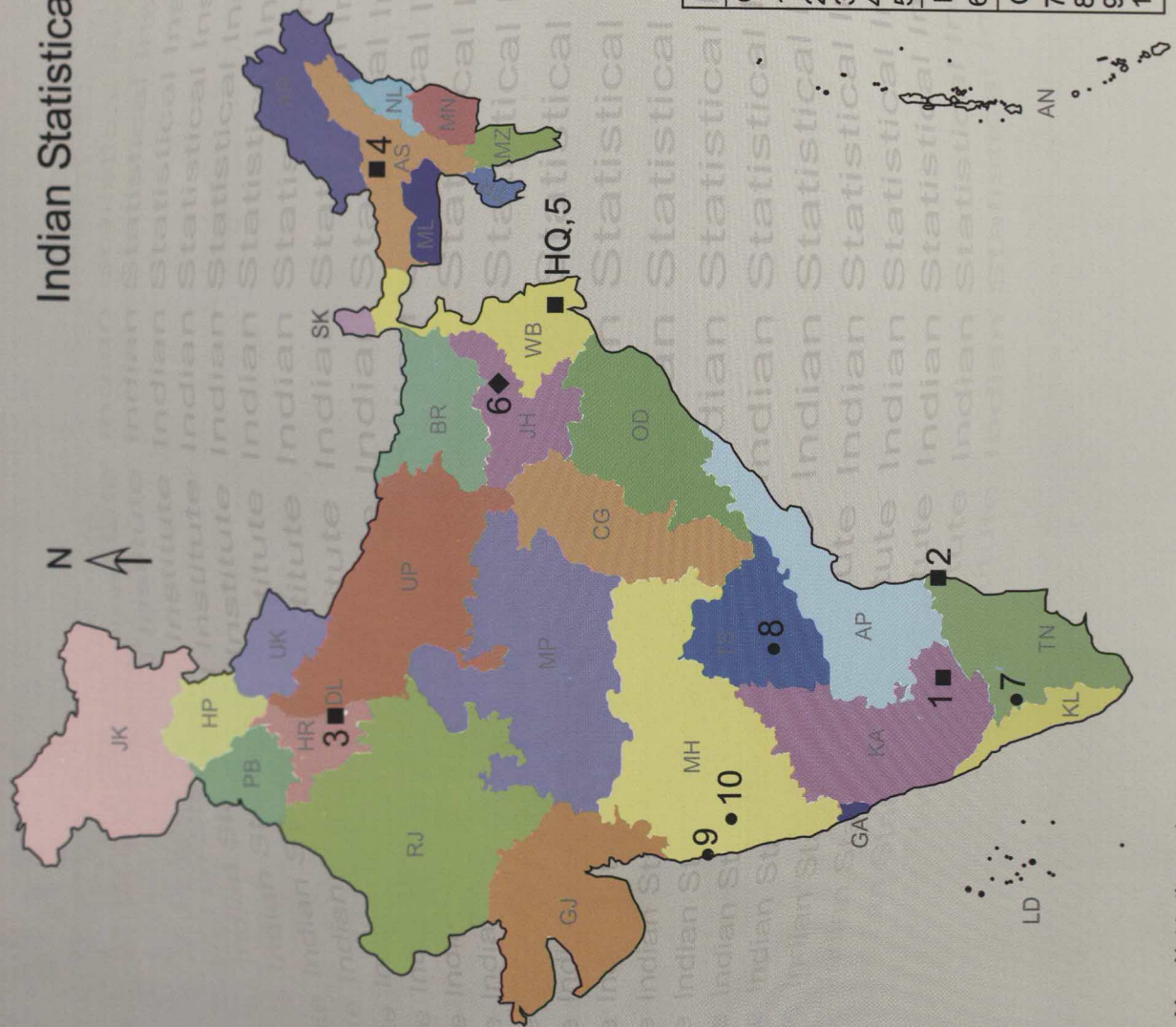
- B.Stat.(Hons.), B.Math.(Hons.), M.Stat., M.Math., M.S. in Quantitative Economics, M.S. in Quality Management Science, M.S. in Library and Information Science, M.Tech. in Computer Science, M.Tech. in Quality, Reliability and Operations Research
- Post Graduate Diploma in Statistical Methods and Analytics
- Post Graduate Diploma in Business Analytics (PGDBA) jointly with IIT Kharagpur and IIM Calcutta
- Post Graduate Diploma in Computer Applications (PGDCA)
- Junior/Senior Research Fellowships in several areas of natural and social sciences
- Statistical Training Diploma for students from developing countries (through International Statistical Education Centre)
- Ph.D. degrees in Statistics, Mathematics, Quantitative Economics, Computer Science and Quality, Reliability & Operations Research

The Institute also confers D.Sc. (Honoris Causa).

## Organization of ISI by Divisions, Constituent Units and Associate Institutions

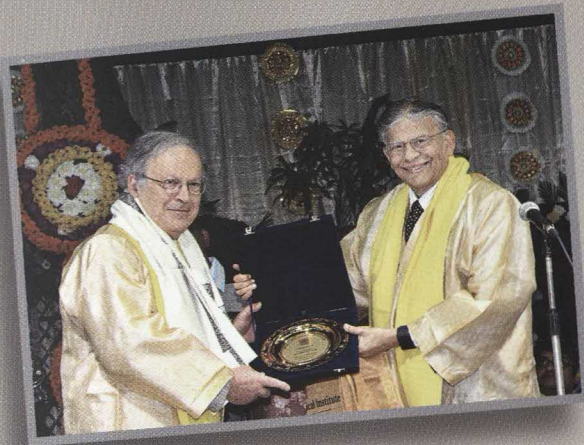


# Indian Statistical Institute: Locations



Head Quarter (HQ)	Kolkata
Centres	■
1. Bangalore	
2. Chennai	
3. Delhi	
4. North-East (Tezpur)	
5. RC Bose	
Branch	◆
6. Giridih	
Outlying SQC & OR Units	●
7. Coimbatore	
8. Hyderabad	
9. Mumbai	
10. Pune	

Map: Not to the scale



Felicitation of Prof. Leslie G. Valiant by Dr. Vijay Kelkar, President, ISI at 51st Convocation on 23 January 2017



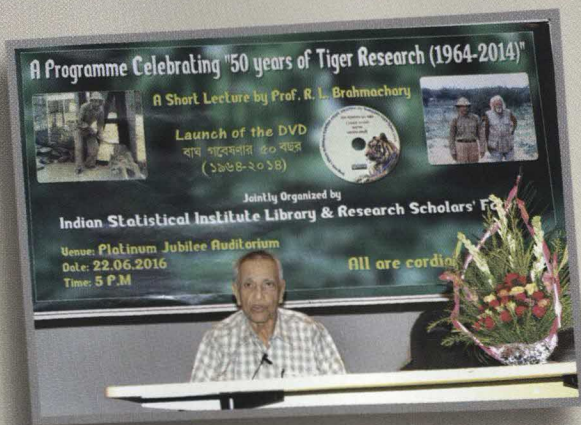
Prof. S. Bandyopadhyay, Director, ISI and Prof. Goverdhan Mehta, Chairman, ISI at Council meeting on 18 February 2017



Prof. S. Bandyopadhyay, Director, ISI delivering lecture at INMO Training Camp, ISI, Kolkata on 03 January 2017



7th Workshop on 'Digital Pictorial Photography and Photography Exhibition' organized by Reprography & Photography Unit on 13 February 2017



Prof. R. L. Brahmachary delivering lecture at 'A Programme Celebrating 50 years of Tiger Research (1964-2014)' organized by Library and ISI Research Scholars on 22 June 2016



National Symposium on 'The Psychology in Diabetes, Issues, Challenges and Care' organized by Psychology Research Unit, ISI, Kolkata on 01 March 2017



● Geology Museum visit of Prof. Leslie G. Valiant, Harvard University, with other dignitaries on 23 January 2017



● Annual Workshop on 'Machine Intelligence and Applications' organized by Machine Intelligence Unit, ISI, Kolkata on 30 March 2017



● Speakers and participants in Symposium on 'Mathematical Programming and Game Theory' at ISI, Delhi Centre during 9-11 January 2017



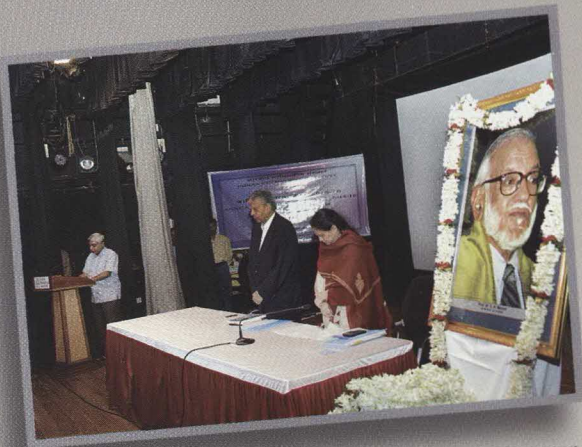
● Inaugural Ceremony of New Academic Building, Giridih Branch, ISI on 01 January 2017



● Prof. Rahul Mukerjee delivering a lecture, organized by ISI Retired Employees' Association on 17 March 2017



● Training cum Workshop on 'Library Automation with Special Application of Koha' organized by Library, ISI Kolkata during 20-24 March 2017



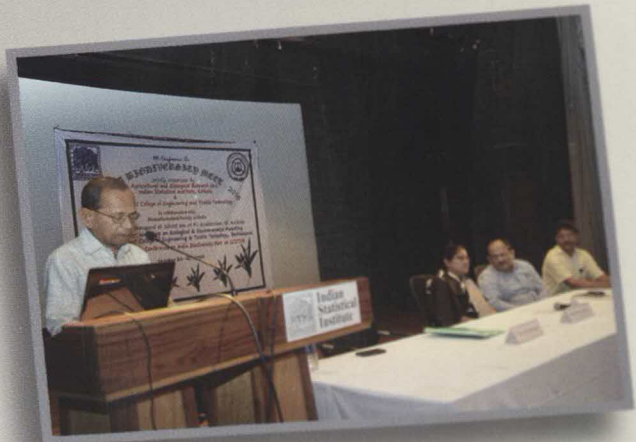
Condolence in memory of Prof. M.G.K. Menon, Former President, ISI Council on 30 November 2016



Lecture in memory of Prof. P. C. Mahalanobis organized by P.C.M. Memorial Museum & Archives on 27 March 2017



Felicitation of Dr. Manilal Bhoumik by Prof. S. Bandyopadhyay, Director, ISI on 12 December 2016



Conference on 'India Biodiversity Meet-2016' organized by AERU on 24 October 2016



Workshop on 'Mathematical and Statistical Foundations for Machine Learning Today' organized by ACMU during 20-22 December 2016



Prof. S. G. Dani and Prof. S. Bandyopadhyay, Director, ISI at 'Sushil K. Banerjee Memorial Lecture' on 28 February 2017



69th ISEC Convocation at ISI, Kolkata on 30 May 2016



Felicitation of Dr. Neena Gupta by Prof. S. Bandyopadhyay, Director, ISI on 22 July 2016



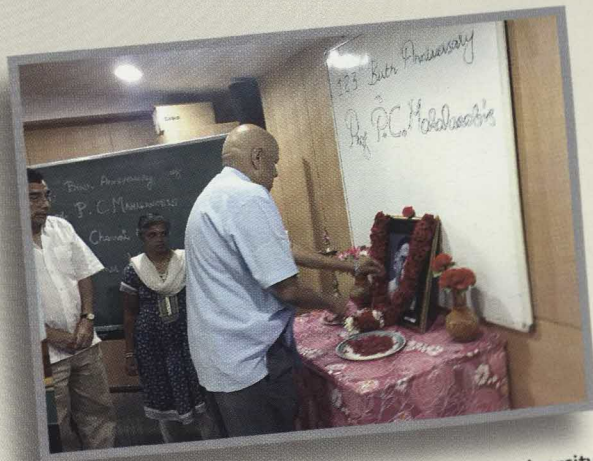
One day Symposium on 'Interdisciplinary Statistical Research' organized by ISRU on 28 June 2016



Felicitation of Prof. Mriganka Sur by Prof. S. Bandyopadhyay, Director, ISI on 19 August 2016



Inauguration of a Programme at Coimbatore, ISI



Prof. T. Krishnan, ISI and Prof. C. Srinivasan, University of Kentucky at '123rd birthday celebration of Prof. P. C. Mahalanobis' at ISI, Chennai on 29 June 2016



Participants of Workshop on 'Open Source Software for Library Automation' organized jointly by ISI, Bangalore and Assam Don Bosco University, Assam during 23-25 January 2017



Celebration of '125th Birth Anniversary of Dr. B. R. Ambedkar' organized by ISI SC/ST/BC Employees' Co-ordination Council on 30 December 2016



'34th Annual Meeting of the Indian Society for Medical Statistics' at ISI, Kolkata on 01 December 2016



Seminar on 'Cancer Awareness' organized by Resurrection in association with Medical Welfare Unit at ISI Kolkata on 18 November 2016



65th Annual Sports at ISI Kolkata on 19 January 2017



Programme on Swachh Bharat Mission at ISI, Kolkata on 25 May 2016



## Upcoming Centres

### ***A Brief Account of Academic Activities at North-East Centre of Tezpur, Assam***

The North-East (N-E) Centre of the Institute was established at Tezpur, Assam on 23<sup>rd</sup> July, 2011. It was inaugurated by Shri Prabab Mukherjee, the then Finance Minister, Govt. of India and the then Chairman, Indian Statistical Institute Council.

The Post-Graduate Diploma in Statistical Methods and Analytics (PGDSMA) course has been running successfully at the N-E Centre. All the students of the 2016-17 batch passed with FIRST DIVISION, and as per the Memorandum of Agreement with Tata Consultancy Services (TCS), all of them will be absorbed by TCS.

The research topics of this Centre include: Study on life expectancy and its various factors including mental health factors; Understanding the problem of estimating the unknown population parameter(s) in Morgenstern family of distributions; Systematic review and Meta-Analysis of Randomized Controlled Trails; Analysis of Atmospheric Particulate; Retrieval of Historic Atmospheric Black Carbon Concentration; Profile Analysis of Polycyclic Aromatic Hydrocarbons (PAHs) in Environmental Matrices; Tracking the Changes of Elevated Regions and Identification of Erosion Prone Areas; Rock Classification and Detection of Man-made contact Region of the Telengana Terrain; Identification of Coal Bearing Strata; Application of Deep Learning in Medical Image Analysis using CT Scan and Ultra Sound Images; Synergy Analysis of Remote Sensing Modalities for Environmental Applications; Regime Dependent Effect of Output Growth on Output Growth Uncertainty and *vice versa*; Asymmetric Effects of Exchange Rate Uncertainty and Demand Uncertainty on Export; Validation of Taylor's Hypothesis; Study on Inflation, Growth and Uncertainty in India.

Four workshops and training programmes were organised by the N-E Centre during this year. The Centre also hosted three such programmes, which were organised by different Units from Headquarters. Nine scientific papers were published in journals, and one in an edited book. Two faculty members visited many institutions abroad and seven institutions within India on scientific/academic assignments.

### ***A Brief Account of Academic Activities at R C Bose Centre for Cryptology and Security, Kolkata***

R C Bose Centre for Cryptology and Security is a new centre of the Indian Statistical Institute at Kolkata. It aims to promote interdisciplinary research in Mathematics, Computer Science and Statistics towards furtherance of teaching, research as well as training and development in Cryptology and Cyber Security. The Centre acts as a hub for all cryptographic requirements, cutting-edge research activities and technology development in relevant fields, in order to create a critical mass of researchers and experts to fulfil the growing demand in the national and international arena. As in previous years, in 2016-17 the Centre has provided direction and advice to various wings of Armed Forces, DRDO, Police Organisations and Security Agencies. The Centre has also signed an MOU with the Andhra Government to look into the various aspects of cryptocurrencies. Many externally funded projects funded by Samsung, NettApp Inc etc. were also carried out this year.

As part of capacity building at the national level, the Centre has provided dedicated research internship program in Cryptology and Security to senior undergraduate and fresh post-graduate students from premier institutions of the country. A two-month intensive training in Cryptology is given during summer every year where the interns are given some basic courses in all aspect of Cryptology

## Upcoming Centres

and Security. Many workshops and training programs have also been conducted for the students of colleges in and around Kolkata.

The R.C. Bose Centre is engaged in cutting-edge research in various aspects of Cryptography. During this period, in the area of Stream Ciphers, it has performed a systematic analysis of Grain-v1 and has obtained a tighter security bound for the stream cipher QUAD. In Crypto hardware, RunStream and a hardware acceleration suite for RC4-like stream ciphers have been developed and this work has been accepted in IEEE Transactions on VLSI Systems. A new family of tweakable enciphering scheme called FAST, which is suitable for in-place disk encryption, and a new family of universal hash functions, which is amenable to very efficient software implementation, have been proposed.

Some of the areas where work was done during this period include Quantum Cryptography, Steganography, Key Management in Wireless Sensor Networks, Security and Fault Tolerance in Smart Grids and IoT, Cloud Security. In Cloud Security, we proposed a new decentralized access control scheme for secure data storage in clouds. The number of papers published in reputed international journals during this period is at least 10.

The Centre continues to collaborate with leading experts from many academic institutions from around the world and had about 11 visitors during this period. The faculty members have also visited many institutions for collaborative work.

The R.C. Bose Centre will continue to act as a national hub for cryptographic requirements, cutting-edge research activities and indigenous capacity building in all relevant fields of study.

## ***A Brief Account of Academic Activities at Chennai Centre***

Chennai Centre of Indian Statistical Institute was declared open by **Shri Pranab Mukherjee** the then Chairman of ISI Council and External Affairs Minister, Govt. of India on 26<sup>th</sup> July 2008. During the year 2011, a Post Graduate programme called M. Stat. was introduced. By 2012, several units like Applied Statistics Unit, Computer Science Unit and Statistics and Mathematics Unit were introduced besides the already functioning SQC & OR Unit. At present there are 13 faculty members belonging to these four units. Chennai Center has about 12 post graduate students, 3 full time research scholars and 5 postdoctoral fellows.

ISI Chennai Centre collaborates with other institutions at home and abroad. Last year 7 researchers (5 - international) visited the Centre. Currently we are operating from Aminjikarai premises and the development of the new campus at Karapakkam is in the initial stages. Retainer/boundary wall has been constructed at the Karapakkam site and the Earth filling process is going on.

The research interest of faculty are Game Theory, Multi Objective Programming, Linear Complementarity Problems and its variants, Reliability, Statistical Finance, Harmonic mappings, Composition Operators, Quasiconformal and Special functions, Several complex variables, Semi definite Complementarity problems, Stochastic games, Bootstrap methods for High-dimensional Time Series, Cognitive models of strategic reasoning, Topological Quantum Computing, methods and materials, Development of quantum field theory for random and interacting systems etc.

The Centre is also engaged with various corporates on assignments related to Quality Management and Operations Research, Development of Cleanliness Index with TN Government, etc.

## A BRIEF HISTORY OF THE INSTITUTE

In the 1920's, Prasanta Chandra Mahalanobis, then a Professor at Presidency College, Calcutta conducted several studies employing statistical methods with results that vindicated his ideas about the efficacy and possibilities of the emerging science of Statistics. In a meeting on 17<sup>th</sup> December 1931 presided by Sir R.N. Mukherjee, the first President of the Institute, the Indian Statistical Institute (ISI) was formally established and Prasanta Chandra Mahalanobis was appointed the Honorary Secretary. The Indian Statistical Institute was registered on 28<sup>th</sup> April, 1932, as a non-government and non-profit distributing learned society under the Societies' Registration Act No. XXI of 1860. The Institute is now registered under the West Bengal Societies Registration Act XXVI of 1961, amended in 1964. It has the following objectives:

- (i) To promote the study and dissemination of knowledge of Statistics, to develop statistical theory and methods, and their use in research and practical applications generally, with special reference to problems of planning for national development and social welfare;
- (ii) To undertake research in various fields of natural and social sciences with a view to the mutual development of Statistics and these sciences;
- (iii) To provide for, and undertake, the collection of information, investigations, projects, and operational research for purposes of planning and the improvement of efficiency of management and production.
- (iv) To undertake any other ancillary activities in fulfillment of the objectives (i), (ii) and (iii).

The Institute started functioning initially from a room of the Presidency College with enduring support from a number of distinguished personalities and devoted scholars in Kolkata. Over the first two decades, which turned out to be a glorious chapter in the annals of Indian science and institution building, the ISI embarked upon a series of pioneering programmes involving the application of Statistics in search of solution of the urgent and live problems of the country. Such programmes included innovative projects on sample surveys of yield and land utilisation of crops, socio-economic after-effects of Bengal famine and problems of flood research. These innovations and methodological research have since become classics in Statistics. At the same time, the training of scientific personnel began to grow. This also encouraged high level research and brought into focus the need for publication of the research results, for which *Sankhyā*, the first international journal of the country in Statistics, came into being in 1933.

Apart from the impact made in the world of Statistics, the Institute held a pivotal role in the task of nation building, when India became independent, through the brilliant choice of the area of surveys, which were socially and nationally relevant. The patronage and invaluable contribution of Sir Ronald A. Fisher played an important role. Led by Professor Mahalanobis and a very able group of younger statisticians including R.C. Bose, S.N. Roy and C.R. Rao, the Institute was poised to take on the larger role. The Institute is proud to have C.R. Rao, who is among the world leaders in statistical science over the last six decades and still active at the age of 93 as the Director of the Center for Multivariate Analysis at Pennsylvania State University, USA, in its list of alumni.

The 1950s saw the Institute establishing (i) a full fledged research and training school in Statistics and Probability, with its application in natural and social sciences, (ii) a planning wing entrusted with the formulation of the Second Five-Year Plan of India, (iii) publication of *Sankhyā*, (iv) the National Sample Survey wing engaging in comprehensive socio-economic data collection for the nation, (v) a string of Statistical Quality Control units for promoting the quality movement at various industrial centres in the country, (vi) a collaboration with the International Statistical Institute to train Government statisticians from Asia and Africa, and (vii) an Electronic Computer Laboratory that was responsible for developing (a) the 1<sup>st</sup> mechanical hand computing machine, (b) the 1<sup>st</sup> Analog computer, (c) the 1<sup>st</sup> Punched Card storing machine and (d) the 1<sup>st</sup> Solid State Computer in India, to name some of the principal activities. In 1954 Pandit Jawaharlal Nehru, the then Prime Minister of India, entrusted

## Brief History

Professor Mahalanobis and ISI with the responsibility of preparing the draft Second Five-Year Plan for the country. The draft submitted by Prasanta Chandra Mahalanobis and the planning models formulated by him and his colleagues have since been regarded as major contributions to economic planning in India. In 1956, the Institute installed the first electronic computer in the country. In 1961, the ISI, in collaboration with Jadavpur University, undertook the design, development and fabrication of a fully transistorized digital computer, called ISI-JU-1, which was commissioned in 1966. The Institute, from its formative period till present times, received as guests eminent scientists, some of whom were Nobel Laureates. Besides Ronald A. Fisher, J.B.S. Haldane and Walter A. Shewhart, the luminaries included Frederic and Irene Curie, Neils Bohr, A.N. Kolmogorov, P.M.S. Blackett, J.D. Bernal, Joan Robinson, Genichi Taguchi and George Akerlof, 2001 Nobel prize winner in economics and a visiting professor of ISI during 1967-68. In recent times, the visit of Amartya K. Sen, Robert Aumann, Lotfi A. Zadeh, Joseph E. Stiglitz, Sir James A. Mirrlees, Eric Maskin, Ei-ichi Negishi and S.R.S. Varadhan, 2007 Abel Prize winner for his contributions to probability theory and an alumnus of the institute, may be specially mentioned.

The formal recognition came in December 1959, when Pandit Jawaharlal Nehru piloted in the Parliament the enactment of the Indian Statistical Institute Act of 1959, which designated ISI as an 'Institution of national importance'. The activities steadily grew, existing interests became more broad-based and a number of science units were created in the interest of live interaction between Statistics and Natural and Social Sciences. Empowered by the Act to award degrees, the Institute started the B. Stat. and M. Stat. courses. An excellent library was founded at Kolkata and the Documentation Research and Training Centre began functioning in Bangalore. Other developments in infrastructure also began.

During 1971-72, two decisions of the Government of India produced serious repercussions on the functioning of the ISI. One was de-linking of the Institute from the Perspective Planning Division of the Planning Commission in 1971, while the other was the separation of National Sample Survey from the ISI and its take-over by the Central Government in 1972. Professor Mahalanobis passed away on 28<sup>th</sup> June, 1972. It was a critical period for the Institute. To overcome the problem, the ISI sought to strike a judicious balance between the individual academic work on truly fundamental problems and the work that called for a greater engagement with the social and economic problems of the country. The members of the Institute, under the Chairmanship of Shri P.N. Haksar, held a Special General Body Meeting on 26<sup>th</sup> July, 1974 and amended the Memorandum of Association and the Regulations of the Institute, encouraging more inter-disciplinary research and enhancing active participation of the scientists of the ISI in decision-making process of the Institute. The organisational amendments were implemented, with the concurrence of Government of India, in August, 1976. The various research units in natural, social and computer sciences were grouped under a number of scientific Divisions.

Over the decades diversity in research thrusts began to grow manifold, with emphasis on Computer Science and application of Statistics in the new areas of research in natural and social sciences. Two centres, one at Delhi and one at Bangalore were created with full-fledged research and teaching programmes. The Delhi Centre, initially housed within the Planning Commission premises, was started in 1974, and shifted to its present campus in 1975. The Bangalore Centre was conceived by Prof. P.C. Mahalanobis during 1960s. With the Statistical Quality Control unit functioning in Bangalore from 1956, and Documentation Research and training Centre from 1962, Professor Mahalanobis thought of starting a centre of ISI around the mid-sixties. However, the activities of the Bangalore Centre started in September 1978 in a rented building under the Directorship of Professor G. Kallianpur. The various units moved to the present campus in May 1985 and in September 1996, the Bangalore Centre was formally declared as a Centre of ISI. The Chennai centre of the Institute came into being on 26<sup>th</sup> July, 2008 and has to its credit several theoretical and applied research work in Statistics and Mathematics, and many of the projects undertaken have been breakthrough applications. A North-East Centre of the Institute has been established at Tezpur, Assam on 23<sup>rd</sup> July, 2011 and it is also expected to focus on such diversity of teaching, training and research. This centre is currently housed in Tezpur University campus. The Post-Graduate Diploma in Statistical Methods and Analytics (PGDSMA) course has been running successfully at the N-E Centre, Tezpur. The Institute has started offering a

one-year Postgraduate Diploma in Computer Applications (PGDCA) since the year 2014-15 at its Giridih Branch. A two-year full time diploma programme, Post Graduate Diploma in Business Analytics (PGDBA) is being jointly offered by ISI, IIT Kharagpur and IIM Calcutta since 2015 with 51 students in the first batch.

The Institute is fully funded by the Ministry of Statistics & Programme Implementation, Govt. of India. The support and encouragement of the Ministry of Statistics & Programme Implementation, Govt. of India are among the major factors which are helping the Institute to sustain its academic growth and excellence. The Ministry provides funds to the Institute under Plan & Non-Plan budget as per the recommendations of a committee set up for the purpose by the Ministry of Statistics & Programme Implementation, Govt. of India under Section 8(1) of the "Indian Statistical Institute Act. 1959, No. 57 of 1959" based on the programme of research, teaching, training and various academic activities. The grants-in-aid provided by the Ministry of Statistics & Programme Implementation, Govt. of India to the Institute includes the funds required for construction of buildings, hostels, guest house, purchase of equipments, hiring manpower etc. The Ministry plays a pivotal role in expansion of the research & training activities of the Institute by way of opening its new Centres in various parts of the country. The North-East Centre at Tezpur, Assam which was inaugurated by Shri Pranab Mukherjee, the then Finance Minister, Govt. of India and the then Chairman, Indian Statistical Institute Council in the presence of Shri Srikant Jena, Hon'ble Union Minister for Ministry of Statistics & Programme Implementation, Govt. of India; Shri Tarun Gogoi, Hon'ble Chief Minister, Govt. of Assam; Dr. T.C.A. Anant, Secretary, Ministry of Statistics & Programme Implementation, Govt. of India and other dignitaries. In July 2012, the Ministry of Statistics & Programme Implementation, Govt. of India approved establishment of R.C. Bose Centre for Cryptology and Security as a separate Centre of the Institute.

The present structure of eight divisions has been arrived at through some further changes. Recently there have been some changes. Systems Science and Informatics Unit (SSIU) has been started as a part of the Computer and Communication Sciences Division (CCSD) at ISI Bangalore centre in August 2009. The Documentation Research and Training Centre (DRTC) has been made a part of CCSD. Cryptology and Security Research Unit (CSRU) also became a part of CCSD since April, 2014. Which is an integral component of R.C. Bose Centre for Cryptology and Security, Kolkata, a national hub for cryptographic requirements. The Indian Statistical Institute Act of 1959 was amended by the Parliament in 1995 to empower the Institute to award Degrees/Diplomas not only in Statistics, but also in Mathematics, Quantitative Economics, Computer Science and such other subjects related to Statistics as may be determined by the Institute from time to time. Several new courses have also been added since: M. Tech. in Computer Science, M. Tech. in Quality, Reliability and Operations Research, M.S. in Quantitative Economics, B. Math. and M. Math.

In conclusion, a list of the distinguished scientists and statesmen who have served the Institute during the 85 years of its existence in the capacities of President, Chairman or Director is presented. A list of recipients of the honorary D. Sc. degree given by the Institute is also provided.

#### Presidents of the Institute

1	Sir Rajendra Nath Mookerjee	1932-35
2	Shri E.C. Benthall	1936-37
3	Shri James Reid-Kay	1938
4	Shri Badridas Goenka	1939-41
5	Dr. Nalini Ranjan Sarkar	1942-43
6	Dr. Chintaman D. Deshmukh	1944-63
7	Shri Y.B. Chavan	1964-66
8	Prof. Satyendra Nath Bose	1967-75
9	Shri Subimal Dutt	1976-89
10	Prof. M.G.K. Menon	1990-2012
11	Dr. C. Rangarajan	2012-16
12	Dr. Vijay Kelkar	2016-till date

**Chairmen of the Institute**

1	Shri B. Rama Rao	1954
2	Shri D.N. Mitra	1955-63
3	Shri K.P.S. Menon	1964-70
4	Shri S.C. Roy	1971
5	Dr. Atma Ram	1972
6	Shri. P.N. Haksar	1973-97
7	Dr. Bimal Jalan	1998-2001
8	Dr. N.R. Madhava Menon	2002-03
9	Shri Pranab Mukherjee	2004-12
10	Shri A.K. Antony	2012-14
11	Dr. Arun Shourie	2014-16
12	Prof. Goverdhan Mehta	2016- till date

**Directors of the Institute**

1	Prof. P.C. Mahalanobis	Dec 1931	-	June 1972
2	Prof. C.R. Rao	July 1972	-	June 1976
3	Prof. G. Kallianpur	July 1976	-	Sept 1978
4	Prof. B.P. Adhikari	Aug 1979	-	Oct 1983
5	Prof. Ashok Maitra	April 1984	-	Jan 1987
6	Prof. J.K. Ghosh	Jan 1987	-	Jan 1992
7	Prof. B.L.S. Prakasa Rao	Jun 1992	-	Feb 1995
8	Prof. S.B. Rao	July 1995	-	July 2000
9	Prof. K.B. Sinha	Aug 2000	-	July 2005
10	Prof. S.K. Pal	Aug 2005	-	July 2010
11	Prof. Bimal K. Roy	Aug 2010	-	July 2015
12	Prof. Sanghamitra Bandyopadhyay	Aug 2015	-	till date

**List of persons awarded the D.Sc. (Honoris Causa) by the Institute**

February 1962	Prof. Satyendra Nath Bose, Prof. Ronald A. Fisher, Pandit Jawaharlal Nehru, Dr. Walter A. Shewhart
April 1962	Prof. A.N. Kolmogorov
May 1965	Dr. Chintaman Dwarkanath Deshmukh
December 1974	Prof. Raj Chandra Bose, Dr. M.V. Keldysh, Prof. Jerzy Neyman
February 1977	Prof. Harald Cramer
February 1978	Shri Morarji Desai, Prof. L.V. Kantorovich
December 1989	Prof. C.R. Rao
January 2001	Prof. Gopinath Kallianpur
February 2004	Prof. S.R. Srinivasa Varadhan
March 2006	Prof. L.A. Zadeh
December 2006	Dr. Manmohan Singh
February 2011	Dr. Subhas Mukherjee (Posthumously)
January 2013	Prof. K.R. Parthasarathy, Prof. Jayanta Kr. Ghosh, Prof. Pranab Bardhan

## Summary of Activities at a Glance

- **MoU with other Organisations (15 Nos.)** :
- (i) American Society for Quality India; (ii) Ericsson India Pvt. Ltd; (iii) Networks Specified; (iv) Silicon Valley Community Foundation; (v) University of Gothenburg; (vi) Tata Consultancy Services Ltd; (vii) Airport Authority of India; (viii) National Highway Authority of India; (ix) Department of Biotechnology; (x) Dauphine Université Paris; (xi) School of Electrical Engineering, Kyungpook National University; (xii) SyMec Project under Dept. of Biotech; (xiii) Dhirubhai Ambani, DA-ICT, Gandhinagar; (xiv) Society for Elect. Transactions & Security and (xv) Wipro Limited.
- **Number of books published** : 22
- **Number of papers published** : 679
- **Number of Conferences, Workshops and Seminars held (Total – 359)** : 27 (Conference)  
64 (Workshop)  
268 (Seminar)
- **Prestigious Awards and Honours**
  - **Neena Gupta (Stat-Math Unit, Kolkata)** : B.M. Birla Science Prize in Mathematics;
  - **Antar Bandyopadhyay (Stat-Math Unit, Delhi)** : IISA Young Researcher Award (2016);
  - **B.V. Rajarama Bhat (Stat-Math Unit, Bangalore)** : J.C. Bose Fellowship;
  - **Nikhil Ranjan Pal (ECSU, Kolkata)** : Fellow of The World Academy of Sciences, 2016;
  - **S. Bandyopadhyay (MIU, Kolkata)** : J.C. Bose Fellowship, Engineering Sciences (2017-22), DST;
  - **Supratik Pal (PAMU, Kolkata)** : Alexander von Humboldt Fellowship, 2016;
  - **Arunava Sen (EPU, Delhi)** : Economic Theory fellow, Society for Advancement of Economic Theory, 2016;
- **Regional Mathematical Olympiad (RMO), 2016**
  - Date** : 16 October, 2016
  - Participants** : 191 (West Bengal),  
1475 (Karnataka)
  - Successful Students** : 32 (West Bengal),  
45 (Karnataka)
- **Indian National Mathematical Olympiad (INMO), 2017**
  - Date** : 15 January, 2017
  - Participants** : 77
- **International Statistical Education Centre (ISEC)**
  - Founded** : 1950
  - Commencement date of 70<sup>th</sup> Term** : 01 August, 2016
  - Number of Trainees** : 28
  - Countries participated** : Afghanistan, Bangladesh, Congo, Côte d'Ivoire, Ethiopia, Fiji, Ghana, Kenya, Mongolia, Niger, Nigeria, South Sudan, Sri Lanka, Tanzania and Zambia.

## 1. TEACHING AND TRAINING

A brief account of teaching and training activities of the Teaching and Training Division during the academic session **2016-2017** is given below.

### Degree and Training Courses

During the academic session **2016-2017**, a total of **21763** candidates applied for admission and were called for written selection tests for various courses offered by the Institute, viz., B. Stat. (Hons.), B. Math. (Hons.), M. Stat., M. Math., Master of Science (M.S.) in Quantitative Economics, Master of Science (M.S.) in Quality Management Science, Master of Science (M.S.) in Library and Information Science, M. Tech. in Computer Science, M. Tech. in Quality, Reliability and Operations Research, Post Graduate Diploma in Statistical Methods and Analytics, Post Graduate Diploma in Computer Applications, Post Graduate Diploma in Business Analytics, **Research Fellowships** in Statistics, Mathematics, Quantitative Economics, Computer Science, Quality, Reliability and Operations Research, Physics and Applied Mathematics, Agriculture & Ecology, Geology, Library and Information Science and Development Studies. Admission tests were conducted at 39 different centres (38 centres were all over the country and one centre in Tanzania). A total of **14382** candidates finally appeared for admission tests and a total of **1375** candidates qualified in the written tests and were called for interviews. Based on the performance in the written tests, interview and the academic records, **451** candidates were offered admission to various courses during the academic session under review.

The annual examinations for all the regular courses during 2015-2016 academic session were held during April-May 2016. The 2016-2017 academic session commenced from **July, 2016**.

The number of candidates admitted to the different degree, Diploma programmes and in Junior Research Fellowship during 2016-2017 and the number of students who passed the annual examinations in 2016, are given in **Table 1**.

Till **31<sup>st</sup> March, 2017**, **116** trainees of Mathematics, Statistics, Engineering and Technology courses from various Universities/Institutions (Academy of Technology; Amity University; Ashutosh College, Kolkata; Banaras Hindu University; Bengal School of Technology; Birla Institute of Technology, Mesra; Calcutta Institute of Engineering and Management; Camellia Institute of Technology; Chennai Mathematical Institute; Cochin University of Science and Technology; Department of Genetics, University of Calcutta; Department of Statistics, University of Madras; Dhirubhai Ambani Institute of Information and Communication Technology, Gujarat; Doon University, Dehradun; Heritage Institute of Technology; IASc-INSA-NASI Summer Research Fellowship Programme; Indian Institute of Engineering, Science and Technology, Shibpur; Indian Institute of Science Education and Research, Bhopal; Indian Institute of Science Education and Research, Thiruvananthapuram; Indian Institute of Science Education and Research, Kolkata; Indian Institute of Technology, Allahabad; Indian Institute of Technology, Bhubaneswar; Indian Institute of Technology, Chittoor; Indian Institute of Technology, Kanpur; Indian Institute of Technology, Kharagpur; Institute of Engineering and Management, Kolkata; Indian Institute of Information Technology, Sri City; International Institute of Information Technology, Hyderabad; Jadavpur University; Jalpaiguri Government Engineering College; MAKAUT, West Bengal; Narula Institute of Technology; National Institute of Technology, Rourkela; Oriental Institute of Science and Technology; Presidency University, Kolkata; Rajabazar Science College; Ramakrishna Mission Vivekananda University; Sir M. Visvesvaraya Institute of Technology, Bangalore; SRM University, Chennai; SRM University; Sikkim Manipal Institute of Technology, Sikkim; Tamil Nadu; St. Xavier's College, Kolkata; Techno India University; University of Calcutta; University of Kalyani; University of Hyderabad; University of Malaya, Malaysia; Vidyasagar University; Visva-Bharati University, Santiniketan) received four weeks/six weeks/two months/three months/four months and six months Project training in different Units of the Institute, viz., ACMU, AERU, ASU, BAU, CVPRU, DEAN'S OFFICE, ECSU, ERU, GSU, HGU, ISRU, MIU, PAMU, SMU and SQC & OR under the guidance of different faculty members of the Institute.



Teaching and Training

### Convocation

The 51<sup>st</sup> Convocation of the Indian Statistical Institute was held on 23<sup>rd</sup> January, 2017, at 10.00 A.M. It started with a Vedic Hymn by the ISI Club, followed by welcome address by Dr. Vijay Kelkar, President, ISI, annual review by Prof. Sanghamitra Bandyopadhyay, Director, ISI and the Convocation Address by Professor Leslie G. Valiant, A.M. Turing Award Winner, Harvard University. Degrees and diplomas were awarded to students by Dr. Kelkar. The Convocation was closed by Dr. Kelkar, after a vote of thanks by Dr. Amita Pal, Dean of Studies, ISI and the National Anthem by ISI Club. The list of recipients of various medals and prizes is given below.

**Prasanta Chandra Mahalanobis Gold Medal** for the most outstanding performance in **M. Stat.** students (2014-2016):

Somabha Mukherjee

ISI Alumni Association **Mrs. M.R. Iyer Memorial Gold Medals** for outstanding performances:

**B. Stat. (Hons.):** Souvik Ray  
**M. S. (Q.E.)** : Abhishek Gaurav

**M. Stat.** : Swarnadip Ghosh  
**M. Tech. (QROR):** Shraddha Ruidas

ISI Alumni Association **Rashi Ray Memorial Medals** for outstanding performance in **M. Tech. (CS)** (2014-2016):

Arka Rai Choudhuri

ISI Alumni Association **P.C. Panesar Gold Medal** for outstanding performance in **M. Math.** (2014-2016):

Mitul Islam

**Mukul Chaudhuri Memorial Prize** for the best female student in **B. Stat. (Hons.)** first year batch (2015-2016):

Disha Ghandwani

**Nikhilesh Bhattacharya Memorial Gold Medal** for the best student in **B. Stat. (Hons.)** (2013-2016):

Souvik Ray

**S.H. Aravind Gold Medal** for outstanding performance in **B. Math. (Hons.)** (2013-2016):

Pritam Dey

**Sunity Kumar Pal Gold Medal** for the best dissertation in **M. Tech. (CS)** (2014-2016):

Arka Rai Choudhuri

Nitish Kumar Panigrahy

**TCS award** for the best dissertation in **M. Tech. (CS)** (2014-2016):

Nishant Kumar

Arnab Kundu

**Dr. N.S. Iyenger Award** for best student of **Econometrics** (2016):

Mouli Modak

In addition to regular teaching duties in various academic programmes of the Institute, the faculty members of the Institute offered research courses in consultation with the research fellow advisory committees of respective divisions for the research fellows of the Institute.

Table – 1

Number of students who passed during 2016 and  
number of existing students/fellows during 2016-2017

Sl. No.	Courses	Number of students who passed the Annual Examination		
		In 2016	During the year 2016-17	
01.	<b>B. Stat. (Hons.)</b> (Offered at Kolkata)	1 <sup>st</sup> year	32	46 <sup>***</sup>
		2 <sup>nd</sup> year	19	35 <sup>***</sup>
		3 <sup>rd</sup> year	23	19
02.	<b>B. Math. (Hons./Pass)</b> (Offered at Bangalore)	1 <sup>st</sup> year	23	34
		2 <sup>nd</sup> year	22	25 <sup>**</sup>
		3 <sup>rd</sup> year	14	23 <sup>*</sup>
03.	<b>M. Math.</b> (Offered at Kolkata & Bangalore- in alternative year)	1 <sup>st</sup> year	16	18 <sup>*</sup>
		2 <sup>nd</sup> year	22	18 = (16+2 <sup>**</sup> )
04.	<b>M. Stat.</b> (Offered at Kolkata, Delhi & Chennai)	1 <sup>st</sup> year	32 <sup>##</sup> = (17+7+8)	40 <sup>##</sup> = (23 <sup>§</sup> +8+9 <sup>§</sup> )
		2 <sup>nd</sup> year	47	34 <sup>§</sup>
05.	<b>M.S. (QMS)</b> (Offered at Bangalore)	1 <sup>st</sup> year	11	11
		2 <sup>nd</sup> year	12	11
06.	<b>M.S.(QE)</b> (Offered at Kolkata & Delhi)	1 <sup>st</sup> year	37 <sup>#</sup> = (15+22)	41 <sup>#</sup> = (13+28)
		2 <sup>nd</sup> year	34 <sup>#</sup> = (11+23)	37 <sup>#</sup> = (15+22)
07.	<b>M. Tech. (CS)</b> (Offered at Kolkata)	1 <sup>st</sup> year	21	21
		2 <sup>nd</sup> year	27	21
08.	<b>M. Tech. (QROR)</b> (Offered at Kolkata)	1 <sup>st</sup> year	16	17
		2 <sup>nd</sup> year	13	17 <sup>*</sup>
09.	<b>M.S. (Library and Information Science)</b> (Offered at Bangalore)	1 <sup>st</sup> year	07	10
		2 <sup>nd</sup> year	06	07
10.	<b>Post-Graduate Diploma in Statistical Methods and Analytics</b> (Offered at North-East Centre, Tezpur)	1 <sup>st</sup> year	06	15
11.	<b>Post-Graduate Diploma in Computer Applications</b> (Offered at Giridih)	1 <sup>st</sup> year	07	06
12.	<b>Post Graduate Diploma in Business Analytics</b> (Offered at Kolkata)	1st Semester	51	52
13.	<b>Junior &amp; Senior Research Fellows in different disciplines</b> (Offered at Kolkata, Delhi, Bangalore, Chennai & Hyderabad)		20	184 <sup>***</sup>
<b>Grand Total</b>			<b>518</b>	<b>742</b>

<sup>\*</sup> One student repeating a year, <sup>\*\*</sup> Two students repeating a year, <sup>\*\*\*</sup> Three students repeating a year

<sup>§</sup> One student in exchange programme,

<sup>#</sup> Total number including Kolkata and Delhi,

<sup>##</sup> Total number including Kolkata, Delhi and Chennai,

<sup>\*\*\*</sup> JRF & SRF at Kolkata

Table 2

Ph. D degree awarded by the Institute in the 51<sup>st</sup> Convocation held on 23.01.2017

Sl. No.	Name of the Fellow	Title of the Thesis	Subject	University / Institute	Name of the Supervisor(s)
1.	Soumitra Samanta M. Tech. (Computer Science) (Indian Statistical Institute)	On Human Action Analysis from Video Data.	Computer Science	ISI	Prof. Bhabatosh Chanda, ECSU, ISI, Kolkata
2.	Srimanta Bhattacharya M. Tech. (Computer Science) (Indian Statistical Institute)	Some Results on Combinatorial Batch Codes and Permutation Binomials over Finite Fields.	Computer Science	ISI	Prof. Bimal Kr. Roy, ASU, ISI, Kolkata
3.	Indranil Ghosh Ray M. C. A. (University of Kalyani)	Cryptographically Significant MDS matrices and low degree equations for S-Boxes.	Computer Science	ISI	Prof. Kishan Chand Gupta, ASU, ISI, Kolkata
4.	Shashank Singh M. Tech. (Computer Science) (Indian Statistical Institute)	Studies on Index Calculus Techniques for the Discrete Log Problem.	Computer Science	ISI	Prof. Palash Sarkar, ASU, ISI, Kolkata
5.	Kripabandhu Ghosh M. C. A. (Jadavpur University)	Information Retrieval in Legal Domain.	Computer Science	ISI	Prof. Swapan Kumar Parui, CVPRU, ISI, Kolkata
6.	Swapna Agarwal M. Sc. (Computer Science) (Visva-Bharati)	On Automatic Recognition and Synthesis of Emotional Facial Expressions.	Computer Science	ISI	Prof. Dipti Prasad Mukherjee, ECSU, ISI, Kolkata
7.	Nilanjan Datta M. Tech. (Computer Science) (Indian Statistical Institute)	Design and Security Analysis on Symmetric-Key Primitives.	Computer Science	ISI	Dr. Mridul Nandi, ASU, ISI, Kolkata
8.	Subhabrata Samajder M. Tech. (Computer Science) (Indian Statistical Institute)	Some Aspects of Statistical Analysis of Linear and Differential Cryptanalysis.	Computer Science	ISI	Prof. Palash Sarkar, ASU, ISI, Kolkata
9.	Tapas Pandit M. Tech. (Computer Science) (Indian Statistical Institute)	Studies on Predicate Signcryption and Related Cryptographic Primitives.	Computer Science	ISI	Prof. Rana Barua, SMU, ISI, Kolkata

10.	Monika Bhattacharjee M. Stat. (Indian Statistical Institute)	Asymptotics of Large Variance-Covariance and Autocovariance Matrices.	Statistics	ISI	Prof. Arup Bose, SMU, ISI, Kolkata
11.	Kiranmoy Chatterjee M. Sc. (Statistics) (University of Kalyani)	Some Contributions to the Analysis of Dual-record System for Estimating Human Population Size.	Statistics	ISI	Dr. Diganta Mukherjee, SOSU, ISI, Kolkata
12.	Minerva Mukhopadhyay M. Sc. (Statistics) (University of Calcutta)	Some Contributions to Bayesian Variable Selection in Linear Models Based on g-prior.	Statistics	ISI	Prof. Tapas Samanta, ASU, ISI, Kolkata
13.	Prajamitra Bhuyan M. Stat. (Indian Statistical Institute)	Dynamic Stress-Strength Modeling and Analysis.	Statistics	ISI	Prof. Anup Dewanji, ASU, ISI, Kolkata
14.	Bipul Saurabh M. Stat. (Indian Statistical Institute)	On quantum homogeneous spaces and local index formula in noncommutative geometry.	Mathematics	ISI	Prof. Arup Pal, SMU, ISI, Delhi
15.	Kumarjit Saha M. Stat. (Indian Statistical Institute)	Random directed trees and their scaling limits.	Mathematics	ISI	Prof. Anish Sarkar, SMU, ISI, Delhi
16.	Nirupama Mallick M. Sc. (Mathematics) (Utkal University)	Nilpotent completely positive maps and Regular representations of completely bounded maps.	Mathematics	ISI	Prof. B V Rajarama Bhat, SMU, ISI, Bangalore
17.	Shubhabrata Das M. Sc. (Mathematics) (Ramakrishna Mission Vidyamandira)	Controlled Floyd Separation and a Non-Relatively Hyperbolic Group.	Mathematics	ISI	Prof. Mahan Mj., School of Mathematical Sciences, TIFR, Mumbai

Teaching and Training

18.	Subrato Banerjee M. A. (Economics) (Jawaharlal Nehru University, Delhi)	Essays on Economic Behaviour and Regulation.	Quantitative Economics	ISI	Prof. Bharat Ramaswami, EPU, ISI, Delhi
19.	Debojyoti Mazumder M. Sc. (Economics) (University of Calcutta)	Three Essays on Search and Matching: Status Conscious Job Choice, Trade and Optimal Friction.	Quantitative Economics	ISI	Prof. Abhirup Sarkar, ERU, ISI, Kolkata
20.	Ritwik Bhattacharya M. Sc. (Mathematics) (Indian Institute of Technology Kharagpur)	On Some Design Issues in Censored Life Testing Experiments.	Quality, Reliability & Operations Research	ISI	Dr. Biswabrata Pradhan, SQC & OR Unit, ISI, Kolkata and Prof. Anup Dewanji, ASU, ISI, Kolkata

**Table 3**

**Research Fellows who have been awarded Ph. D degree by Academic Bodies other than ISI during 2016 for work done in the ISI**

Sl. No.	Name of the Fellow	Title of the Thesis	University	Name of the Supervisor (s)
1.	Paramita Bhattacharjee	Nutritional Status and Body Composition of Children and Adolescents among Mech and Limbu Communities of Darjeeling and Jalpaiguri Districts in West Bengal- Comperative Study.	Vidyasagar University	Prof. Barun Mukhopadhyay, BAU, ISI, Kolkata
2.	Roshni Roy	Involvement Of MicroRNA And MicroRNA Processing Genes In Conferring Risk To Tobacco Related Oral Precancer And Cancer.	University of Calcutta	Prof. Bidyut Roy, HGU, ISI, Kolkata
3.	Samit Biswas	On some aspects of land map image analysis.	Indian Institute of Engineering Science and Technology, Shibpur	Prof. Bhabatosh Chanda, ECSU, ISI, Kolkata
4.	Hemmaphan Suwanwiwat	Short Answer Assessment System with Student Identification using an Automatic Off- line Handwriting Recognition System and	Griffith University, Australia	Prof. Umapada Pal, CVPRU, ISI, Kolkata

## Teaching and Training

		Novel Features.	Combined	
5.	Tanmoy Mondal	From Times Series Signal Matching to Word Spotting in Multilingual Historical Document Images.		PolyTech Tours Université François Rabelais, Tours, France
6.	Biswajit Halder	Studies on Automatic Authentication of Printed Security Documents		The University of Burdwan
				Prof. Umapada Pal, CVPRU, ISI, Kolkata
				Prof. Utpal Garain, CVPRU, ISI, Kolkata

**Number of candidates who were awarded degrees in the  
51<sup>st</sup> Convocation of the Institute held on 23<sup>rd</sup> January, 2017**

Degree /Diploma	Number of candidates
Doctor of Philosophy (Ph.D.)	26*
Master of Technology (M. Tech.) in Computer Science	27
Master of Technology (M. Tech.) in Quality, Reliability and Operations Research	13
Master of Statistics (M. Stat.)	47
Master of Mathematics (M. Math.)	22
Master of Science (M.S.) in Quantitative Economics	34
Master of Science (M.S.) in Library and Information Science	06
Master of Science (M.S.) in Quality Management Science	12
Bachelor of Statistics (Honours) [B.Stat. (Hons.)]	23
Bachelor of Mathematics (Honours) [B.Math. (Hons.)]	13
Bachelor of Mathematics (Honours) [B.Math.]	01
Post-Graduate Diploma in Statistical Methods and Analytics	06
Post-Graduate Diploma in Computer Applications	07
<b>Total</b>	<b>237</b>

\* (Including those who worked in the Institute but were awarded Ph.D. degree by other academic bodies.)

### **International Statistical Education Centre (ISEC)**

The International Statistical Education Centre (ISEC) was founded in 1950 at the initiative of Professor P.C. Mahalanobis. The Centre opened at Kolkata through an agreement between the International Statistical Institute and the Indian Statistical Institute (ISI). At present, the Centre is run by the Indian Statistical Institute under the auspices of the Government of India. The Centre functions under a joint Board of Directors. In its history of more than 60 years, Prof. P.C. Mahalanobis was the Chairman of the Board of Directors since the inception of the Centre in 1950 until his death in 1972. Since then, Professor C.R. Rao had been the Chairman of the Board till 2015. Currently, Prof. S.P. Mukherjee is the Chairman of the Board.

The Centre aims to provide training in theoretical and applied statistics at various levels to selected participants from countries of the Middle East, the South and the South-East Asia, the Far-East and the commonwealth countries of Africa. The primary training programme is a 10-month regular course in Statistics leading to a Statistical Training Diploma. In addition, special courses on different topics of varying duration are also organized.

The commencement date of the 70<sup>th</sup> Term of the ISEC Regular Course (2016-2017) was August 1, 2016. There were 28 trainees from fifteen countries, namely, (1) Afghanistan, (2) Bangladesh, (3) Congo, (4) Côte d'Ivoire, (5) Ethiopia, (6) Fiji, (7) Ghana, (8) Kenya, (9) Mongolia, (10) Niger, (11) Nigeria, (12) South Sudan, (13) Sri Lanka, (14) Tanzania and (15) Zambia. Twenty-three trainees were supported by fellowships under the ITEC/SCAAP of the Government of India while five were supported by the Central Bank of Sri Lanka. They will be awarded the Statistical Training Diploma in the Convocation, scheduled on May 30, 2017.

The ISEC in its totality has shifted now to the first floor in a new building, named Deshmukh Bhavan, at 202, B.T. Road, Kolkata 700108, and has four class rooms, one computer laboratory, one library and a number of rooms for the Member-Secretary, the Programme Coordinator and the faculty members with all modern amenities including scope for interactive presentations. Professor Sanghamitra Bandyopadhyay, Director, ISI has taken special interest in enhancing the international image of the ISEC courses and its infrastructure. The trainees have been provided with computer facilities and internet connections in the Computer Laboratory and in the ISEC hostel. They also have access to the books at the ISI library. Teachers at the headquarter of the Indian Statistical Institute and officers of the Government of India at the National Statistical Systems Training Academy, the National Sample Survey Office and various ministries have been participating in teaching the Regular Course throughout the years (including the current year). Till now, about 1628 trainees from 84 countries have received the Statistical Training Diploma.

## 2. RESEARCH AND OTHER SCIENTIFIC ACTIVITIES

The major thrust of the Institute is on research in various disciplines comprising Theoretical and Applied Statistics, Mathematics, Computer Sciences, Biological Sciences, Economics and other Social Sciences, Physics and Earth Sciences, Statistical Quality Control and Operations Research, and Library and Information Sciences. Scientists of the Institute carry out independent research in their own basic discipline and also undertake interdisciplinary research in collaboration with other units within the Institute and also with outside organizations. The Institute also takes up various internally and externally funded projects in diverse fields on challenging live problems of national and international importance. As a part of research activities, scientists of the Institute are involved in consultancy work as well. This section gives a brief account of the principal areas of work, over the past year, of the scientific divisions of the Institute, namely, the Divisions of:

- Theoretical Statistics and Mathematics
- Applied Statistics
- Computer and Communication Sciences
- Physics and Earth Sciences
- Biological Sciences
- Social Sciences
- Statistical Quality Control and Operations Research
- Library, Documentation and Information Sciences

In addition, there is a report each from the 'Center for Soft Computing Research: A National Facility' and the 'Computer and Statistical Services Centre'.

### Theoretical Statistics and Mathematics Division

The Theoretical and Mathematics Division, which presently has units in Kolkata, Delhi, Bangalore and Chennai, continued its activities in the areas of Research, Teaching, conducting Workshops, International conferences and project related activities.

Some of the main thrust areas of research of the Division during this period are: Balanced Polya Urn Schemes, Absolute continuous Marshall Olkin bivariate distributions, Probability theory, Free probability and large dimensional random matrices, Hypergraph connectivity of random complexes, Cryptography, Geometry, non-commutative geometry, Topology, Algebra, Number theory, Functional Analysis, Linear Algebra, Harmonic Analysis, Operator theory, Operator algebras, Complex analysis.

Colleagues also continued collaborative research under internal and externally funded projects with funding from prestigious organizations like JC Bose Fellowship, Marie Curie Research Staff Exchange, Fulbright Academic Excellence Fellowship, Microsoft Research, Hitachi.

Publications by the Division include over 150 papers in reputed international and national journals and colleagues also contributed editorial activities of monographs and journals.

Recognition bestowed on our colleagues during this period included JC Bose Fellowship, Young researcher awards, Associateship of the Academy of Science, Hans Schneider Prize, B M Birla Science prize.

The Division conducted several national and international conferences. The flagship lectures PC Mahalanobis Memorial Lecture and the Ashok Maitra Memorial lectures were delivered by Professor



Research Activities

IM Johnstone and Professor Mahtew Penrose. Professor S.R.S. Varadhan gave a mini course on Random Graphs.

***Stat-Math Unit, Kolkata***

**Cryptography: a complete characterization of Format Preserving Sets with respect to matrices over finite fields.**

Barua, R., Gupta, K.C. (ASU), Pandey, S. (CSRU) and Ghosh Roy, I.

**Statistical significance tests and graphical tests for different hypotheses in one and two sample problems**

Bose, A.

**Non-Commutative Geometry, Levi civita connection in noncommutative geometry**

Bhowmick, J.

**An Uncertainty Principle of Paley and Wiener on Euclidean Motion group**

Bhowmik, M. and Sen, S.

**Tests for High-Dimensional Data Based on Means, Spatial Signs and Saptial Ranks**

Chaudhuri, P. and Chakraborty, A.

**Commutative Algebra:** a complete description of "nice derivations" of the polynomial ring in three variables over a principal ideal domain containing the field of rational numbers; new algebraic characterisations of the affine 2-space and the affine 3-space.

Dasgupta, N. and Gupta, N.

**Non-parametric statistics; Rates of convergence in Central Limit Theorem (CLT); Law of iterated logarithms (LIL) and Characterization theorems; Growth Curve Model and plant sensitivity; Applications of Statistics to Industrial quality control, Physics, Sociology, Agriculture, Education and other natural sciences**

Dasgupta, R.

**Quantum symmetry of classical spaces**

Goswami, D. and Bhattacharyya, S.

**Thick points for Gaussian free fields with different cut-offs**

Hazra, R.S.

**Point Process convergence of branching random walk with heavy tailed step size**

Hazra, R.S., Bhattacharyya, A. and Roy, P.

**Extremes of some Gaussian random interfaces**

Hazra, R.S. and Chiarini, A.

**Geometry and Topology:** Introduced the notion of Nambu structure on Lie algebroid. Investigated higher order generalizations of well known results for Lie algebroids and bialgebroids

Mukherjee, G.

**Number Theory: Established subconvex bounds for certain degree six L-functions, studied the subconvexity problem for degree one L-functions**

Munshi, R., Holowinsky, R. and Qi, Z.

**Proposed a new measure of inequality/poverty based on  $L^p$  metric**

Munshi, R. and Munshi, S. (ERU)

**Analysis: A theorem of A. Atzmon regarding uniform approximation**

Ray, S. K. and Sengupta, J.

***Stat-Math Unit, Delhi***

**Oscillation of eigenvalues of structured matrices; Bures-Wasserstein distance on positive definite matrices**

Sharma, R. and Jain, T.

**Balanced Pólya Urn Schemes with Colors indexed by a Polish Space**

Bandyopadhyay, A. and Thacker, D.

**Negatively Reinforced Urn Schemes**

Bandyopadhyay, A. and Kaur, G.

**Estimation of parameters of absolute continuous Marshall Olkin bivariate distribution using EM algorithm**

Dewan, I. and Nandi, S.

**Irreducibility of a general family of classical orthogonal polynomials, particularly Hermite-Laguerre polynomials and Generalized Laguerre polynomials and their associated Galois groups**

Nair, S., Shorey, T. N., Jindal, A., Sarma, R. and Laishram, S.

**Exponential diophantine equations involving sums of products of consecutive integers**

Hajdu, L., Tengely, S. and Laishram, S.

**Perfect cubes in product of term of arithmetic progression extending earlier results**

Das, P., Saradha, N. and Laishram, S.

**Problem of existence of infinitely many positive integers whose sum of digits in different bases are close enough**

Deshouillers, J.M., Habsieger, I., Landreau, B. and Laishram, S.

**Chirp signal model when a linear trend is present**

Nandi, S.

**Difficulties observed in estimation of parameters of chirp signal model**

Nandi, S. and Kundu, D.

**Quantum groups and noncommutative geometry**

A. K. Pal

**Recovering the underlying image from motion-blurred photographs**

Sarkar, D. and Nandy, K.

Research Activities

**Random graphs**

Roy, R., Mazumdar, R. and Mukhopadhyay, A.

**Drainage networks and Brownian web**

Roy, R., Saha, K. and Sarkar, A.

**Kneser-Tits (equivalently Tits-Weiss) conjecture, "R-triviality of some exceptional groups"**

Thakur, M.

**Classification result for Albert division algebras, up to isotopy**

Thakur, M. and Hooda, N.

***Stat-Math Unit, Bangalore***

**Push-forward at the level of Chow groups the relation of monodromy and algebraic cycles**

Banerjee, K. (Visiting Scientist –ISF UGC)

**Symmetric homomorphisms and Representations for completely bounded maps.**

Rajarama Bhat, B.V., Mallick, N. and Sumesh, K.

**Bures distance and representation metric**

Rajarama Bhat, B.V., and Mukherjee, M.

- Williamson form & quasifree states
- Extendibility for Gaussian states

Rajarama Bhat, B.V.

**Study of smooth homotopy complex projective spaces**

Kasilingam, R. (Inspire Faculty)

**Stability for parabolic bundles and construction of the corresponding module space**

Majumder, S. (Visiting Scientist –ISF UGC)

**Distal actions, Group actions, Co finite groups.**

Raja, C.R.E.

**Geometry of Banach spaces and application to approximation theory and convex optimization**

Rao, T.S.S.R.K.

**Martingale Chaoses, Weiner (Brownian motion) and Ito (Levy processes)**

Rajeev, B.

**Operator theory**

- Rank of a non-trivial co-doubly commuting submodule
- Characterizations, in the theme of Brown and Halmos, of analytic Toeplitz operators over unit polydisc
- A characterization of commuting pair of contractions, for which the product of them is a pure contraction
- Results on covariant representations of subproduct systems A series of results concerning reproducing kernel Hilbert spaces, related to the factorization of their kernels

Sarkar, J.

**Factorization of Kernels and Reproducing Kernel Hilbert Space**

Kumari, R., Timotin, D. and Sarkar, J.

**Factorizations of Contractions**

Das, B.K. and Sarkar, J.

**Representations for a Commuting Pair of Pure Contractions similar to that of Berger-Coburn-Lebow type representations for a Commuting Pair of Pure Isometries**

Sarkar, S. (SRF)

**Random Spanning acycles**

Skraba, P., Thoppe, G. and Dhandapani, Y.

**Hypergraph connectivity of random complexes**

Iyer, S.K. and Dhandapani, Y.

***Stat-Math Unit, Chennai***

**On the generalized Zalcman functional  $\lambda a_n^2 - a_{2n-1}$  in the close-to-convex family**

Ponnusamy, S. and Li, L.

**Turan type inequalities for Struve functions**

Ponnusamy, S., Singh, S. and Baricz, A.

**Characterization of univalent harmonic mappings with integer or half-integer coefficients**

Ponnusamy, S. and Qiao, J.

**John disks and K-quasiconformal harmonic mappings**

Ponnusamy, S. and Chen, Sh.

**On the Bohr inequality**

Ponnusamy, S., Abu Muhanna, Y. and Ali, R.M.

**Bounds for the product of modified Bessel functions**

Ponnusamy, S., Baricz, A., Maširević, D.J. and Singh, S.

**Modified Dini functions: monotonicity patterns and functional inequalities**

Ponnusamy, S., Baricz, A. and Singh, S.

**Radii of covering disks for locally univalent harmonic mappings**

Ponnusamy, S., Yu Gra, S. and Starkov, V.V.

**Injectivity of sections of convex harmonic mappings and convolution theorems**

Li, L. and Ponnusamy, S.

**Generalized Zalcman conjecture for convex functions of order alpha**

Li, L., Ponnusamy, S. and Qiao, J.

**Geometric studies on the class  $u(\lambda)$**

Obradović, M., Ponnusamy, S. and Wirths, K.J.

**Circular symmetrization, subordination and arclength problems on convex functions**

Okada, M., Ponnusamy, S., Vasudevarao, A. and Yanagihara, H.

### **Applied Statistics Division**

The Applied Statistics Division came into being in September 1996 in place of the Applied Statistics, Survey and Computing Division. The Computer Science Unit was renamed as the Applied Statistics Unit and the Biometry Unit was transferred to the Biological Sciences Division. Till 2005-2006, the Applied Statistics Division consisted solely of the Applied Statistics Unit. In 2006, a new unit, namely, the Bayesian and Interdisciplinary Research Unit was created within this Division. Later in 2012, two more units named Applied and Official Statistics Unit, North East centre, Tezpur and Applied Statistics Unit, Chennai became parts of this Division. In October 2014 Bayesian and Interdisciplinary Research Unit of this Division was renamed as Interdisciplinary Statistical Research Unit.

The main activities of the Division include teaching, training, research and Ph.D. guidance, projects and consultancy, academic administration, editorial work, etc., along with many others miscellaneous duties. All the members of the Division take active part in teaching in the degree and diploma courses of the institute. They also take part in ISEC and other short-term courses. The members of the Division regularly conduct North East workshops, Winter/ Summer schools and Training programmes on topics of general interest for users of Statistics including researchers/ teachers, ISS officers and probationers, summer interns, high school students, officials from government and other agencies, etc. The Statistical Trainee programme for fresh MSc (Statistics) students is a unique training programme in which the trainees get hands-on experience with application-oriented research and projects and eventually assist the faculty members.

The research activities of the scientists of the Division have a wide focus. The topics of interest include Sample Surveys, Design of Experiments/ Optimal Designs, Statistical Inference/ Robust Inference, Bayesian Methods/ Decision Theory, Large Sample Theory/ Asymptotic Theory, Multivariate Analysis, Directional Data Analysis, Time Series Analysis, Reliability/Survival Analysis/ Actuarial Statistics, Epidemiology/ Clinical Trials, Environmental Statistics, Demography/ Population Studies, Image Processing/ Pattern and Speech Recognition/Neural Networks, Classification and Clustering, Circular and Spherical regression, Financial Statistics, Stochastic Modelling/ Applied Stochastic Processes, Statistical Computing/ Big Data Analysis, Cellular Automata/ Mathematical Genetics, Cryptology and Security, and several others.

#### **Applied Statistics Unit, Kolkata**

- **Study on Optimal Response-adaptive Designs under Different Types of Constraints**
- **Modeling, Analysis and Coherent Forecasting for Categorical, Count Data and Zero-inflated Count Data**
- **Regression for Circular-circular Data and Robustness Issues for Circular Data**
- **Study on the Clinic Visit Rates Due to Respiratory Failure Caused by Different Pollutants**
- **Group Sequential Methods for Comparing Odds Ratio under Inverse Sampling**

Biswas, A.

- **Classification of Genes/Proteins**
- **Expansion of the Notion of Carry Value Transformation (CVT) and Exclusive-OR Transformation (XORT) for Performing Arithmetic Operations**
- **Analysis of Boolean Functions**

Pal Choudhury, P.

**Sharp Upper and Lower Bounds for the reliability of a Decreasing Mean Residual Life (DMRL) Distribution with Known Mean**

Das, S. and Sengupta, D.

- **Estimation of the Reliability of a Software Based on A NHPP Model for Error Occurrence, Adapted to Periodic Debugging Data**
- **Investigation into Defining a Broad Class of Failure Time Models Based on the Stress-strength Mechanism and a Study on Optimal Censoring Scheme in the Context of Random and Progressive Hybrid Censoring**
- **Completion and Extension of Some Work on Nonparametric Estimation of Competing Risks with Current Status Data to Include Dependent Inspection Time**
- **Development of an algorithmic approach to arrive at a near-optimal allocation of units with fixed covariate values into two or more treatment groups**

Dewanji, A.

**Modelling and Analysis of the Size and Shape of Typical Contiguous Areas under Rainfall Using Satellite Images Depicting Average Rate of Rainfall over different pixels representing a grid over the Earth's Surface**

Jana, K.K. and Sengupta, D.

**Study on Inference Issues for Imperfectly Recalled Time to Event Data in Retrospective Studies**

Mirzaei, S. and Sengupta, D.

### ***Interdisciplinary Statistical Research Unit, Kolkata***

**Variance Estimation in Randomized Response Surface**

Adhikary, A. K.

**Robust Estimation based on the Extended Bregman Divergence**

Basak, S. and Basu, A.

**Weighted Likelihood Estimation for Right Censored Data.**

Biswas, A. Majumder, S., Guha Niyogi, P. and Basu, A.

**A Bayesian Approach of Analyzing Semi-continuous Longitudinal Data with Monotone Missingness**

Biswas, J. and Das, K.

**Classification Using Estimation of Voronoi Area**

Bhandari, S. K. and Kundu, A.

- **A Bayesian Semiparametric Approach to Learn about Gene-Gene Interactions in Case-Control Studies**
- **Effects of Gene-Environment and Gene-Gene Interactions in Case-Control Studies: A Novel Bayesian Semiparametric Approach**
- **A Non-Gaussian, Nonparametric Structure for Gene-Gene and Gene-Environment Interactions in Case-Control Studies Based on Hierarchies of Dirichlet Processes**

Bhattacharya, D. and Bhattacharya, S.

**A Bayesian Two-stage Regression Model for Zero-inflated Longitudinal Outcomes**

Bhuyan, P., Biswas, J. and Das, K.

Research Activities

- **Non-marginal Decisions: A Novel Multiple Testing Procedure**
- **Asymptotic Theory of a Non-Marginal Multiple Testing Procedure and Comparison with Existing Methods**

Chandra, N.K. and Bhattacharya, S.

**A Bayesian Joint Model for Patient Monitoring Using Wireless Sensor Networks**

Chatterjee, A., Biswas, J. and Das, K.

**A Short Note on Almost Sure Convergence of Bayes Factors in the General Set-Up**

Chatterjee, D., Maitra, T. and Bhattacharya, S.

- **Robust Tests of Hypothesis for non-homogeneous data**
- **Model Adequacy Test and the S-Divergence in Robust Parametric Inference**
- **Robust Bayes Inference against Data Contamination**

Ghosh, A. and Basu, A.

**Robust inferences in Beta regression model with applications to health-care studies**

Ghosh, A.

**Robust Wald-type Tests for Different Hypothesis Testing Problems**

Basu, A., Ghosh, A. Martin, N. and Pardo, I.

**A Multivariate Quantile Regression Model for Longitudinal Outcomes**

Kulkarni, H., Biswas, J. and Das, K.

- **On Classical and Bayesian Asymptotics in Stochastic Differential Equations with Random Effects Having Mixture Normal Distributions**
- **On Asymptotics Related to Classical and Bayesian Inference in Stochastic Differential Equations with Time-Varying Covariates**
- **On Classical and Bayesian Asymptotics in State Space Stochastic Differential Equations**

Maitra, T. and Bhattacharya, S.

**Robust Estimation based on the Family of C-divergences.**

Maji, A., Ghosh, A., Basu, A. and Pardo, I.

**Semi-supervised Approach for Updating Classifier**

Mukherjee, D. and Bose, S.

**Classification under Elliptically Symmetric Multivariate Models**

Pal, A., Bhandari, S. and Bose, S.

**A Bayesian Approach for Determination of Convergence, Divergence and Oscillation of Infinite Series with Application to Riemann Hypothesis**

Roy, S. and Bhattacharya, S.

**Robust Discriminant Analysis in the Presence of Outliers**

SahaRay, R. and Ghosh, A.

**Applied Statistics Unit, Chennai**

**Estimating Headrooms of Indian ADRs- An Application of Nonlinear Filtering Technique**

Sen, R. and Bhattacharya, K.

**To Evaluate Biomarkers Performance Development of the Three Class Receiver Operating Characteristic Curve model and Study on the Volume under the ROC Surface**

Sen, R. and Kumarapandiyam, G.

**Bayesian Portfolio Optimization with Low Tail-risk**

Sen, R. and Das, S.

- **Analysis of Recall Based Time to Event Data**
- **Test for Independence between Time to Failure and Cause of Failure with k Causes**

Sudheesh, K. K., Dewan, I. (Stat-Math Unit, Delhi) and Anjana, S.

**Jackknife Empirical Likelihood-based Inference for S-Gini Indices**

Sudheesh, K. K., Sreealkshmi, N. and Sen, R.

**Quantile Based Tests for Exponentiality against DMRL and NBUE Alternatives**

Sudheesh, K. K., Sreealkshmi, N. and Asha, G.

**Applied and Official Statistics Unit, North-East Centre, Tezpur**

**Determinants of Healthy Life Expectancy" Using the 'Integrated Data in Europe on Ageing Research' (IDEAR)**

Chungkham, H.S., Westerlund, H. Head, J. and Hanson, L.M.

**Understanding the Moderating Effect of Physical Inactivity in the Relationship between Psychosocial Work Factors and Depressive Symptoms**

Paraskevi, P., Rod, N. H., Chungkham, H.S. and Hanson, L.M.

**Analysis of Atmospheric Particulate Matter Removal using Satellite Imagery Derived Vegetative Cover**

Maitra, S. and Jyethi, D. S.

**Retrieval of Historic Atmospheric Black Carbon Concentration in the Arctic Region and North America**

Jyethi, D. S., Husainand, L. and Dutkiewicz, V.

**Profile analysis of polycyclic aromatic hydrocarbons (PAHs) in environmental matrices**

Jyethi, D. S. and Khillare, P. S.

- **Systematic Review and Meta-Analysis of Randomized Controlled Trails on Food Fortification/ Supplementation**
- **Meta-Analysis Approach on Iron Fortified Foods and its Effect on Haemoglobin Concentration in Pregnant Women**

Athe, A.

**Tracking the Changes of Elevated Regions and Identification of Erosion Prone Areas around Kaziranga National Park Using Satellite Imagery**

Maitra, S., Neogi, N. and Ghosh, K. (MIU, Kolkata)



## Research Activities

- **Rock Classification and Detection of Manmade Contact Region of the Telengana Terrain**
- **Identification of Coal Bearing Strata in Adilabad District of Telengana**  
Maitra, S., Ghosh, K. (MIU, Kolkata) and Chakraborty, T. (GSU, Kolkata)

**Application of Deep Learning in Medical Image Analysis using CT Scan and Ultra Sound Images**

Ghosh, R. , Maitra, S. and Ghosh, K. (MIU, Kolkata)

**Synergy Analysis of Remote Sensing Modalities for environmental applications**

Neogi, S., Maitra, S. and Ghosh, K. (MIU, Kolkata)

**Regime Dependent Effect of Output Growth on Output Growth Uncertainty: Evidence from OECD Countries**

Chowdhury, K. B. and Sarkar, N. (ERU, Kolkata)

**Regime Dependent Effects of Uncertainty on Inflation and Output Growth: Evidence from the UK and the USA**

Chowdhury, K. B., Kundu, S. and Sarkar, N. (ERU, Kolkata)

- **Asymmetric Effects of Exchange Rate Uncertainty and Demand Uncertainty on Export**
- **Validation of Taylor hypothesis**

Chowdhury, K. B. and Kundu, S.

**Inflation, Growth and Uncertainty in India**

Chowdhury, K. B., Kundu, S. and Sarkar, K.K.

**Understanding the Problem of Estimating the Unknown Population Parameter(s) in Morgenstern Family of Distribution(s) of the Study Variable Using Information on Supplementary Variable**

Mehta, V. and Singh, H.P.

## **Computer and Communication Sciences Division**

Over the years, the Computer and Communication Sciences Division (CCSD) at ISI has grown to eight units spread over four centres:

- **Advanced Computing and Microelectronics Unit, Kolkata**
- **Computer Vision and Pattern Recognition Unit, Kolkata**
- **Electronics and Communication Sciences Unit, Kolkata**
- **Machine Intelligence Unit, Kolkata**
- **Documentation, Research and Training Centre, Bangalore**
- **Systems Science and Informatics Unit, Bangalore**
- **Computer Science Unit, Chennai**
- **Cryptology and Security Research Unit, RC Bose Centre, Kolkata**

CCSD counts amongst its faculty a number of highly decorated scientists, as well as fellows of various prestigious national and international academies and societies. The various activities undertaken by the staff of this division are summarised in the following pages under the heads of teaching, research, externally and internally funded project work, workshops and conferences conducted, editorial work, etc.

### ***Advanced Computing and Microelectronics Unit, Kolkata***

The members of the faculty and research students of the ACM Unit are engaged in teaching, research, training and consultancy in the following two major areas of Computer Science and Engineering: (i) Algorithms and Architectures and (ii) Computer-Aided Design for Microelectronic Circuits and Systems. In particular, our work focuses on:

#### **Algorithms and Architectures:**

- Streaming and Low Memory Algorithms
- Discrete and Computational Geometry
- Discrete and Combinatorial Geometry
- Parametrized Complexity
- High Dimensional Geometry and Computational Topology
- Randomized and Approximation Algorithms
- Multi-Core Computing
- Parallel and Distributed Algorithms
- Program Analysis and Software Engineering
- Wireless, Sensor and Mobile Networks
- Network Planning and Design
- 5G Device to Device Communication
- VLSI Architectures for Image Processing
- Combinatorial Image Processing
- Graph Coloring and Graph Algorithms

#### **Computer-Aided Design for Microelectronics:**

- CAD for Lab-on-a-Chip, Microfluidics
- CAD Tools for Quantum Computing, Reversible Circuits
- Embedded Systems and System-on-Chip Design
- Intellectual Property Protection of VLSI Design
- Logic Synthesis and Testing
- Low-Power Chip Design
- Nanoelectronics and Giga-Scale Integration
- Physical Design of ASIC and FPGA Chips
- Design Verification

During the period 2016-2017, the faculty members of the unit were engaged in different research projects mentioned below.

#### **Intelligent Transportation System**

Sinha, B. P. and Chakraborty, G.

#### **Holy Grail of Error-Resilient Bio-Assays on a Lab-on-a-Chip (HERBAL)**

Bhattacharya, B.B., Banerjee, A., Chakraborty, P. P., Dinda, A., Tsung-Y, Ho, Wille, R. and Chakraborty, K.

Research Activities

**GP-GPU Computing for Large Scale Networks (GPLN)**

Das, N., Bhattacharjee, S. and Ghosal, A.

**Logic Synthesis for Quantum Computing**

Sur-Kolay, S., Jha, N., Das, D. and Chakrabarti, A.

**Massive Data Algorithms**

Nandy, S. C. and Bishnu, A.

**Voronoi Game**

Das, S.

**Algorithms & Bounds for Dominating Set, Geodetic Set and Obstacle Number in Graphs**

Bishnu, A., Paul, S. and Ghosh, A.

**A Framework for Collaborative Application Execution for Mobile Cloud Computing**

Banerjee, A. and De, P.

**Efficient Vertical Handover Techniques in Heterogeneous Wireless Networks**

Ghosh, S.C.

***Computer Vision and Pattern Recognition Unit, Kolkata***

The faculty of the Computer Vision and Pattern Recognition Unit, Kolkata, are engaged in research related to the broad area of Language Technology and Image Processing. They are currently working on projects in the following areas.

**Document Analysis: text recognition from stylized printed documents**

Tripathy, N., Chakraborti, T., Nasipuri, N. and Pal, U.

**Efficient off-line signature verification**

Alaei, A., Pal, S., Pal, U. and Blumenstein, M.

**Recognition of text from natural scene images and video frames**

Bhunia, A.K., Kumar, G., Roy, P. P., Balasubramanian, R. and Pal, U.

**Line-wise text identification in comic books**

Pal, S., Christophe Burie, J., Pal, U. and Ogier, Jean-Marc

**Document image retrieval**

Alaei, F., Alaei, A., Blumenstein, M. and Pal, U.

**Affiliation Analysis of Academic Papers**

Yadav, A. and Majumdar, D.

**Detecting Factual and Non-Factual Content from News Articles**

Sahu, I. and Majumdar, D.

**South Asian Face Database**

Chatterjee, G. and Chakraborty, N.

**Effect of Internet on brain structure**

Chatterjee, G., Ghosh, P., Kanai, R. and Datta, H.

**Studying the phenomenon of disgust with reference to genetic contribution using twins**

Chatterjee, G. and Singh, D.

- **Cognitive architecture of face-processing – understanding the separation of information streams**
- **Human face and body skin tone and their relationship with various biological and social parameters**

Chatterjee, G. and Chakraborty, N.

**Detection and assessment of image and video quality degradation**

Palit, S. and Sarkar, S.

**Generation of Synthetic Online Handwriting Samples based on Sigma-Lognormal Model**

Bhattacharya, U., Plamondon, R., Dutta Chowdhury, S.,  
Goyal, P. and Parui, S. K.

**Deep Learning for Document Image Classification**

Chakraborty, B., Mukherjee, P. S. and Bhattacharya, U.

**Bangla Online Handwriting Recognition Using Recurrent Neural Network Architecture**

Roy, S., Das, A. and Bhattacharya, U.

**An Approach to Automatic Reading of Old Degraded Bangla Printed Documents**

Parui, S. K. and Bhattacharya, U.

**Study of a real-life problem of automatic face recognition**

Sanyal, A., Bhattacharya, U. and Parui, S. K.

***Electronics and Communication Sciences Unit, Kolkata***

The faculty of the Electronics and Communication Sciences Unit, Kolkata, are engaged in research on Image and Video Processing, Machine Learning, Social Networks, etc. They are currently working on projects in the following areas.

- **Image processing: Improving quality of degraded / damaged images**
- **Biometrics: Iris recognition**
- **Handwritten word recognition**

Chanda, B.

**Theoretical Machine Learning**

Das, S.

- **Video scene classification**
- **Event recognition from unconstrained video**

Mohanta, P.P.

- **Reconstruction of 3D linear structures in the breast from Cranio-Caudal (CC) and Medio-Lateral-Oblique (MLO) mammographic views**
- **Recognition and localization of consumer products on the shelves of a supermarket**

Mukherjee, D. P.

## Research Activities

- **Fusion scheme for multimodal heterogeneous information based on Dempster-Shafer framework**
- **Neural network based schemes for transfer learning**

Pal, N. R.

## Model access and privacy control for online social networks

Pal, P.

- **Detecting and tracking objects in videos with variable background**
- **Common Sense Reasoning**
- **Watson-Crick Automata**
- **DNA Computing**

Ray, K. S.

## **Machine Intelligence Unit, Kolkata**

- **Dimensionality Reduction**
- **Video Processing**

Ghosh, A.

## Medical Imaging

Maji, P.

## Bioinformatics

Bandyopadhyay, S., De, R. K., Maji, P. and Ray, S. S.

## Computational Systems Biology

De, R. K.

## Pattern Recognition

Bandhyopadyay, S. and Murthy, R. K.

## Machine Vision and Perception

Ghosh, K.

## **Documentation, Research and Training Centre, Bangalore**

The Documentation Research and Training Centre was established as an integral part of the Indian Statistical Institute in 1962. The primary objectives of DRTC are to promote research and training, in the area of Library Science, Documentation and Information Science. The main areas of research in which the different faculty members of the DRTC were engaged during the period, are furnished below.

## Knowledge Organization

Madalli, D. P.

- **Faceted Approach for Domain Ontology Development**
- **Development of Universal Knowledge Core**

Dutta, B. and Madalli, D. P.

- **Linguistic Phenomenon and Knowledge Organization**
- **Graph Database and Query Optimization**

Dutta, B.

Research Activities

- Digital Libraries and Semantic Web
  - Multilingual data in Indian languages for Universal Decimal Classification
- Madalli, D.P.
- Library and Information Technology
  - Big Data
- Prasad, A. R. D.
- Institutional Repositories and Open Access to Information
- Prasad, A. R. D. and Madalli, D.P.
- Ontology Supported Information Systems
- Krishnamurthy, M.

***Systems Science and Informatics Unit, Bangalore***

- Visualizing Image Segmentation and Filtering Algorithms in Optimization Framework
- Danda, S., Najman, L. and Daya Sagar, B. S.
- Mathematical Morphology on General Data
- Challa, A., Najman, L. and Daya Sagar, B. S.
- Granulometric and Fractal Analyses for Feature (Shape-Size-Orientation) Based Classification of Planar and Grayscale Basins Hierarchically Decomposed from CARTOSAT-I DEMs
- Ashok Vardhan, S. and Daya Sagar, B. S.
- Quantitative Morphologic and Scaling Analyses of Lunar Digital Elevation Models (LDEM) Derived from TMC Data of Chandrayaan-1 Mission via Mathematical Morphology and Fractal Geometry
- Surendran, A. and Daya Sagar, B. S.
- Quantitative Characterization of Complex Topologically Prominent Components of Porous Media derived from Rocks of Petrologic Significance via Mathematical Morphology and Fractal Geometry
- Soor, S., Gade, S. and Daya Sagar, B. S.
- Pattern Recognition, Machine Learning, Image Processing
- Meher, S. K. and Arun Kumar, D.
- Neural information processing: study of human depth EEG signals
  - Micro seizure detection
- Majumdar, K.

***Computer Science Unit, Chennai***

- Almost Involutory Recursive MDS Diffusion Layers
- Gupta, K. C. (ASU), Pandey, S.K. and Venkateswarlu, A.
- Structured strategies in dynamic games
- Ghosh, S. Konar, N. and Ramanujam, R.
- Cognitive models of strategic reasoning

Research Activities

Ghosh, S. and Verbrugge, R.

**Empirical studies on strategic reasoning**

Ghosh, S. Heifetz, A., Verbrugge, R. and Weerd, H. de

**Formal studies on preference and reliability dynamics**

Ghosh, S. and Sano, K.

**Syntactic studies of epistemic attitudes in conversation**

Banerjee, A. Ghosh, S. and Karmakar, S.

**Weighted Independent Sets in Graph Classes**

Maffray, F. and Karthick, T.

**Weighted Efficient Domination in Graph Classes**

Brandstädt, A., Eschen, E.M., Frieze, E. and Karthick, T.

**Vertex Coloring of Graph Classes**

Maffray, F. and Karthick, T.

**Variations in vertex coloring**

Karthick, T.

**Stab number of rectangle intersection graphs**

Chakraborty, D. (ACMU), Francis, M.C.

**Cograph dimension and permutation dimension of planar graphs**

Chacko, D. Francis, M.C. and Salam, S.

**Total Colouring Conjecture**

Basavaraju, M., Sunil Chandran, L. and Francis, M.C.

**More efficient certifying algorithms for circular-arc graph recognition**

Francis, M. C., Hell, P. and Stacho, J.

***Cryptography and Security Research Unit, Kolkata***

**Format Preserving Sets**

Barua, R., Gupta, K. (ASU), Pandey, S. and Ghosh Roy, I.

**Stream Ciphers**

Paul, G., Maitra, S. (ASU), Sinha, N. Gangopadhyay, S.,  
Mihaljevic, M. and Matsuura, K.

**Disk Encryption**

Chakraborty, D., Sarkar, P. (ASU), Ghosh, S. and Lopez, C.M.

**Provable Security**

Paul, G. and Sanyal, A.

**Crypto hardware**

Paul, G., Khalid, A., Chattopadhyay, A., Abediostad, F.,  
Imad Ud Din, S., Hassan, M., Biswas, B. and Ravi, P.

**Quantum Cryptography**

Paul, G. and Acharya, A. (ASU)

**Steganography**

Paul, G., Mukherjee, I., Davidson, I. and Ravi, S.S.

**Key Management in Wireless Sensor Networks**

Ruj, S., Sakurai, K. and Sardar, L.

**Cloud Security**

Ruj, S., De, S.J., Sengupta, B. (ASU), Das, A.,  
Sakurai, K., Kawamoto, J., Anada, H., Nishide, T.,  
Verma, R. and Saxena, R.

**Security and Fault Tolerance in Smart Grids and IoT**

Ruj, S., Paul, A., Dorbala, Y., Huang, Z.,  
Nayak, A., Pal, A. and Huh, M.

**Uniform intersecting family of finite sets**

Majumder, K.

**Physics and Earth Sciences Division**

The Division comprises of two units: Geological Studies Unit (GSU) and Physics & Applied Mathematics Unit (PAMU), both located at Kolkata.

The major areas of research of the Geological Studies Unit are Structural Geology, Sedimentology, Stratigraphy and Palaeontology. Most of these studies are based on extensive field work.

The thrust areas of research in PAMU are Theoretical Physics and Applied Mathematics. Additionally, some experimental work is being done in the Fluvial Mechanics Laboratory of this Unit. Broadly, the scientists work in the areas of Astrophysics and Data Analysis, Biological Optics, Condensed Matter Physics, Cosmology of the Early Universe, High Energy Physics, Mesoscopic Physics and Nanoelectronics, Quantum Field Theory, Quantum Information Theory, Quantum Mechanics, Nonlinear Dynamical Systems, Sediment-fluid Interactions and Flow Visualization.

Scientists have also carried out work on internally as well as externally funded projects. The division has published around 60 research papers in reputed international journals. It is also involved in teaching B. Stat. and M. Tech. courses apart from their own Ph.D. program. Also a few lecture series, workshops and conferences were organized during this period.

***Geological Studies Unit, Kolkata***

The major areas of research of the Geological Studies Unit of the Institute are Structural Geology, Sedimentology, Stratigraphy and Palaeontology. Below are the specific topics on which research is conducted.

**Geochemistry and numerical modeling**

Banerjee, A.



Research Activities

**Archean greenstone belts of India – tectonics and sedimentation**

Saha, D., S. Patranabis-Deb, Banerjee, A., P. Bachhar, B. Biswas, G. Deb

**Fault zones and crustal deformation in the Eastern Himalaya**

Saha, D., Banerjee, A. and Patra, A.

**Field study of flow, salinity and sedimentation-erosion patterns in the Sundarbans estuarine system**

Chakraborty, C.

**Sedimentology and palaeogeography of the Siwalik Group in the eastern Himalaya**

Chakraborty, T., Bera, S., Beek, P. van der, Huyghe, P.,  
Taral, S., Mallick, S., Debnath, A. and More, S.

**Precambrian aeolian deposits of India and Brazil**

Chakraborty, T. and Basillicci, G.

**Stratigraphic Basin analysis**

Patranabis-Deb, S., Saha, D., Majumder, T. and Khan, S.

**Sedimentary record of the Triassic - Jurassic fluvial to lacustrine transition in a continental rift basin, India (Pranhita-Godavari Gondwana Basin)**

Ghosh, P., Goswami, S. and Gierlowski-Kordesch, E.

**The signatures of microbial activity in a Late Triassic fluvial succession – the Maleri Formation, Pranhita-Godavari Rift Basin, India**

Ghosh, P. and Dasgupta, S.

**A GIS-based study on the drainage network of the Kosi Megafan, India, and its interaction with the August 2008 flood flow**

Majumder, D. and Ghosh, P.

**A GIS-based study on the orogen-wide pattern of erosional relief and its implications for physiographic evolution of the Himalayan mountain belt**

Ghosh, P.

**Shape analysis of vertebrate fossil bones**

Sengupta, D.P., Bandyopadhyay, S. and Chakravorty, S.

**Revision of stratigraphy of the Upper Gondwana formations of Satpura basin, central India**

Sengupta, S., Sengupta, D.P. and Bandyopadhyay, S.

**Cistecephalid dicynodont from the Permian Kundaram Formation of Pranhita-Godavari Basin**

Kammerer, C.F., Bandyopadhyay, S., and Ray, S.

**Vertebrate microfossils from the Tiki Formation of the Rewa Gondwana basin**

Bandyopadhyay, S. and Ray, S.

**Vertebrate faunal assemblage of the Jurassic Kota Formation, Pranhita-Godavari basin, India**

Mukherjee, D. and Bandyopadhyay, S.

**Jurassic Gondwana vertebrates of India**

Mukherjee, D.

**Post cranial anatomy and growth strategy of the Indian Middle Triassic capitosaur as deduced from osteohistology**

Mukherjee, D., Sengupta, D.P. and Rakshit, N.

**Diversity, palaeobiogeography and palaeoecology of Miocene gastropods from India with special emphasis on Kutch, Gujarat**

Das, S.S.

### ***Physics and Applied Mathematics Unit, Kolkata***

The main areas of research in Physics & Applied Mathematics Unit are Theoretical Physics and Applied Mathematics. Additionally, some experimental work is also being done in the Fluvial Mechanics Laboratory of this Unit.

Broadly, the Scientists of the Physics & Applied Mathematics Unit (PAMU) of the Institute work in the areas of Astrophysics & Data Analysis, Biological Optics, Condensed Matter Physics, Cosmology of the Early Universe, High Energy Physics, Mesoscopic Physics and Nanoelectronics, Quantum Field Theory, Quantum Information Theory, Quantum Mechanics, Nonlinear Dynamical Systems, Sediment-fluid Interactions and Flow Visualization.

A brief account of the specific research work done by the members of PAMU during the year 2016-17 is given below:

#### **PHYSICS**

**Biological Optics:** Phase function (reflectance) modeling in biological (cell) media that could be applied for medical diagnostic purposes of general or specific tissue cells or the likes has been initiated.

Roy, A. K., Sharma, S.K.

**Cosmology :** How one can possibly constrain the initial vacuum by Cosmic Microwave background data has been demonstrated. Also, the idea of conformal attractors in inflation has been extended to non-canonical sectors that corroborates with latest observational data.

Chandra, D., Pinhero, T. and Pal, S.

**Quantum nonlocality and randomness:** The relation among incompatible measurement, violation of Bell's inequality and steering has been explored in most general non-signaling theory and quantum results have been reproduced as a special case.

Kar, G.

**Quantum Coherence:** It has been shown that the distillable coherence is always bounded by the  $l_1$  norm measure of coherence, giving the latter an operational interpretation from a resource-theoretic viewpoint.

Parashar, P., Rana, S., Winter, A. and Lewenstein, M.

**Theoretical Fluid Dynamics:** Noncommutative effects in fluid dynamics in continuity and Euler equations in constraint dynamics framework has been explored.

Ghosh, S., Banerjee, R. and Mitra, A.K.

**AdS- CFT correspondence:** Effect of noncommutative black hole in bulk metric on boundary holographic superconductor has been analysed and extension of this model in presence of magnetic field has also been investigated.

## Research Activities

Ghosh, S., Pramanik, S. and Das, S.

**Particle motion in a torus knot:** Particle motion in a torus knot, related constraint analysis and motion of charged particle in torus knot in presence of electromagnetic field, its semi-classical quantization is studied.

Ghosh, S., Pramanik, S. and Das, P.

**Jacobi metric approach in General Relativity:** Charged particle dynamics in Reissner-Nordstrom spacetime has been studied in Jacobi metric formalism.

Ghosh, S., Das, P. and Ripon, S.K.

**Quantum Mechanics:** Energy dependent Hermitian as well as non-Hermitian potentials have been studied. Exact solutions of many particle Calogero type models have been obtained. Discrete spectrum and corresponding closed form solutions of rational extensions to quantum systems of generalized nonlinear oscillators have been obtained.

Roy, P., Roy, B., Nath, D. and Schulze Halberg, A.

**Vortex beams :** A unified approach towards the dynamics of optical and electronic vortex beam from the perspective of geometrical phase and associated Hall effects has been proposed. The geometric phase and fractional orbital angular momentum states in electron vortex beam have also been studied.

Basu, B., Bandyopadhyay, P. and Chowdhury, D.

**Thin Topological Insulator :** The quantum capacitance in ultrathin topological insulator (TI)-ferromagnetic interface, electric field induced spin accumulation in the Landau level states of TI thin films and the effect of hybridization and the external field on a thin film TI in the context of quantum phase transition have been theoretically studied.

Basu, B., Chowdhury, D., Menon, A., Z.B. Siu, Z.B. and Jalil, M.B.A.

**Electronic transport in mesoscale and nanoscale systems:** Circular currents in nanojunctions, persistent currents in isolated conducting rings and spin selectivity in electronic transmission have been studied.

Maiti, S.K.

## APPLIED MATHEMATICS

**Chimera states in neuronal networks:** The occurrence of chimera patterns in neuronal networks have been observed using purely local synaptic coupling. A new chimera pattern, namely the imperfect traveling chimera state, where the incoherent traveling domain spreads into the coherent domain of the network has been identified.

Ghosh, D., Perc, M., Hramov, A.E., Koronovskii, A.A., Banerjee, T. and Bera, B.K.

**Nonlinear waves:** Study of the dynamics of periodic waves in competing cubic-quintic nonlinear medium reveals that defocusing/focusing quintic nonlinearity leads to stabilization of snoidal / (cnoidal and dnoidal) periodic waves depending on whether the Kerr-medium is focusing / defocusing.

Roy, B., Nath, D. and Roychoudhury, R.

**Suppression of Oscillation: Bifurcation and Basin Stability analysis:** The stabilization of saddle point in coupled systems has been investigated using mean-field coupling via inverse pitchfork bifurcation.

Ghosh, D., Bera, B.K., Majhi, S., Hens, C. and Pal, P.

## INTERDISCIPLINARY RESEARCH - Fluvial Mechanics Laboratory

**Live-bed scour around bridge pier:** A number of experiments were carried out in the Fluvial mechanics laboratory of ISI Kolkata to observe the flow past a surface-mounted vertical circular cylinder at immobile and scoured bed conditions.

Sarkar, S. and Dey, S.

**Image based Bed-load transport:** The image-based bed-load sediment transports were studied at Politecnico di Milano.

Sarkar, S., Radice, A. and Ballio, F.

## Biological Sciences Division

Agricultural and Ecological Research Unit carries out both internally and externally funded research and projects mainly in the areas of Agriculture, Ecology and Statistical and Mathematical modelling. In Agriculture, emphasis is given on Agronomy, Soil Chemistry, and Entomology and even on Agricultural marketing. Researches are being carried on various agricultural and cash crops like rice, sorghum and tea. Works are also being done on various aspect of soil chemistry such as soil carbon dynamics, soil nutrients and contaminants. Even scientists of the unit are working on using nano technology in the field of fertilizers and pesticides. Ecology is also one of the major thrust areas of work on which many projects are being carried out. Scientists are working on invasive plant biology and its threat on one hand and also on genetic variation of mangrove plants at Sundarbans through SSR markers on the other.

Biological Anthropology Unit is primarily engaged in research on aspects of health, aging and physical growth and development. Presently, the following areas of research are being pursued by the faculty members of the Unit, such as , health aspects of : i) Tea garden and agricultural labourers in North Bengal; ii) Eating behaviours and health of adolescent girls; iv) Health and aging among the urban elderly women; iii) bio-cultural dimensions of aging considering urban and rural elderly populations of West Bengal; iv) Assessment of health of family caregivers of dementia (Alzheimer related) patients; v) evaluation of physical growth and development and its secular trend among children and adolescent in Kolkata and its neighbourhood.

The Human Genetics Unit has been pursuing research projects, both internally and externally funded. The focus of these studies is to understand the genomic and environmental contributions to common diseases in India.

Epigenetic studies on Oral Cancer:

Genome-wide CpG methylation confirmed the abnormal and dynamic variations in CpG promoters in various cancer genomes. They also revealed that the CpG methylation status (either hypo or hyper) of promoters affected the expression of protein coding genes and various noncoding RNAs. Oral squamous cell carcinoma (OSCC) is one of the common malignancies in Southeast Asia. Epigenetic changes, mainly the altered DNA methylation, have been implicated in many cancers. Considering the varied environmental and genotoxic exposures among the Indian population, a genome-wide DNA methylation study conducted on paired tumor and adjacent normal tissues of ten well-differentiated OSCC patients and validated in an additional 53 well-differentiated OSCC and adjacent normal samples.

Genetic and epigenetic studies on Psoriasis:

Psoriasis is a chronic inflammatory skin disorder. Several studies suggested psoriasis to be a complex multifactorial genetic disease, but the exact triggering factor is yet to be determined. Epistatic interactions between HLA-Cw6 and other susceptibility loci have also been demonstrated in some populations. Our data suggested the association of IL12B with the psoriasis, however no evidence was observed for the epistatic effect of IL12B with HLA-Cw6 among the psoriasis patients in India.

Statistical Genomics:

## Research Activities

Some novel statistical methods have been developed for association analyses of complex genetic traits. These include:

- (a) A Quasi-likelihood based method association mapping of multivariate phenotypes using sibship data and transmission information from both parents.
- (b) Comparison of genotype-based and allele-based population-based association methods for mapping longitudinal phenotypes.
- (c) Developing an imputation-based method for population-based association mapping of multivariate phenotypes in the presence of missing data.
- (d) Developing a test for gene-gene interaction and SNP-SNP interaction for case-control data.
- (e) A new clustering method for clustering mixed type data arising in medical diagnosis.
- (f) Methodological development on integrating SNP data and eQTL data in genetic association study.

Analyses were performed on association analyses of different phenotypes under collaborative projects.

### ***Agricultural and Ecological Research Unit, Kolkata***

**Development of Information on Agricultural and Horticultural Production and their Marketing using RS and GIS in some district of West Bengal**

P. Banik, Ghosal, P. K., Banerjee, A.K. and Sarker, A.

**Fantastic yields in the system of rice intensification: fact or fallacy?**

Banik, P.

**Competition or facilitation between two invasive plants**

Dewanji, A., Banerjee, A.K., Jha, P., Chatterjee, S.,  
Bhattacharya, S. and Dewanji, A. (ASU)

**Development of natural food preservatives from spices and herbs**

Chattopadhyay, R.R.

**Phytonematode problems of rice in Jharkhand: density, diversity and pathogenesis**

Mukherjee, A., Mondal, S. and Khan, M.R.

**Biorational management of rice pests and diseases: evaluation of nanoparticle based and endophyte-mediated approaches**

Mukherjee, A. and Dhal, P.

**Study of soil carbon dynamics through integrated nutrient management in different agroecosystems of Assam**

Bhattacharya, P.

**Parallel analysis of transport of contaminants in soil-plant systems in different soil types of eastern India: a sustainable approach**

Bhattacharya, P., Mandal, A., Sarkar, S. and Roy, S.

**Generation and characterization of SSR marker for some mangroves of Sundarbans, India**

Das, S. and Dasgupta, N.

**Studies on keeping quality of different types of tea (Black, Green, Oolong & White) and their biochemical aspects & antioxidant properties**

Das, S. and Hazra, A.

**Exploring Potential of Sweet Sorghum for Bio-Ethanol Production in West Bengal**

Barik, S.

**Determination of functional response under selective predation through experimentation and modeling**

Chattopadhyay, J., Bhattacharya, S. and Mukhopadhyay, I.

**Comparison of relative growth rate measures under different environmental conditions with application to biological data**

Bhattacharya, S., Mukhopadhyay, S., Hazra, A. and Bhowmick, A.R.

***Sterculia foetida*, L.– Eco-friendly, cost effective and rich sources of nutritious edible oil, animal food supplements as well as biofuel and its multimodal application to environmental perspectives**

Mandal Biswas, S.

**Management Practices for growth, yield and quality of maize (*Zea mays* L)**

Adhikary, S.

**Surface Functionalized Porous Nanomaterial Loaded Micronutrient Fertilizers for Gangetic Alluvial Soils**

Goswami, A., Barik, S. and Pradhan, S.

**SYL-MNS-CEA-ZAAL-BER/API nanocomposite drug for Mongpa tribe neonates: Innovation from anthropo-cultural knowledge base**

Goswami, A., Barik, S. and Singh, J.

***Biological Anthropology Unit, Kolkata***

**Health Status and Survival Strategy of the tea garden labourers of locked tea gardens of Jalpaiguri district, West Bengal**

Ray, S.K., Bhattacharya, A. and Mallick, A.

**Living with Age: An Investigation on the Urban Poor Elderly Women**

Mukhopadhyay, S. and Ghosh, A.

**A study on mental health and well-being of dementia caregivers in urban areas of West Bengal**

Mukhopadhyay, S. and Basu, I.

**Bio-cultural dimensions of aging considering urban and rural elderly populations of West Bengal**

Mukhopadhyay, B.

***Human Genetics Unit, Kolkata***

**Genomic and Epigenetics Studies on Common Diseases in Indian Populations: Role of Mitochondrial and mitochondrial-function-associated nuclear genes in oral cancer**

Roy, B.

- Epigenetic studies on Oral Cancer
- Genetic and epigenetic studies on Psoriasis

Chatterjee, R.

## Research Activities

**Genetics and Functional Genomics of Pancreatic Cancer: Genome-wide analysis of DNA methylation profile in pancreatic adenocarcinoma**

Sikdar, N.

**Statistical Genomics: Statistical Methods for Analysis of Complex Traits**

Ghosh, S. and Mukhopadhyay, I.

## Social Sciences Division

The Social Sciences Division consists of eight units spread over Kolkata, Giridih, Delhi and Bangalore. These are: Economic Research Unit (Kolkata), Linguistic research Unit (Kolkata), Population Studies Unit (Kolkata), Psychology research Unit (Kolkata), Sampling and Official Statistics Unit (Kolkata), Sociological Research Unit (Kolkata and Giridih), Economics and Planning Unit (Delhi) and Economic Analysis Unit (Bangalore).

The scientific workers of these units are extensively involved in research, teaching, consultancy, editorial work, externally and internally funded project works and academic administration. Research is carried out both at individual and collaborative/interdisciplinary levels. The faculty members are also providing guidance to the Research Fellows. Training programs/ workshops are organized on a regular basis for non-ISI research fellows, college teachers and ISS probationers at different centres and at universities in the Northeastern region of India.

The main topics of different dimensions of current researches in the Economic Research Unit are as follows: Analyzing multidimensional Well-being, Inequality, Poverty and Welfare; Gender Bias in Education, Intra-household Allocation Models; Purchasing Power Parity, Cross Country Studies, Commodity Taxation; Gender Inequality in Health, Gender Violence, Analysis of Voting Pattern; Growth Theory, Development Economics; Effects of Demonetization on Different Important Indices of Sectoral Growth in India; The Effect of Inflation on Inflation Uncertainty in the G7 Countries Ethnic Conflict; Linguistic Conflict and Linguistic Justice; Trade and Unemployment; Various Issues in Panel Data Models with Cross Sectional Dependence; Experimental Choice Consistency and Social Learning; Mechanism Design; Evolution of Socialist Societies; Government-Industry Nexus and Indigenous Armed Resistance; Violence and Elections: A Game-theoretic Exploration of Student Politics; Impact of MGNREGA on the Livelihood Security of Rural Poor in India: a Study Using National Sample Survey Data; Variations in Income Elasticity: An Analysis of Indian Household Budget Data; Spousal Violence against working women in India; Gender violence in India: its roots, nature and extent; Status of Women in East India: Its Measurement and Determinants.

The Linguistic Research Unit is engaged in research activities in the areas of Cognitive Linguistics, Corpus Linguistics, Computational Linguistics, Language Technology, Sociolinguistics, Field Linguistics and Descriptive Linguistics.

The Population Studies Unit is engaged in research on population growth, attitude of family members toward their children, child mortality, gender differentials in socio-economic status of the children and gender inequalities.

The Psychology Research Unit has been pursuing research in the area of school, educational, cognitive and health psychology.

The Sampling and Official Statistics Unit is engaged in research on agricultural credit, randomized response model, demand for banknotes and coins, concurrent impact evaluation of the Foreign Trade Policy of India (FTP) 2015- 2020 and socio-economic impact of national highways on the rural population of the country.

The research in the Sociological Research Unit covers diverse areas such as HIV/AIDS in underdeveloped Countries; Women studies: Tribal women, empowerment, NREGA, women and child

health; Cooperatives; Social Justice and Development; Gender inequality in morbidity pattern in India, Agrarian relations and Social Network Analysis.

The Economics and Planning Unit (Delhi) faculty continues to work on the cutting edge of economic research, both in theory, as well as empirical analysis. The unit currently has 23 Ph.D. students (13 Senior Research Fellows and 10 Junior Research Fellows). Members of the faculty teach a number of PhD and MSQE courses in macroeconomics, microeconomic theory, game theory, statistics and probability, panel data econometrics, mathematical economics, and development economics.

Research in the area of agriculture economics has looked at food supply chains, the welfare effects of trade liberalization, as well as the impact of climate change on welfare outcomes in the agriculture sector. Research in mechanism design and auction theory, long a strength of the unit, continues. Recent work has explored the link between matching theory and mechanism design theory. The links between education, health, and other public goods and the distribution of income has been investigated theoretically. Social capital and collective action in the Himalayas, the impact of climate change on agriculture and manufacturing, the economics of groundwater depletion, and climate change and electricity demand in India are some of the environmental issues in India on which empirical research has been conducted. Declining labour force participation by women in rural India has been studied. There has also been recent work analyzing inter-caste marriages. In the field of health economics, gender bias in access to health care has been explored, as well as how health policy in India needs to be devised to meet the Sustainable Development Goals. The political economy of holdouts in land markets has also been studied. In macroeconomics, endogenous growth theory and optimal taxation continues to be active areas. Fiscal policy in small open economies is also an area of ongoing work. Research exploring the links between distortions in the agriculture sector and monetary policy using multi-sector NK DSGE models is also ongoing work. The link between myopia and pensions has also been explored in a macroeconomic setting. In microfinance ongoing work examines the institutional aspects behind success/failure of micro-finance. Other fundamental issues in the micro-finance literature, such as group vs. individual lending, various aspects of dynamic incentives, and the effect of competition have also been examined.

Economic Analysis Unit (Bangalore) is engaged in research on Climate change and agricultural yields, Livelihoods and human development in Tripura, Small Farmers in India and research on women workers of coffee industry.

### ***Economic Research Unit, Kolkata***

The scientific workers of the Unit are extensively involved in research, teaching, training, consultancy and academic administration. The research is carried out both at individual and collaborative/interdisciplinary levels. These include theoretical as well as empirical research in economics and econometrics.

The topics of different dimensions of researches in the unit are as follows:

Analyzing multidimensional Well-being: a Quantitative Approach; Axiomatic Approaches to Success Functions in Conflicting Situations; Inequality and Welfare: Some Axiomatic Characterizations; Gender Bias in Education, Intra-household Allocation Models; Purchasing Power Parity, Cross Country Studies, Poverty, Inequality, Welfare; Applied Demand Analysis (Parametric and Semiparametric Models), Commodity Taxation; Gender Inequality in Health, Methods for Assessing Overweight and Obesity; Woman and Child Health, Generalized Measure of Diversity; Gender Violence, Analysis of Voting Pattern; Average Growth Index; Growth Theory, Development Economics; Effects of Demonetisation on Different Important Indices of Sectoral Growth in India; Re-investigating the Puzzling Relationship Between Inflation and REIT Returns: A Regime-Switching Approach; Convergence of Food-grains Productivity in Indian Agriculture; The Effect of Inflation on Inflation Uncertainty in the G7 Countries: A Double Threshold GARCH Model; Political Economy; Credit Markets in LDCs; A Theory of Joint Venture Formation and Break-up; R&D Incentives in an Upstream-



## Research Activities

Downstream Structure; Ethnic Conflict; Linguistic Conflict and Linguistic Justice; Reordering an Existing Queue; Incentives and Justice for Sequencing Problems; A Characterization of the Symmetrically Balanced VCG Rule in the Queueing Problem; Bidding rings-A Bargaining Approach; Trade and Unemployment; Various Issues in Panel Data Models with Cross Sectional Dependence; Experimental Choice Consistency and Social Learning; Mechanism Design; Evolution of Socialist Societies; Government-Industry Nexus and Indigenous Armed Resistance, Violence and Elections: A Game-theoretic Exploration of Student Politics; Impact of MGNREGA on the Livelihood Security of Rural Poor in India: a Study Using National Sample Survey Data; Variations in Income Elasticity: An Analysis of Indian Household Budget Data; Spousal Violence against working women in India; Gender violence in India: its roots, nature and extent; Status of Women in East India: Its Measurement and Determinants.

The details of the applied and theoretical researches in Economic Research Unit are given below:

### **Analyzing Multidimensional Well-Being: A Quantitative Approach**

Chakravarty, S.R. and Maharaj, B.

### **Axiomatic Approaches to Success Functions in Conflicting Situations**

Chakravarty, S.R., Chattopadhyay, N. (SOSU) and Qingbin, L.

### **Inequality and Welfare: Some Axiomatic Characterizations**

Chakravarty, S.R.

### **Gender Bias in Education, Intra-household Allocation Models**

Majumder, A. and Mitra, C.

### **Purchasing Power Parity, Cross Country Studies, Poverty, Inequality, Welfare**

Majumder, A., Ray, R. and Santra, S.

### **Applied Demand Analysis (Parametric and Semiparametric Models), Commodity Taxation**

Majumder, A., Chakrabarty, M., Ray, R. and Santra, S.

- Gender Inequality in Health, Methods for Assessing Overweight and Obesity
- Woman and Child Health, Generalized Measure of Diversity
- Gender Violence, Analysis of Voting Pattern
- Average Growth Index

Pal, M.

### **Growth Theory, Development Economics**

Gupta, M.R.

- Effects of Demonetisation on Different Important Indices of Sectoral Growth in India
- Convergence of Food-grains Productivity in Indian Agriculture

Sarkar, N. and Mukhopadhyay, D.

### **Re-investigating the Puzzling Relationship Between Inflation and REIT Returns: A Regime-Switching Approach**

Sarkar, N. and Das, M.

### **The Effect of Inflation on Inflation Uncertainty in the G7 Countries: A Double Threshold GARCH Model**

Sarkar, N. and Banik Chowdhury, K. (Tezpur)

Research Activities

- Political Economy
- Credit Markets in LDCs

Sarkar, A.

**A Theory of Joint Venture Formation and Break-up**

Kabiraj, T. and Sengupta, S.

**R&D Incentives in an Upstream-Downstream Structure**

Kabiraj, T. and Modak, M.

**Ethnic Conflict**

Dasgupta, I. and Bakshi, D.

**Linguistic Conflict and Linguistic Justice**

Dasgupta, I. and Guha-Neogi, R.

- Reordering an Existing Queue
- A Characterization of the Symmetrically Balanced VCG rule in the Queueing Problem

Mitra, M., Youngsub Chun and Mutuswami, S.

**Incentives and Justice for Sequencing Problems**

Mitra, M. and De, P.

**Bidding rings-A Bargaining Approach**

Mitra, M., Chatterjee, K. and Mukherjee, C.

**Trade and Unemployment**

Chakrabarty, B.S.

**Various issues in Panel Data Models with Cross Sectional Dependence**

Das, Samarjit

**Experimental Choice Consistency and Social Learning**

Banerjee, P.

**Mechanism Design**

Roy, S.

**Evolution of Socialist Societies**

Ghosh, C.

- Government-Industry Nexus and Indigenous Armed Resistance
- Violence and Elections: A Game-theoretic Exploration of Student Politics

Munshi, S.

- Impact of MGNREGA on the Livelihood Security of Rural Poor in India: a Study Using National Sample Survey Data
- Variations in Income Elasticity: An Analysis of Indian Household Budget Data

Das, S.

- Spousal Violence Against Working Women in India
- Gender violence in India: its Roots, Nature and Extent
- Status of Women in East India: Its Measurement and Determinants

Sharma Biswas, C.

### ***Linguistic Research Unit, Kolkata***

During the period (April 2016 - March 2017) the Linguistic Research Unit of the Institute is engaged in research activities in the areas of **Cognitive Linguistics, Corpus Linguistics, Computational Linguistics, Language Technology, Sociolinguistics, Field Linguistics and Descriptive Linguistics**. The specific topics are given below.

- **Substantivist Lexicological Study of Bangla**
- **Interlexical Study of Asamiya in a Substantivist Framework:** to develop the empirical base for electronic lexical resources for Asamiya.
- **Sociolinguistics:** studies in linguistic (lexical and syntactic) difficulty in the context of the study of cognition and discourse.

Dasgupta, P.

- **Domain-Specific Parallel Translation Corpora from Hindi to Bangla:** a Hind-Bangla parallel-translation corpus keeping Hindi as the source language and Bangla as the target language.
- **POS Tagset of Bangla Text Corpus:** The POS tagset and POS tagged Bangla corpus are available at the TDIL Data Centre, Govt. of India homepage.
- **POS Tagged Hindi-Bangla Parallel Translation Corpus**
- **Chunked Hindi-Bangla Parallel Translation Corpus**
- **Bangla Web Text Corpus Generation**
- **Corpus of Indian English used in Newspapers (From Newspapers)**
- **Bangla Pronunciation Dictionary in Electronic Form**
- **Corpus-Based English Language Teaching (C-BELT) System**
- **Digital Lexical Database for Tribal Languages of West Bengal, Odisha, and Jharkhand**

Dash, N. S.

### ***Population Studies Unit, Kolkata***

**A Sample Based Method to Estimate Population Growth Rate in a District of Jharkhand, India**

Prasanta Pathak

- **Attitude of Family Members toward their children with developmental challenges**
- **Post-2015 Development Agenda and Child Mortality in India**

De, P.

- **Gender differentials in socio-economic status of the children across the states in India**
- **Causal Analysis Approach in the context of gender inequalities across Indian states**

Barman, S.

### ***Psychology Research Unit, Kolkata***

**Safe School Survey**

Dutta Roy, D.

**A study on Innovative Self- efficacy of School Teachers**

Dutta Roy, D. and Kundu, A.

**A study on Visuospatial Reasoning ability of adolescent school students**

Dutta Roy, D. and Datta, S.

**Self-care efficacy in Diabetes management**

Research Activities

Dutta Roy, D. and Adhikari, S.

**Metamemory among adolescents**

Dutta Roy, D. and Khatoon, M.

**Development and Validation of a Cognitive measure for Juvenile Delinquent in Indian Context**

Ghosh, A. and Maitra, T.

- Spirituality and Self-esteem among adolescent boys and girls of H.S. School, Kolkata
- Loneliness and social adjustment in old age

Bhattacharya, H.

**Value profile similarity of Scientists and Non-scientists**

Dutta Roy, D. and Paul Chowdhury, S.

**Value profile similarity and Symptom Severity**

Dutta Roy, D. and Chatterjee, D.

**Rabindrik value preferences across gender and periods in Adolescence**

Dutta Roy, D. and Banerjee, A.

***Sampling and Official Statistics Unit, Kolkata***

**The Equity Impacts of Targeted Smallholder Agricultural Credit:**

Mitra, S., Visaria, S., Mookherjee, D. and Maitra, P.

**Decentralized Targeting of Agricultural Credit Programs: Private Agents or Local Governments?**

Mitra, S., Visaria, S., Mookherjee, D. and Maitra, P.

**Politicians' Motivations: Evidence from a lab-in-the-field experiment in India:**

Mitra, S., Banerjee, P., Iversen, V., Niccolo, A. and Sen, A.

**Sham Litigation, Delayed Tax Payment and Evasion: The Role of Informal Credit Market:**

Mitra, S., Marjit, S. and Misra, S.

**Data Link Initiative**

SOSU and IFMR

**Protection of respondent's privacy in estimating sensitive population proportion by hypergeometric randomized response model**

Dihidar, K.

**Respondent privacy in randomized response surveys for continuous sensitive variables**

Dihidar, K. and Bose, M. (ASU)

**On the generalization of finding the robust optimum plot size and shape**

Dihidar, K. and Satyabrata Pal

**Protection of privacy in estimating sensitive population proportion by a modified unrelated question model and its inverse mechanism**

Dihidar, K. and Basu, L.

Research Activities

**Estimating sensitive population proportion using a combination of binomial and hypergeometric randomized responses by direct and inverse mechanism**

Dihidar, K. and Bhattacharya, M.

**Estimation of the demand for banknotes and coins at aggregate and denomination levels as well as at national and regional levels, assessment of demand-supply mismatch of currency**

Chattopadhyay, N., Chakraborty, A. B., Chaudhuri, P. (SMU)  
and Sengupta, D. (ASU)

**Concurrent impact evaluation of the Foreign Trade Policy of India (FTP) 2015- 2020**

Chattopadhyay, N., Chakraborty, A. B., Bose, M. (ASU),  
Dewanji, A. (ASU) and Basak, G.K. (SMU)

**Socio-economic impact of national highways on the rural population of the country**

Chattopadhyay, N., Mitra, S., Chakraborty, A. B.,  
Chaudhuri, P. (SMU) and Sengupta, D. (ASU)

**A study on estimation of the variability of the prices for different items of consumption expenditure across different states/districts**

Chakraborty, A. B.

***Sociological Research Unit, Kolkata***

The faculty and scientific members of the unit are engaged in teaching various courses in Sociology in ISI and other universities. The unit has one Ph.D. student. The current research topics are:

**Contextualizing Intergenerational Mobility of Women 'Techies' of Kolkata**

Ghosh, B.N. and Bhattacharya, A.

- **Causes of HIV/AIDS in underdeveloped Countries: A critical Review**
- **Development of Tribal Women in Rural Jharkhand**
- **The Health problems of ageing in India: some theoretical issues**
- **Changing Matrilineity of the Khasi Society of Meghalaya**
- **Empowerment of Tribal Women in India: A Brief Review on Actions Taken and Goals Achieved**

Ghosh, B.N.

**Women in Natural Resource Collection: Experience from Rural Jharkhand in India**

Ghosh, B.N. and De, U.K.

**Existing status of co-operatives specially milk co-operatives in India: the case study of West Bengal**

Ghosh, B.N., Das, K. and Karmakar, R.

**NREGA on Women in West Bengal**

Ghosh, B.N., Kar, N.B. and Das Roy, S

**Status of Muslim women: a case study of north 24-parganas district in West Bengal**

Ghosh, B.N. and Kar, N.B.

**Role of women in the production organization of family based handloom industry**

Shome, S.

**Levels of undernutrition among the tribes of Central India**

Shome, S., Pal, M. (ERU), Bharati, P. (BAU)

**Overweight and obesity among the children or adults; women and children health and nutritional status and its relationship with socio-economy**

Bharati, S.

**Changes in basic amenities, awareness, socio-economy and child morbidity: A comparative study from NFHS-2 and NFHS-3**

Bharati, S., Pal, M. (ERU), Mitra, M. and Bharati, P. (BAU)

**Social Justice and Development: With Special Reference to Dalits in Eastern India**

Ghosh, T.

- **Contribution of the unpaid family labour in the handloom sector of textile industry.**
- **Labour market discrimination in India**
- **Child labour in handloom industry in Murshidabad district**
- **Female Employment in Meghalaya**
- **Gender inequality in morbidity pattern in India**

Chakraborty, S.

**Human- crocodile conflict in Indian Sundarban: an analysis of the spatio-temporal incidences in relation to people's livelihood**

Das, C. S. and Jana, R.

**Social Network Analysis Approach for Studying Livelihood Strategy of Rural People in India: An Empirical Attempt**

Jana, R. and Choudhuri, A.

***Economics and Planning Unit, Delhi***

The Economics and Planning Unit faculty continues to work on the cutting edge of economic research, both in theory, as well as empirical analysis. The unit currently has 23 Ph.D. students (13 Senior Research Fellows and 10 Junior Research Fellows). Members of the faculty teach a number of PhD and MSQE courses in macroeconomics, microeconomic theory, game theory, statistics and probability, panel data econometrics, mathematical economics, and development economics.

Research in the area of agriculture economics has looked at food supply chains, the welfare effects of trade liberalization, as well as the impact of climate change on welfare outcomes in the agriculture sector. Research in mechanism design and auction theory, long strength of the unit, continues. Recent work has explored the link between matching theory and mechanism design theory. The links between education, health, and other public goods and the distribution of income has been investigated theoretically. Social capital and collective action in the Himalayas, the impact of climate change on agriculture and manufacturing, the economics of groundwater depletion, and climate change and electricity demand in India are some of the environmental issues in India on which empirical research has been conducted. Declining labour force participation by women in rural India has been studied. There has also been recent work analyzing inter-caste marriages. In the field of health economics, gender bias in access to health care has been explored, as well as how health policy in India needs to be devised to meet the Sustainable Development Goals. The political economy of holdouts in land markets has also been studied. In macroeconomics, endogenous growth theory and optimal taxation continues to be active areas. Fiscal policy in small open economies is also an area of ongoing work. Research exploring the links between distortions in the agriculture sector and monetary policy using multi-sector NK DSGE models is also ongoing work. The link between myopia

## Research Activities

and pensions has also been explored in a macroeconomic setting. In microfinance ongoing work examines the institutional aspects behind success/failure of micro-finance. Other fundamental issues in the micro-finance literature, such as group vs. individual lending, various aspects of dynamic incentives, and the effect of competition have also been examined.

Below is a more detailed breakdown of research interests by faculty members.  
Areas of research by the members of the unit:

- **Why Are Fewer Married Women Working in Rural India? A Decomposition Analysis over Two Decades**
- **Student Responses to the Changing Content of School Meals in India**
- **Exposing Corruption: Can electoral competition discipline politicians?**
- **Information Provision and Learning Outcomes: Evidence from a Randomized Control Trial and**
- **Social Identity and Incentives in the workplace: A Quasi field experiment in India's Manufacturing Sector**

Afridi, F.

- **Optimal inheritance and capital taxes under the present-biased preferences**
- **Political intergenerational welfare state**
- **Myopia and pensions and**
- **Market for investment loans**

Bishnu, M.

- **On the role of aid selectivity in aid programs**
- **On the role of regulation in platform markets**
- **On holdout with land contiguity**
- **On the political economy of holdout in land acquisition**

Roy Chowdhury, P.

- **DSGE models with a banking sector,**
- **Small open economy models with fiscal policy**
- **A model of employment targeting with search and matching frictions.**

Ghate, C.

- **Gender bias in access to Healthcare**
- **Efficient utilisation of existing resources of healthcare facilities**
- **Distribution of healthcare resources between and within states to understand how health resources must be allocated to meet the SDGs**

Kapoor, M.

## Auctions and mechanism design

Mishra, D.

## Issues relating to the economics of education

Mukhopadhyay, A.

- **Food supply chains**
- **World food markets**
- **Welfare effects of trade liberalization, and**
- **Experimental economics**

Ramaswami, B.

- **Matching theory and mechanism design theory**

## Research Activities

- **Stability of matching rules for teams and implementation via undominated strategies in bounded mechanisms**

Sen, A.

- **Impact of climate change on agriculture and manufacturing**
- **Economics of groundwater depletion**

Somanathan, E.

- **Whose Education Matters? An Analysis of Inter Caste Marriages in India**
- **Untouchability: Cultural or Institutional? An Analysis of the Practice of Untouchability in India**
- **Impact of Education Loans on Higher Education: The Indian Experience**
- **Gender Peer Effects in High Schools: Evidence from India**
- **Public versus Private Provisioning: Role of Education and Political Participation**

Ray, T.

### ***Economic Analysis Unit, Bangalore***

Five Junior Research Fellows were taken for programme in Development Studies. Courses taught in the first year include Statistics, Applied Econometrics, Data Base of the Indian Economy, Development theory and policy, Poverty and Inequality. The research topics of the unit are:

#### **Research on Climate change and agricultural yields in Karnataka**

Swaminathan, M. and Jayaraman, T.

- **Research on Livelihoods and human development in Tripura**
- **Small Farmers in India: Evidence from Village Studies**

Swaminathan, M. and Ramachandran, V.K.

#### **Research on women workers of coffee industry using primary survey secondary sources**

Chattopadhyay, M. and Pais, J.

### **Statistical Quality Control and Operations Research Division**

The Division comprises of eight SQC & OR Units located at Bangalore, Chennai, Coimbatore, Delhi, Hyderabad, Kolkata, Mumbai and Pune and the Central SQC (CSQC) Office located in the main campus at Baranagore which co-ordinates the activities of the Division. The Division presently has 39 Faculty Members at different levels and designations.

The scientific workers of the Division are extensively involved in research, teaching, consultancy (with a special emphasis to enhance Quality and Productivity), editorial work, externally and internally funded project works and academic administration. The uniqueness of the Division is in carrying out research in application areas and disseminating Statistical Knowledge to a large section of the industry, and thus helping the country in enhancing Quality and Productivity of goods and services.

Research is carried out both at individual and collaborative/interdisciplinary levels. Training programs/workshops are organized on a regular basis.

The Division is instrumental in running the following Academic Programmes:

- M.Tech. (QROR) programme at Kolkata;
- M.S. (QMS) programme at Bangalore and Hyderabad;



## Research Activities

- Part-Time Certificate Course at Bangalore; and
- Part-Time Certificate Course at Hyderabad.

The faculty members of the division also teach in other academic programmes like B.Stat., M.Stat. (both Kolkata and Chennai), M.S. (LIS) (Bangalore). They also supervise Ph.D. thesis and Dissertation and Project work of M.Tech. (QROR), M.S. (QMS) and M.Stat. students.

Some of the main thrust areas of research of the Division during this period are: Generalized Positive Subdefinite Matrices and Interior Point Algorithm, Progressive type-I interval censoring with random removal; process capability indices; fuzzy optimization approach for software reliability estimation; Mathematical Programming and Multivariate Statistical Process Control.

The scientific workers of the Division published more than 35 papers in reputed international and national journals and colleagues also contributed towards editorial activities of monographs and journals.

Apart from the usual Industrial/Organisational consultancy projects, the Division has also taken up some very interesting and useful projects of National Importance like

- Improving the Quality Management System of a section of the Defence Production Industry,
- Developing a Sampling Scheme to estimate the amount of Fake Currency in circulation in the country,
- Developing a methodology to Normalise the scores of the students from Different Examination Boards,
- Developing an index for Cleanliness in order to assess the effectiveness of the "Swacch Bharat" Programme in different parts of Tamil Nadu.

The Division also caters to the needs of some of the industries abroad.

### ***SQC and OR Unit, Kolkata***

#### **On Generalized Positive Subdefinite Matrices and Interior Point Algorithm**

Das, A.K., Jana, R. and Deepmala

#### **On existence results for some nonlinear systems of equations**

Das, A. K., Deepmala, Jana, R.

#### **Impact on Noise Quality due to Highway and Infrastructure Development**

Mukhopadhyay, A. R.

#### **Point and interval estimation under progressive type-I interval censoring with random removal**

Pradhan, B. and Budhiraja, S.

#### **Acceptance Sampling Plan with progressive Type-I Interval Censoring with Random Removal using Cost Function**

Pradhan, B. and Budhiraja, S.

- **Generalized hybrid censored reliability acceptance sampling plans for the Weibull distribution**
- **Inference and optimum life testing plans under Type-II progressive hybrid censoring scheme**

Pradhan, B., Sen, T., Bhattacharya, R. and Tripathi, Y.M.

- **Process Control for Ordinal Data**

- **Process Control for joint monitoring of mean and variance**

Das, N.

**Assessing lifetime performance index of Weibull distributed products using progressive type II right censored samples**

Dey, S., Sharma, V.K., Anis, M.Z. and Yadav

**On some subtle misconceptions about process capability indices**

Anis, M.Z. and Md. Tahir

**Development of Risk Analytics towards Multidisciplinary Big-Data Study of Humanitarian Logistics for Disaster Response**

Das, P., Anis, M. Z and Sadhukhan, S.

**Modeling Multistage Process Monitoring and Fault Detection Strategies under Partial and Imprecise Information**

Das, P., Gauri, S.K. and Chatterjee, D.

**Development of System to Measure Cleanliness**

Bandyopadhyay, A., Biswas, A., Sett, R., Manna, D.K. and Raman, S.

**Assessment of Capability of MSME Sector**

Rajagopal, A. and Bandyopadhyay, A.

**Development of Holistic Production System**

Bandyopadhyay, A. and Sett, R.

**Estimation and Control of Prices of Agricultural Commodities**

Bandyopadhyay, A., Biswas, A., Sett, R., Manna, D.K. and Raman, S.

**Improvement of Government Service Delivery Systems**

Bandyopadhyay, A., Biswas, A., Sett, R. and Manna, D.K.

**Integrated shift and drift control of a growth process**

Mandal, P. and Chakraborty, S.

### ***SQC and OR Unit, Delhi***

**Mathematical Programming, Linear Complementarity Problem(LCP) and its generalizations, Optimization problem in graph theory, Matrix Theory (Study of Matrix Classes useful in Complementarity, Optimization and Game Theory), Non-cooperative games, Algorithms for Stochastic Games**

Neogy, S.K.

**Design of Experiments – Static Characteristics, Dynamic Characteristics and Categorical Characteristics in a multi response processes**

Chakravorty, R.

**Mathematical Programming, Matrix classes in Linear Complementarity Problem, Game theory**

Dubey, D.

Research Activities

***SQC and OR Unit, Bangalore***

- Simultaneous optimization of coding productivity and defect density at coding phase of software development process using Taguchi's loss function
- Development of a fuzzy optimization approach for software reliability estimation
- Development of an integrated EPC - SPC methodology for simultaneously monitoring multiple characteristics

John, B.

**A Study on Regression Models which are Insensitive to the Variation of Training Data from a stable Process**

Chowdhury, K.K. and Giri, H.

***SQC and OR Unit, Coimbatore***

**Textile Sector**

**Quality circle initiatives of female workers in control of hard waste in spinning mills**

Rajagopal, A.

**Control of TDS contribution from Bleaching process of knitted fabrics.**

Venkatraman, R. and Rajagopal, A.

**Safety stock in inventory control and management on for purchases in spinning.**

Narayanan, V. and Rajagopal, A.

**Optimum operation level for compressor loadings to textile machinery towards energy savings**

Chandran, V. and Rajagopal, A.

**Ensuring on-time delivery of Capital machines – eliminating shortage of child parts in an Italian collaborative post spinning machine assembly**

Sankara Kuthalam, P. and Rajagopal, A.

**Automobiles Sector**

**Multi pot - Multi plate Braking system for Agriculture tractor Design Improvement Design Optimization in Booster Tandem Master Cylinder assembly (TVS Brakes India)**

Ruban, and Rajagopal, A.

**Troubleshooting of rejection in Chain Sprockets of Two Wheelers in an OEM company**

Sri Vignesh, S. and Rajagopal, A.

**Software Sector**

**Less space More vehicles to park at same time – an allocation plan in an MNC. was carried out using queuing model**

Varadarajan, V. and Rajagopal, A.

**Lean Six Sigma approach of minimizing defects in software development projects**

Galraj, G.K. and Rajagopal, A.

**Scope for developing Software to fix specified defects in Customer support (Production) was carried down at MNC**

Ronald Paul, P. and Rajagopal, A.

**Detecting errors in Drawings of custom made Furniture for a German collaborative firm in Coimbatore**

Bharanidharan Raj, B. and Rajagopal, A.

**Finance Sector**

**Increasing earnings from the preparation of financial reports from the inputs of audio & transcripts by minimizing errors on BPO on errors financial reports**

Viswanathan, K. and Rajagopal, A.

**Environmental Sector**

**Zero effect of Radiation of Cell Towers beyond environmental norms conducted in MNC**

Anthony Cruze, M. and Rajagopal, A.

**Health Care Sector**

**Efficiency & Effectiveness of Housekeeping department in Multi-specialty Hospital an allocation problem of paramedical staff**

Solomon David, J. and Rajagopal, A.

**Cleanliness of hand to avoid secondary infection at ICU in healthcare**

Senthilkumar, S. and Rajagopal, A.

**Infrastructure**

**Reducing the cost of Production by identifying productivity of product mix (among several B products) in a Rock crusher plant**

Lakshmipathy, D. and Rajagopal, A.

**Food Processing**

**Service quality of Food court of MNCs – a win win approach**

Abimanyu, S. and Rajagopal, A.

**SME Sector**

**Defense purchase analytics of OFB for SEM among MSME**

Rajagopal, A., Venugopal, V. and Suresh, A.

**Engineering Sector**

**Quality improvement of petroleum dispensing product for Indian Markets and minimize the warranty claims from customers**

Selvaraj, R. and Rajagopal, A.

**Forecasting the sales for the next quarter – SMART solution for edible oil**

Sudhakar, C. and Rajagopal, A.

Research Activities

**Reduction of soldering defects of through hole connectors in printed circuit boards conducted at MNC Bangalore**

Nadukudy, V. and Rajagopal, A.

**Process design for reducing Customer returns of Castings**

Vignesh, V. and Rajagopal, A.

**Human Resource Sector**

**Reducing the attrition of workers in a textile spinning mill – A statistical diagnostics**

Rajagopal, A. and Lakshmiathy, D.

**Wholesome Excellence measuring the productivity after YOGA practices**

Raja, A. and Rajagopal, A.

***SQC and OR Unit, Hyderabad***

**Statistical Modelling, Credit Risk Modelling, Linear Complementarity Problem, Decision Support Systems, Fixed Point Theorems in Fuzzy Metric Spaces, Six Sigma, DOE, SPC, Text Data Mining, Generalized Gaussian Distributions (GGD)**

Murthy, G.S.R., Murthy, A.L.N., Murali Rao, G. and Subhani, S.M.

**Drugs Survey, National Haemovigilance Programme**

Murthy, G.S.R.

**Signal Review Panel**

Murthy, G.S.R. and Murthy, A.L.N.

***SQC and OR Unit, Mumbai***

**Process classification through Cp, Cpk and Taguchi's Loss function**

Sarkar, A.

**Multivariate Statistical Process Control**

Sikder, S.

***SQC and OR Unit, Pune***

**Six Sigma- Integration of approaches to synergies growth of an Organisation, Design for Six Sigma, Reliability and Data Analytic**

Rath, R.

**Library, Documentation and Information Sciences Division**

The Library, Documentation and Information Science Division has its Central Library located in Kolkata with a network of other libraries in ISI Bangalore Centre, ISI Delhi Centre, ISI Chennai Centre and NE Library, Tezpur. The scientific workers of this division have worked on different projects. The division has arranged workshop, conference, seminar and lecture on different fields of library and information science.

Main research areas are on the Annotated and Chronological History of Indian Statistical Institute, Restitution, Indexing and Editing of Old Photographs of ISI for historical illustration, Unification of Gold and Green OA Resources in the domain of Mathematics and Statistics where the OA service providers are using different retrieval software, different meta-data schema and more importantly different sets of retrieval techniques, Development of digital libraries including Shewhart collection, Haldane collection, Dissertations, working papers and others. This project deals with open source institutional repository software specially DSpace.

### **Central Library, Kolkata**

The Central Library occupies a unique place in academic and research activities of the Institute. The Central Library moved to its present location in 1978, and it occupies 5 floors (60000sq.ft) of a ten-storied building at Kolkata. It continues to function as the Eastern Regional Library of the National Board of Higher Mathematics [NBHM], Department of Atomic Energy, Government of India since 1989.

Over the years, the ISI Central Library has attained the distinction of being one of the richest libraries in India in the areas of mathematics, statistics, economics, theoretical computer science and related areas. To achieve the goals of the Library, following activities were undertaken during the year under report:

#### **Collection Development**

The Library maintains an excellent collection of books, journals, reports, rare and special collection, government publications, data-books, theses and other documents/ materials in print and electronic formats. During the year under report, the library accessioned 794 books were purchased from ISI budget, while 52 books were received on complimentary basis. The Library also accessioned more than 2700 bound volumes of journals and subscribed to 600 scholarly journal titles in print. More than 52 journal titles were received as complimentary and 95 titles in exchange with Sankhya. The library received and processed more than 2000 loose issues of journals. It classified and catalogued 829 new books. It also processed 140 titles on government reports/data-books etc. more than 200 government reports have been added. Beside this, the library has added a collection of 160 books in English and Bengali and in Hindi 83 books on literature, humanities, travel, health and recreation in its Statistical Workers' Circulating Library totaling its collection to around 40000. In addition to this, the library has about 32000 reprints.

#### **E-Resources**

The library has a good collection of electronic resources on different media and has access to several online journals/databases. During the year under report, the library has added approximately 600 e-books, 15 CDs & DVDs containing books and CDs on statistical data. The library has provided the online access to about 4000+ full-text journals. It has renewed the online database like MathSciNet, Science Direct, Springer Link through consortia. It has also subscribed to the IEL online of the IEEE/IEE publications, ACM Digital Library and Current Index to Statistics (CIS) on Web. The library has also subscribed to Census data, online database and statistical data sources available on CDs.

#### **Publications Exchange Programme**

The library maintains the publication exchange programme of 'Sankhya - the Indian Journal of Statistics' with 52 national and 23 international institutions/organizations. The 23 international agencies are from various countries of the world such as Bangladesh, Belgium, Brazil, Canada, China, Taiwan, Croatia, Czech Republic, Denmark, France, Hungary, Italy, Japan, Pakistan, Poland, Romania, Russia, Slovakia, Spain, Switzerland, Thailand, UK and USA. In exchange the Library has received 95 titles during the reporting period.

## Research Activities

### Membership

Membership of the ISI-Library is restricted to persons with post-graduate or equivalent academic qualification and interest in the objectives of the Institute. Faculty members, research scholars, students, research associates, visiting scientists, ISEC trainees, project-linked staff, project assistants, ISI-employees, outside students and the Institute members are eligible for the membership of the Institute Library. However, they have to apply for the membership of the library and receive a bar-coded Library Card. During this period, library membership was given to 325 persons and 970 readers were given special permission to use the library for a short period. Currently the total number of library member is 2548. Total number of members including staff, students and research scholars of the Institute is 960 in its Workers' Circulating Library.

### Services

The ISI-Library, since its inception has been providing a variety of library and information services to its users. The services presently being provided include:

**Web-OPAC:** Members use this facility to browse and search the database to see the status of a document including their own transactions.

#### **Lending/ Document Delivery Service:**

**Inter-library loan:** 42 Books and journals were borrowed from other libraries, while 125 books and journals were lent to other libraries.

**Current Awareness Service:** 12 monthly lists of current additions to the library were made available online.

**Self-Photocopying Service:** The library provided the Self-photocopying service in its periodical section, which was available everyday throughout the library hours. During this period 5000 pages were photocopied from the journals.

**Electronic Document Delivery Service:** Full-text articles and/or bibliographical data were provided through email from online resources. Besides electronic document delivery, 8000 pages of printouts were also supplied against demand.

**Online Full-Text Access to Journals/ Database:** During the period under review, the library has provided services from more than 4000+ online journals and major databases like MathSciNet, Econlit, ScienceDirect, Springer Link, IEL Online (IEEE/IEE Electronic Library), Wiley inter science, ACM Digital Library, CIS on WEB, OUP journal online consortia and JSTOR (Life science). The online access is available through campus-wide network.

**Reprographic & Photographic Service:** During the year, it provided around 409270 pages of photocopies, 662 graphic designs, 7901 scanned items, 3500+ pages of color and b/w pages of print outs, 18300 pages of color photocopies, and 966 spiral bindings. 853 pages were laminated. The Unit has developed a Digital Photo Archive of ISI. It has digitized all rare photographs of ISI since its inception.

The Unit is developing a digital archival repository comprising of ISI's old documents like ISI council proceedings, library's accession register, administrative documents, old letters of ISI's distinguished persons etc. that are preserved in paper document and microfilm. 17650 frames of microfilm/fiche have been digitized.

**Documentation Service:** A searchable bibliographic database has been prepared on scientific contributions made by the ISI scientists on all subject fields since 1934. The entries are currently being subjected to editing.

**General Enquiry Assistance & Consultation Service:** Assistance has been extended to 200 external visitors including participants of the Winter School, NBHM Nurture Programme, Summer Research School and visiting students of different institutions.

**Special Initiatives:**

Consortia arrangements: During the reporting year, the Library has further strengthened the consortia initiative by enhancing the electronic collection and online access to scholarly resources to cope up with the increasing subscription cost and diminishing budget.

Preservation and conservation: It has completed binding of more than 1000 physical volumes of journals. Lamination and de-acidification of 8 rare books of 2000 pages were completed. 120 books were fumigated and rare and out-of-print books were scanned and photocopied.

Institutional Repository (IR): A prototype of IR of ISI has been created. Currently it covers scientific writings of Professor P.C. Mahalanobis, full-text of 3000+ ISI research papers, full text of all convocation addresses, ISI Annual Report from 1933 to 2008 and 100 Ph.D theses.

**Digitization:** 40 books were digitized. These will be made available on the Web after the completion of the work.

***Library, Delhi***

Indian Statistical Institute, Delhi Centre, maintains an academic library, which aims to be a leading library in the fields of Economics, Mathematics, Statistics, Operations Research and Statistical Quality Control. The library caters mainly to the needs of bonafide students, scholars and staff of the Institute. However, it is also open for reference to academic and research users of other educational and scientific institutions of the city and its neighboring regions.

It is an automated library with an extensive collection of books, journals, CDs, reports, govt. publications and other documents in print and electronic formats. The ISI Delhi Centre library also act as one of the NBHM regional library of northern India and provides information resources to support academic and research activities in the areas of Mathematics, and allied subject areas. Some of the main activities of the library during the period under review were as under:

**Collection Development**

**Books:** The library accessioned 69 new books and 544 bound volumes during the year under report from the ISI and NBHM funds. The library also received 74 books as gift from different sources. Thus raising the current library stock both books and bound journals to 51576 volumes.

**Journals:** During the period under review 132 journals, both foreign as well as Indian have been renewed. 20 journals on gratis and 9 journals in exchange are being received in the library from various sources.

**Online Resources:** The library also participated consortia based subscription to electronic resources and provided users more than 700 full text electronic journals access including EconLit, SIAM e-journals, Current Index to Statistics, MathSciNet, IAOR, ScienceDirect, SpringerLink, JSTOR, Oxford Journals, Taylor & Francis, IEEE, INFORMS, AMS, IMS, Sankhya and many others.

**CDs:** The library has more than 570 CDs of different reference books and journals including databases.



## Research Activities

### Exchange Programme

Exchange program established with seven scientific institutions in the regions of China, Korea, Netherlands, Poland, Spain and Vietnam for getting their publications in exchange to our journal 'Sankhya'- Indian Journal of Statistics and "Texts and Readings in Mathematics" (book series).

### Library Services

**Circulation services:** During the period April 1 2016 to March 31, 2017, total 150 members, availed the lending facilities as permanent members of the library, whereas more than 200 users availed reference facilities of the library. More than 2400 publications have been circulated among the members.

**Reprographic services:** During the period under review more than 2000 pages have been photocopied and made available to users of the library and outsiders. Photocopy facilities were also provided to research scholars of neighboring institutes under NBHM programme.

**Electronic document delivery service:** In addition to Photocopy facilities, more than 1000 full-text articles (PDF files) were provided to the users.

**Current awareness service:** The following lists were brought out regularly from the Library:

- Monthly list of current periodicals
- New additions of books

**Web-OPAC Facility:** The users have been given *koha* Web OPAC access facilities on the Internet.

**Web Enable Library Services:** The library provides web enabled library service to users. The library web site contains information about the library its collection, services, rules, list of electronic journals, catalogues, databases, telephone directories, and online requisition forms etc. The contents of library web pages are regularly updated to serve the internal and external needs of users.

### Union Catalogue of Serials

The Indian Statistical Institute Delhi Centre library has developed this Union Catalogue of Serials database with a view to promote the new improved access to journal holdings among the users. The database stored the serial holdings information of 3 ISI Libraries i.e. Kolkata, Delhi and Bangalore. The tool provides a web based central access point to all print and electronic journal holdings information and can be search under Journal title, Keywords, ISSN, Item types, Alphabetical browse (A-Z) or even Library wise serial holdings.

### Library, Bangalore

Indian Statistical Institute Bangalore Centre Library is aiming to be identified as a model Library in the Indian Academic scenario. The Library is providing many modern Library Services using Internet and they are popularly known as Web based Information Services. Bangalore Centre Library has also initiated interactive applications for its users. The Library has developed a very distinguished collection in different knowledge domains namely Mathematics, Statistics, Systems science, Information Science, Economics, Quality management and Operations Research, Library and Information Science, Computation and Artificial Intelligence and so on. Various services are designed to meet the Information needs of the Faculty members, Students, Research Scholars and Visiting Scientists. Walk-in users from other Research Institutes and Universities are also permitted to use the Library. The following activities were undertaken by the library during the period October 2016 – March 2017.

### **Collection Development**

The Library purchased 113 books, received 186 books as gift during this period. The Library subscribed to 352 journals, 16 journals were subscribed from NBHM grants. Additionally Library has subscribed to "IEL ONLINE" giving access to journals and technical reports published by IEEE. The Library has 39 E-Books from World Scientific Publishing.

### **Library Collection**

Total no. of books is 30,466 and bound volumes are 19007.

### **Membership**

More than 260 registered users enjoyed the Library facilities and the services. In addition, facilities were extended to around 720 walk-in users during this period.

**Current Content Service:** Content pages of around 1600 journals have been scanned.

**Circulation Service:** Around 21208 books and 964 journals were circulated during this period. 200 loose issues of journals were issued to users overnight.

### **Inter-library Loan Service**

Due to good liaison amongst the local libraries, the library has been involving itself in providing Inter-library Loan Service.

**Document Delivery Service:** Under this service around 600 documents in pdf format were downloaded and supplied to the registered users.

**Reprographic Service:** During this period 28002 photocopies were supplied to the Library users.

**Web based Library Services:** The Library has devised various services using World Wide Web. They are all accessible at <http://www.isibang.ac.in/library>. Full-text Online journals were accessed through this website. The Library also provides access to various abstracting and indexing services.

## ***Library, Chennai***

Academic Library for Indian Statistical Institute Chennai Centre (ISIC) was started in 2011 to cater to the information needs, adding to the existing library of SQC & OR unit, at Taramani. This evolving library aims to a vibrant collection in the fields of Statistics, Applied Statistics, Mathematics, Computer Science, Statistical Quality Control and Operation Research making it prototypical in functioning, administration and unique in collection. Various services are provided for an efficient usage of library facilities by the students, faculty members, visiting scientists and research scholars. Researchers from other institutions are offered reference service.

### **Collection Development**

The Library maintains an excellent collection of books, journals, magazines, question papers, multimedia resources etc. During April 2016 – March 2017, 410 books were added raising the collection to 3525 books. Around 16 International online journals and 16 magazines were subscribed.

### **Technical Processing**

All the books were catalogued and the database entry, done in KOHA, the Library Automation Software, are updated in Z39.50 Standard bibliographic format. Web OPAC with accessibility and users' details are updated in the library database. Other services like Inter-Library Loan, content service, reprography service and document delivery service are initiated.

Research Activities

### **Web based library services**

It has remote access to more than 2000 e-journals accessible through ISI Kolkata Library procured under ISI Consortia.

### **Membership**

ISIC library has restricted access to postgraduate students, research scholars, faculty members and visiting scientists totaling to around 35. Institutional Membership were renewed with Indian Institute of Technology, Madras (IITM) and Interlibrary Loan with other ISI Centers and Units were activated.

### **Library Services**

Lending and document delivery service: Around 600 documents were delivered during the period April 2016 – March 2017, showing the active participation of the users. Automation of library with full setup of RFID was fully completed. Database was completed for ISI Chennai Centre Library, Taramani, SQC&OR Unit Library, Aminjikarai and ISI Chennai Centre Hostel library. Full automation of library was completed.

## ***Library, Tezpur***

ISI N-E centre Library started functioning from July 2011. The library aims to provide value services to its users by developing quality documents in the field of Statistics, Mathematics, Quantitative Economics and other allied subjects. The Library has good collection on the three main subjects. Further, it has limited collection in the fields of Computer Science, Soil Science, Library Science and Environmental Science etc. The ISIN-E Centre Library always tries to cater to the needs of user community.

The library installed the software KOHA in the year 2013 and then onwards all the circulation works are done through this software. In October, 2015, ISI N-E Centre Library upgraded its KOHA version from 3.02 to 3.20.

### **Collection Development**

ISI N-E Centre Library has an excellent collection of books, journals etc. In order to cater to the requirements of the user, the library has procured 128 new books in different fields during the 2016-17 session. Total number of books accessioned till date is 2600. The ISI N-E Centre Library also received 11 books from different sources as gift. The Library has 57 CDs of different reference books. The ISI N-E Centre Library has subscribed to 19 Indian and Foreign Journals and 5 Newspapers and 3 magazines during this period.

### **Technical Processing**

All the purchased books are technically processed.

### **Membership**

The main users of this Library are the students, faculty members, visiting scientists and staffs of the Institute. Total number of Library members in 2016-17 is 29. In addition, facilities were extended to around 50 users who participated in different workshops and seminars held in the institute.

### **Library Services**

**Circulation Service:** Around 500 books were circulated in this period.

**Web Opac:** Library members use this facility to browse and search the bibliographic database of the library and check the status of documents including their own transactions. The Library web page contains information about the Library, its collection, services, catalogue and list of Journals.

**Current Awareness Service:** Monthly book arrival list is regularly updated in the Library webpage.

**Electronic Document Delivery Service:** Under this service around 20 full-text articles and e-books in pdf format were downloaded and e-mailed to the students as per their requirement.

**Web Based Service:** Library has remote access to e-resources i.e., full-text and bibliographic databases from ISI Kolkata library website.

### ***Prasanta Chandra Mahalanobis Memorial Museum and Archives***

The Museum and Archives carried out regular up keeping programme for 752 exhibits through 91 panels and a collection of artifacts related to Professor Mahalanobis displayed in the ground floor, chatal, and Professor's residence along with the pest control programme for the whole building of Amrapali. Among other programmes a new project on 'Arrangement and description of archival collection of P.C. Mahalanobis Memorial Museum & Archives' has worked for the development of archival record management system. Under the project over 2,800 photographic documents and above nine hundred letters, manuscripts etc. have been identified, sorted and listed. Ten audio spools have been restored through CD conversion and 4600 nos. of archival documents have been digitized. Under the conservation programme 4,500 archival documents have been treated. Computerized fire alarm and display security system like surveillance camera has been installed in the museum galleries.

A new gallery on Rabindranath Tagore and Prasanta Chandra has been completed in this financial year.

Besides the general visitors, eminent persons and scientists and students from schools, colleges and universities were among the visitors of the museum. Scholars and researchers from different field consulted the archival collection for reference.

### ***Center for Soft Computing Research: A National Facility, Kolkata***

#### **Moving Object Segmentation from Video Images**

Dey, B. and Kundu, M.K.

#### **Rough Sets in Video Tracking**

Chakraborty, D. and Pal, S.K.

#### **Moving Object Detection**

Subudhi, B.N. and Ghosh, A.

#### **Remote Sensing Image Analysis**

Datta, A. and Ghosh, A.

#### **Image Co-segmentation**

Bandyopadhyay, S. and Ghosh, A.

#### **Granular Computing**

Ganivada, A., Ray, S.S. and Pal, S.K.

## Research Activities

### Network Mining

Kundu, S. and Pal, S.K.

### Understanding the Dynamics of User Interaction in Social Networks

Kundu, A. and Pal, S.K.

## Bio-informatics

### micro RNA Analysis

Pal, J.K., Ray, S.S. and Pal, S.K.

### Gene Regulatory Network Analysis

Ray, S.S.

### Quantum Inspired Evolutionary Computing

Das.S. and Pal, S.K.

### Cognitive Vision

Ghosh, K.

### Understanding Temporal Integration of External Stimuli in Human Cognition through Pyschophysical Studies on Flicker Fusion

Chandran, K.S. and Ghosh, K.

### Computing With Words (CWW) and Artificial General Intelligence (AGI)

Banerjee, R. and Pal, S.K.

### Climate informatics and climate change

Chatterjee, C. and Das, S.

## **Computer and Statistical Services Centre, Kolkata**

The IT infrastructures of the Institute was updated/ developed by the CSSC. The outlying Centres (Delhi, Chennai, Tezpur and Bengaluru) and the Giridhi Unit of the Institute were connected with Site-to-Site VPN (Virtual Private Network). The IT infrastructure of the Institute including server's virtualization (cloud), software [Vmware (esxi and Vcenter), Matlab, Mathematica, ArcGis, R etc], Network (wired and wifi), Network and Internet security, IP Telephones, Video conferencing facility, e-library and internet facilities (NKN - 1 gbps) were managed by the CSSC and used by all the Centers of the Institute as a LAN. The meetings including Academic Council meetings among the Institute's Centers (Delhi, Bengaluru, Chennai and Tezpur) and Giridhi Unit through Video Conferencing facilities were managed by the CSSC. The cloud infrastructure with virtualization software, Cisco UCS servers (304 cores/608 threads) and the EMC 260 TB storage were managed by the CSSC, providing the computing facility to the users of the Institute. The classes (M.Tech. in Computer Science and PGDA of ISI Tezpur) through video conferencing facilities were organized by the CSSC throughout the year. The Server of the accounting package FACT installed in ISI Kolkata was accessed from all outlying Centers and Unit through the Site-to-Site VPN connections for maintaining central accounts system of the Institute. The LAN (wire) connection with 100 mbps was provided to all the rooms of all the hostels excluding ISEC in the Kolkata campus. The wifi facility covering the ISEC hostel was installed. The backbone connections connected between all hostels (including Guest House) and CSSC was upgraded from 100 mbps to 10 Gbs facility. The CSSC arranged to provide Laptops and Desktops to the faculties, scientific staff and research scholars of the Institute. The CSSC also arranged to provide technical support to the Institute by Computer Trainees trained by the CSSC.

Members of CSSC took part in teaching different courses of the Institute and supervised project work of non-ISI students studying MCA, B.Tech. etc. In addition, it organized the following activities.

- i. **Regular course of M.Tech and B.Stat.:** Lab class on MySql and PHP
- ii. **Regular Course of PGDCA ISI, Giridih:** Teaching several Courses of Semester I and II
- iii. **Staff Training Program:** Under Professional Training & Development Scheme of ISI throughout of the year.

### 3. PROJECTS

#### Internally Funded Projects

##### Ongoing Projects

Sl. no.	Name of the project	Principal Investigator(s)	Unit(s) involved
<b>Theoretical Statistics and Mathematics Division</b>			
1.	Advances in Non Commutative Mathematics (ANCM)	B.V. Rajarama Bhat, TSSRK Rao & Jayadeb Sarkar	Stat-Math Unit, Bangalore
<b>Applied Statistics Division</b>			
1.	Understanding the classification of various protein families and protein-protein interaction networks	Pabitra Pal Choudhury	ASU, Kolkata
2.	Weight Selection in Multiple Hypothesis Testing	Kiranmoy Das	ISRU
<b>Computer and Communication Sciences Division</b>			
1.	GP-GPU Computing for Large Scale Networks (GPLN)	Nabanita Das	ACMU
2.	A Framework for Collaborative Application Execution for Mobile Cloud Computing (MCC)	A. Banerjee	ACMU
3.	Holy Grail of Error-Resilient Bio-Assay on a Lab-on-a-Chip (HERBAL)	B.B. Bhattacharya	ACMU
4.	Efficient Vertical Handover Techniques in Heterogeneous Wireless Networks (VHO)	S.C. Ghosh	ACMU
5.	Algorithms and Bounds for Dominating Set, Geodetic Set and Obstacle Number in Graphs	A. Bishnu	ACMU
6.	Development of Methodologies Towards Robust Reading of Old Degraded Bangla Printed Documents	S.K. Parui	CVPRU
7.	Administrative Document Analysis	T. Pal	CVPRU
8.	Video Text Understanding	U. Pal	CVPRU
9.	Information Retrieval from Microblogs	M. Mitra	CVPRU
10.	Unsupervised algorithms for deriving insights from text data and building intelligent query suggestion systems	D. Majumdar	CVPRU
11.	Separation of information streams in face image processing	G. Chatterjee	CVPRU
12.	Detection and assessment of image and video quality degradation	S. Palit	CVPRU
13.	Biometric System Design using Bio-hashing Approach	B. Chanda	ECSU
14.	Development of Nature Inspired Metaheuristics for Large Scale Engineering Optimization in Dynamic Environments	S. Das	ECSU

15.	Video Scene Segmentation and Classification	P.P. Mohanta	ECSU
16.	Eulerian Magnification of Video of Biomedical Interest	D.P. Mukherjee	ECSU
17.	Computational Intelligence Approaches for Finding Synergy Networks from Gene Expression Data	N.R. Pal	ECSU
18.	Secured Query Processing for Semantic Web Applications	P. Pal	ECSU
19.	Non-monotonic Reasoning using Disposition: An Approach to Common Sense Reasoning	K.S. Ray	ECSU
20.	Tracking of Moving Objects from Video Scenes using Pattern Classifiers	A. Ghosh	MIU
21.	Modeling Host-Pathogen Interactions	R.K. De	MIU
22.	Analyzing the structure and dynamics of large scale real world complex networks	C.A. Murthy	MIU
23.	Computational Methods for Studying HIV-1 Pathogenicity in Humans: Analysis over Multiple Infection Stages, Mechanisms and Biomolecular Networks	S. Bandyopadhyay	MIU
24.	Indian Language Spoken Document Retrieval	D.P. Mandal	MIU
25.	Computational Model of Brightness Perception in Images	K. Ghosh	MIU
26.	Development of Algorithms for miRNA Expression Analysis in Cancer	S.S. Ray	MIU
27.	Deep learning neural networks for pattern classification	S.K. Meher	SSIU
28.	Strategic reasoning in a dynamic world	S. Ghosh	CSU
29.	Intersection representations for graphs	M.C. Francis	CSU
<b>Physics and Earth Sciences Division</b>			
1.	Oxygenation of the Proterozoic ocean	A. Banerjee	GSU
2.	Field study of flow, salinity and sedimentation-erosion patterns in the Sundarban estuarine system	C. Chakraborty	GSU
3.	Sedimentology and stratigraphy of the Siwalik succession of eastern Himalaya and its bearing on the evolution of the Neogene foreland basin in the eastern Himalaya	T. Chakraborty	GSU
4.	Implications of biotic events present within the Mesozoic non-marine vertebrates of the Gondwana basins of peninsular India	D P. Sengupta & S. Bandyopadhyay	GSU
5.	Diversity, palaeobiogeography and palaeoecology of Miocene gastropods from India with special emphasis on Kutch, Gujarat	S.S. Das	GSU
6.	Archean greenstone belts in India – tectonics and sedimentation	D. Saha	GSU



Projects

7.	Sedimentological and geochemical characteristics of the Late Triassic – Middle Jurassic formations in a Gondwana succession of Pranhita-Godavari Valley Basin – clues for changes in depositional environment and palaeoclimate	P. Ghosh	GSU
8.	Tectonostratigraphic evolution of the Sonakhan Greenstone Belt: A link between Archaean greenstones and younger cratonic basins.	S. Patranabis-Deb	GSU
9.	Upkeep of Geology Museum at the Platinum Jubilee Academic Building	D.P. Sengupta	GSU
10.	Turbulence phenomena due to combined wave current flows over objects	S. Ghosh	PAMU
11.	Live-bed scour around Bridge abutment	S. Sarkar	PAMU
12.	Live-bed scour around Bridge pier	S. Sarkar	PAMU
<b>Biological Sciences Division</b>			
1.	Surface Functionalized Porous Nanomaterial Loaded Micronutrient Fertilizers for Gangetic Alluvial Soils	A. Goswami	AERU
2.	SYL-MNS-CEA-ZAAL-BER/API nanocomposite drug for Mongpa tribe neonates: Innovation from anthropo-cultural knowledge base	A. Goswami	AERU
3.	Generation of SSR marker in some mangroves from Sunderbans, India	S. Das	AERU
4.	Exploring Potential of Sweet Sorghum for Bio-Ethanol Production in West Bengal	S. Barik	AERU
5.	Fantastic yields in the system of rice intensification: fact or fallacy?	P. Banik	AERU
6.	Development of natural food preservatives from spices and herbs	R.R. Chattopadhyay	AERU
7.	Phytonematode problems of rice in Jharkhand: density, diversity and pathogenesis:	A. Mukherjee	AERU
8.	Biorational management of rice pests and diseases: evaluation of nanoparticle based and endophyte-mediated approaches	A. Mukherjee	AERU
9.	Study of soil carbon dynamics through integrated nutrient management in different agroecosystems of Assam	P. Bhattacharyya	AERU
10.	Parallel analysis of transport of contaminants in soil-plant systems in different soil types of eastern India: a sustainable approach	P. Bhattacharyya	AERU
11.	Determination of functional response under selective predation through experimentation and modeling	J. Chattopadhyay & S. Bhattacharya	AERU

12.	<i>Sterculia foetida</i> , L. – Eco-friendly, cost effective and rich sources of nutritious edible oil, animal food supplements as well as biofuel and its multimodal application to environmental perspectives.	S. Mandal Biswas	AERU
13.	Management Practices for growth, yield and quality of maize ( <i>Zea mays</i> L).	S. Adhikary	AERU
14.	Health Status and Survival Strategy of the tea garden labourers of locked tea gardens of Jalpaiguri district, West Bengal	S. Roy	BAU
15.	Living with age :An investigation on the urban poor	S. Mukhopadhyay	BAU
16.	Study of expression of OXPHOS related mitochondrial and nuclear genes from normal, leukoplakia and cancer tissues of oral cavity and importance in progression of disease.	B. Roy	HGU
17.	Genetic Mapping of rare variants, multivariate and longitudinal phenotypes	S. Ghosh	HGU
18.	On integrating several data sources in genetic association study	I. Mukhopadhyay	HGU
19.	Role of epigenetics in psoriasis: Identification of DNA methylation biomarker	R. Chatterjee	HGU
20.	Identification of epigenetic biomarkers in the cell free nucleic acids of the Oral Potentially Malignant Disorder (OPMD) and Oral Squamous Cell Carcinoma (OSCC) patients from eastern India.	R. Chatterjee	HGU
<b>Social Sciences Division</b>			
1.	Bayesian Incentive Compatible Mechanism Design	S. Roy	ERU
2.	Bangla Pronunciation Dictionary	N.S. Dash	LRU
3.	Safe School Survey	D.D. Roy	Psychology Research Unit
4.	Algorithmic High-frequency Trading using Machine Learning Techniques	D. Mukherjee	SOSU
5.	Fiscal Policy, Public Debt, and Emerging Market Economy Business Cycles	C. Ghatge, Chetan Dave (NYU-Abu Dhabi), Pawan Gopalakrishnan (RBI) & Suchismita Tarafdar (SNU)	EPU
6.	Why is the aggregate demand side channel of monetary transmission weak in India?	C. Ghatge, Parantap Basu (Durham), Pawan Gopalakrishnan (RBI), Shesadri	EPU

Projects

		Banerjee (CSSSC) & S. Gupta	
7.	An economic analysis of alternative treatment methods of ovarian cancer in India: An appraisal of economic burden, quality of life and mortality risk	P. Roy Chowdhury, Asima Mukhopadhyay (Tata Medical Centre), Zakir Husain (IIT Kgp), Mousumi Datta (Presidency U), Indrani Roy Chowdhury (JNU) & Jaydip Bhaumik (TMC)	EPU
8.	Simultaneous Borrowing and Saving in Microfinance	P. Roy Chowdhury & D. Dasgupta	EPU
9.	Persistence of Caste System in India: The Practice of Intra-Caste Marriage	T. Ray & A. Roy Chaudhuri	EPU
10.	Power Sharing Across Ethnic Groups In India	A. Roy Chaudhuri & Shampa Bhattacharjee (SNU)	EPU
11.	Impact of Expanding Choices on Household Calorie Consumption in India	T. Ray & A. Das Gupta	EPU
12.	Backward linkages in the provision of education: Effect of tertiary education on schooling	A. Mukhopadhyay, Shampa Bhattacharjee (SNU) & Nishant Chaddha (SNU)	EPU
13.	Linear correlation, basis risk and the design of index based crop insurance	B. Ramaswami & D. Singh Negi	EPU
14.	What drives career choice in urban India?	A. Mukhopadhyay, Tarun Jain (ISB) & Nishith Prakash (U. Conn)	EPU
15.	Identity, Networks and Labor Productivity	F. Afridi, Amrita Dhillon (King's College) & Sherry Xin Li (University of Texas,	EPU

		Dallas)	
16.	Council Characteristics of Gram Panchayats and Local Public Good Provision	B. Ramaswami & Sabyasachi Das (Yale University)	EPU
<b>Statistical Quality Control and Operations Research Division</b>			
1.	Modelling multistage Process Monitoring and Fault Detection Strategies under Partial and Imprecise Information	P. Das	SQC & OR Unit, Kolkata
2.	Development of Cleanliness Index and Budget Allocation System for Government of Tamil Nadu	A. Bandyopadhyay (PI), A. Biswas, R. Sett & D. Sampangi Raman	SQC & OR Unit, Kolkata & Chennai
<b>Library, Documentation and Information Sciences Division</b>			
1.	An Annotated Chronological History of Indian Statistical Institute	N. Ganguly	Library, Kolkata
2.	Development of Digital libraries : Shewhart collections, Haldane collections, Dissertations, working papers and others	A K. Pal	Library, Kolkata
3.	Arrangement and description of archival collection of P.C. Mahalanobis Memorial Museum & Archives'	K. Bhattacharya & N. Ganguly	PCM Memorial Museum & Archives

**Completed Projects**

Sl. No.	Name of the project	Principal Investigator(s)	Unit(s) involved
<b>Theoretical Statistics and Mathematics Division</b>			
1.	Algebra Discussion meeting on Polinomial rings	Mrinal Kanti Das	Stat-Math Unit, Kolkata
2.	Ashok Maitra Memorial Lectures on Probability	Antar Bandyopadhyay & Krishanu Maulik	Stat-Math Unit, Delhi & Kolkata
<b>Applied Statistics Division</b>			
1.	Understanding genes and genomes through the Fractals and Mathematical Morphology	Pabitra Pal Choudhury	ASU, Kolkata
<b>Computer and Communication Sciences Division</b>			
1.	Localizability Testing for Wireless Sensor Networks (LTWSN)	K. Mukhopadhyaya	ACMU
2.	Logic Synthesis for Quantum Computing (QCS)	S. Sur-Kolay	ACMU

Projects

3.	Voronoi Game	S. Das	ACMU
4.	Massive Data Algorithms	S.C. Nandy	ACMU
5.	Intelligent Transportation System (ITS)	B.P. Sinha	ACMU
6.	Biomedical Natural Language Processing (BioNLP)	U. Garain	CVPRU
7.	User Adaptive Online Handwriting Recognition	U. Bhattacharya	CVPRU
8.	Algorithms for Blind Quality Assessment of Images, Tamper Detection and Correction	S. Palit	CVPRU
9.	Integrating CT Images with Gene Expressions using Soft Computing	S. Mitra	MIU
10.	Development of Rough Set Based Approaches for Identification of Co-Expressed miRNAs	P. Maji	MIU
11.	Binary Code for the Brain	K. Majumdar	SSIU
<b>Physics and Earth Sciences Division</b>			
1.	Fault zones, fractals and crustal deformation in the Western Himalaya	D. Saha	GSU
2.	Stratigraphic analysis of the Cuddapah, Bhima and Kaladgi succession: implications for Palaeoproterozoic to Neoproterozoic lithospheric dynamics	S. Patranabis-Deb	GSU
3.	A comprehensive study on vertebrate faunal assemblage of Jurassic Kota Formation, Pranhita-Godavari basin, India	D. Mukherjee	GSU
4.	Study of Caenozoic molluscan diversity from western India with special emphasis on systematics, evolutionary trends and palaeoecological interactions	S.S. Das	GSU
5.	Numerical models of fluid flow in Cuddapah basin: Implication for Mineralization	A. Banerjee	GSU
6.	Simulation of Hawking effect in analogue (fluid) gravity model	S. Ghosh	PAMU
<b>Biological Sciences Division</b>			
1.	Competition or facilitation between two invasive plants?	A. Dewanji	AERU
<b>Social Sciences Division</b>			
1.	Orientation training program on data analytics in Psychological research	D. Dutta Roy	Psychology Research Unit
2.	To Contest or Not to Contest: An Explanation for so Few Women in Politics	M. Kapoor	EPU
3.	Conditional foreign aid, gradualism, and interim aid diversion	P. Roy Chowdhury	EPU

Projects

4.	Where do private schools locate themselves?	A. Mukhopadhyay, Pushkar Maitra (Monash University) & S. Sahoo	EPU
5.	Evaluating the Consumption Effect of Trade	B. Ramaswami & S. Bandhopadhyay	EPU
6.	Livelihoods, homestead farming & Human Development in Tripura	M. Swaminathan	EAU
<b>Statistical Quality Control and Operations Research Division</b>			
1.	Development of Risk Analytics towards Multidisciplinary Big-Data Study of Humanitarian Logistics for Disaster Response	P. Das & M.Z. Anis	SQC & OR Unit, Kolkata
2.	Annual Six Sigma Project	Head, SQC & OR Unit, Bangalore	SQC & OR Unit, Bangalore
3.	Workshop on Statistical Techniques for Research Methodology	Ashok Sarkar	SQC & OR Unit, Mumbai & Chennai
4.	Analysis of attrition and absence of Labour in textile mills	A. Rajagopal	SQC & OR Unit, Coimbatore

**Externally Funded Projects**

**Ongoing Projects**

Sl. no.	Name of the project	Principal Investigator(s)	Unit(s) involved	Funded by
<b>Theoretical Statistics and Mathematics Division</b>				
1.	J.C. Bose Fellowship	Debashish Goswami	Stat-Math Unit, Kolkata	DST
2.	J.C. Bose Fellowship	Arup Bose	Stat-Math Unit, Kolkata	DST
3.	Risk Analysis, Ruin and Extremes (RARE)	Krishanu Maulik & Parthanil Roy	Stat-Math Unit, Kolkata	Marie Curie Research Staff Exchange Fellowship from the 7 <sup>th</sup> European Community Framework Programme
4.	Microsoft Research India: Unrestricted Research Grant	Krishanu Maulik & Ansuman Banerjee	Stat-Math Unit, Kolkata & ACMU	Microsoft Research India
5.	J.C. Bose Fellowship	R.B. Bapat	Stat-Math Unit, Delhi	DST, Govt. of India
6.	BOBASIO Region Airspace Safety Assessment Study	Antar Bandyopadhyay	Stat-Math Unit, Delhi	Airport Authority of India

Projects

7.	Exponential Diophantine Equations: Resolution of some well-known Diophantine equations	Shanta Laishram	Stat-Math Unit, Delhi	Ministry of Defence, Government of India
8.	Implementation of the Attacks on Elliptic Curve Discrete Log Problem	Shanta Laishram	Stat-Math Unit, Delhi	Ministry of Defence, Government of India
9.	SERB Women Excellence	Tanvi Jain	Stat-Math Unit, Delhi	SERB
10.	E <sub>0</sub> -semigroups: classification and invariants	B.V. Rajarama Bhat & Daniel Markiewicz	Stat-Math Unit, Bangalore	UGC
11.	Uniqueness for Stochastic Partial Differential Equations	Siva Athreya & Leonid Mytnik	Stat-Math Unit, Bangalore	UGC
12.	Etale Fundamental groups	Manish Kumar & Lior Bary-Soroker	Stat-Math Unit, Bangalore	UGC
13.	Mathematical Examination of a Load Forecasting Model	Mohan Delampady, B.V. Rajarama Bhat, V.R. Padmawar & Soumen Dey	Stat-Math Unit, Bangalore	Hitachi India Limited, Bangalore
14.	J C Bose Fellowship project	B.V. Rajarama Bhat	Stat-Math Unit, Bangalore	Science and Engineering Research Board
15.	Contractive Hilbert modules	Jayadeb Sarkar	Stat-Math Unit, Bangalore	NBHM research project
<b>Applied Statistics Division</b>				
1.	IBM Award	Atanu Biswas	ASU, Kolkata	IBM
2.	Mathematical Examination of a Load Forecasting Model	Mohan Delampady	ASU, Chennai & Stat-Math Unit, Bangalore	Hitachi India Private Limited
3.	Robust minimum divergence inferences for Non-Standard data problems: Emphasis on Censored, Longitudinal and Highdimensional data and Machine Learning and Multi Sample set ups	Abhik Ghosh	ISRU	DST

<b>Computer and Communication Sciences Division</b>				
1.	Automatic Sample Preparation and Validation of Biochemical Assays on a Microfluidic Lab-on-a-Chip (LoC)	B.B. Bhattacharya	ACMU	India-Taiwan Joint Research Programme in Science & Technology
2.	Delay Fault Modeling and Test Generation for Power Supply Noise	S. Sur-Kolay & B.B. Bhattacharya	ACMU	Intel Corporation, USA
3.	Design for Manufacturability Aware Global Routing	S. Sur-Kolay	ACMU	IBM, USA
4.	Lithography Aware Physical Design for Below 20nm Process Technology	S. Sur-Kolay	ACMU	Indo-Taiwan Joint Research Programme in Science & Technology
5.	A Framework for Response Time Analysis for Embedded Programs on Modern Processors	A. Banerjee	ACMU	Advanced Systems Lab Hyderabad, DRDO, Govt. of India
6.	An Equivalence Checking Framework for Vulnerability Assessment for FPGA-Based Design Flows	A. Banerjee	ACMU	Centre for Artificial Intelligence and Robotics, DRDO, Govt. of India
7.	Binary Analysis for Software Security	A. Banerjee	ACMU	Scientific Analysis Group, DRDO, Govt. of India
8.	Development of Online Handwriting Recognition System for Indian Languages – Phase II	S.K. Parui	CVPRU	Department of Information Technology, Govt. of India
9.	Development of Cross Lingual Information Access System – Phase II	M. Mitra	CVPRU	Department of Information Technology, Govt. of India
10.	The cognitive architecture of face-processing – understanding the separation of information streams	G. Chatterjee	CVPRU	DST - INSA
11.	Analysis, Recognition and Synthesis of Facial Expressions	S. Agarwal & D.P. Mukherjee	ECSU	DST
12.	Digital Image Reconstruction of Indian Cultural Heritage with focus on Hampi Ruins	B. Chanda	ECSU	DST
13.	Identification of Bainite and Martensite from Steel Micrographs	P. Das & D.P. Mukherjee	SQC & OR Unit, Kolkata & ECSU	Tata Steel
14.	Planogram Image Matching	D.P. Mukherjee	ECSU	TCS



Projects

15.	Analysis and Modelling of Atmospheric Pollutant over Indo Gangetic Plain	S. Pal	ECSU	CSIR
16.	MOBILE+ project: a network project involving various Indian and European Institutes	A. Ghosh	MIU	European Commission
17.	Recognition of Antinuclear Antibodies by Automated HEp-2 Cell IIF Image Analysis for Diagnosis of Connective Tissue Disease	P. Maji	MIU	DST, Gol
18.	Development of Computational Techniques to Integrate Multimodal, Multiscale Omics and Imaging Data for Cancer Diagnosis and Prognosis	P. Maji	MIU	DeitY, Gol
19.	Training Programme of Tata Consultancy Services Limited IGP	C.A. Murthy	MIU	TCS, Kolkata
20.	A big data perspective for energy management in smart grids and dwellings (BiDEE: Big Data in Energy management)	Ujjwal Maulik, (Jadavpur University), Sanghamitra Bandyopadhyay, Stéphane Ploix, (Grenoble INP) & Corinne Touati, (INRIA)	MIU	Indo-French Center for Promotion of Advanced Research
21.	Land Cover Classification of Remote Sensing Images Using Granular Computing Methodologies	Saroj K. Meher	SSIU	DST-SERB, Govt. of India
22.	Quantitative Characterization of Complex Topologically Prominent Components of Porous Media derived from Rocks of Petrologic Significance via Mathematical Morphology and Fractal Geometry	B.S. Daya Sagar	SSIU	DST-SERB, Govt. of India
23.	Quantitative Morphologic and Scaling Analyses of Lunar Digital Elevation Models (LDEM) Derived from TMC Data of Chandrayaan-1 Mission via Mathematical Morphology and Fractal Geometry	B.S. Daya Sagar	SSIU	ISRO-Chandrayaan, Govt. of India
24.	Quantification of neural information and subsequent coding scheme	Kaushik Majumdar	SSIU	DBT, Govt. of India
25.	Automatic detection of micro-seizures and a study on how they evolve into macro-seizures	Kaushik Majumdar, Florian Mormann (Department of Epileptology, University of Bonn, Germany)	SSIU	DBT & German Ministry of Education

26.	INSPIRE Faculty Award – Structural & algorithmic study of some geometric intersection graph classes	Mathew C. Francis	CSU	DST
27.	NetApp Faculty Fellowship	Sushmita Ruj	CSRU	NetApp Inc, USA
28.	Samsung GRO	Sushmita Ruj	CSRU	Samsung Electronics, Korea
<b>Physics and Earth Sciences Division</b>				
1.	New Statistical Techniques to Identify Modified Gravity as the Source of Cosmic Acceleration	U. Alam	PAMU	DST
2.	Quest for Dark Matter and Inflation	A. Chatterjee	PAMU	DST
3.	Some Current Quantum Mechanical Problems in Linear and Nonlinear Quantum Systems	A. Sinha	PAMU	DST
4.	Macroscopic dynamics in ensembles of dynamical systems: some challenging issues	D. Ghosh	PAMU	DST
<b>Biological Sciences Division</b>				
1.	Development of information on Agricultural and Horticultural production using RS and GIS technology in some district of West Bengal	P. Banik	AERU	DST, Govt. of WB
2.	Studies on keeping quality of different types of tea (Black, Green, Oolong & White) and their biochemical aspects & antioxidant properties	S. Das	AERU	NTRF
3.	Evidence theory based uncertainty analysis of ground water flow and contaminant transport	I. Mukhopadhyay	HGU	Department of Atomic Energy, Govt. of India
4.	Statistical methods to detect epistasis and gene-environment interactions in genetic association study	I. Mukhopadhyay	HGU	Dept. of Science and Technology, Govt. of India
5.	Non-invasive identification and validation of Epigenetic biomarker in saliva for early detection of Oral pre-cancer and cancer patients in India.	R. Chatterjee	HGU	Council of Scientific and Industrial Research (CSIR), Govt. of India
6.	Identification of Genetic and Epigenetic Associations Among Psoriasis patients in India	R. Chatterjee	HGU	SERB, Dept. of Science and Technology, Govt. of India
7.	Identification of the contribution of Human Leukocyte Antigen (HLA) alleles and functional coding variants to the risk of psoriasis in patients from West Bengal	R. Chatterjee	HGU	Department of Biotechnology, Govt. of WB

Projects

<b>Social Sciences Division</b>				
1.	Evaluation Study on Boarder Area (BADP) Cluster – B	B. Ghosh	ERU	Planning Commission, Government of India
2.	Evaluation Study on Boarder Area (BADP) Cluster – C	B. Ghosh	ERU	Planning Commission, Government of India
3.	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): Himachal Pradesh, Jammu & Kashmir and Uttarakhand	B. Ghosh	ERU	Planning Commission, Government of India
4.	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA): All India Coordination Report	B. Ghosh	ERU	Planning Commission, Government of India
5.	Informal Insurance Under Group Lending with Individual Liability: Evidence from India	A. Sarkar	ERU	IGC, London School of Economics, London
6.	Gender Violence in India: Its Roots, Nature and Extent	C. Sharma Biswas	ERU	ICSSR, Govt. of India
7.	Children's World: International Survey of Children's Well-Being	S. Das	ERU	Goethe University, Germany
8.	Indian Language Corpora Initiative-Bangla-2 (ILCI-2)	N.S. Dash	LRU	DeitY, MCIT, Govt. of India
9.	Poverty and Aspiration	S. Mitra	SOSU	ESRC grant through CAGE, Warwick University, UK
10.	Reviewing the existing system of compilation of trade indices	N. Chattopadhyay	SOSU	DGCI & S, Govt. of India
11.	IGP Project on evaluating the framework of various tests conducted	N. Chattopadhyay	SOSU	Tata Consultancy Services Limited (TCS ion)
12.	Design and Conc. Evaluation of Foreign Trade Policy	N. Chattopadhyay	SOSU	DGCI&S, Govt. of India
13.	Statistics and its applications for RBI Officers	N. Chattopadhyay	SOSU	Reserve Bank of India
14.	Manchester University-ISI Project on Political Economy	S. Mitra	SOSU	ESRC Grant, Manchester University
15.	Socio-Economic Impact of National Highways	N. Chattopadhyay	SOSU	National Highways Authority of India
16.	Women and Work in Rural India	F. Afridi & A. Mukhopadhyay	EPU	IGC

17.	Terms of Trade Shocks and Monetary Policy in India	C. Ghate, Debdulal Mallick (Deakin University) & S. Gupta	EPU	IGC
<b>Statistical Quality Control and Operations Research Division</b>				
1.	Development of Quality System – Ordnance Factory, Ambajhari, Nagpur	R. Sett & A. Bandyopadhyay	SQC & OR Unit, Kolkata	Ordnance Factory
2.	Estimation of Quantum of FICN (fake Indian currency note) in Circulation	A. Gupta, A. Banerjee, D.K. Manna, R. Sett & A.K. Das	SQC & OR Unit, Kolkata	NIA, Ministry of Home Affairs, Govt. of India
3.	Normalization of Marks with Admission Committee for Professional courses	A.K. Chakraborty	SQC & OR Unit, Kolkata	Government of Gujarat
4.	Six Sigma Training & Implementation	A.K. Chakraborty & A. Roy Chowdhury	SQC & OR Unit, Bangalore & Kolkata	ITC, Bollaram, ITC Triveni, ITC, Kovai
5.	Six Sigma Training & Implementation	S. Ray, A. Roy Chowdhury & E V Gijo	SQC & OR Unit, Bangalore	HAL Management Academy, Bangalore
6.	Six sigma Training & Implementation	U.H. Acharya & K.K. Chowdhury	SQC & OR Unit, Bangalore	TVS Motors, Hosur
7.	Six sigma Training & Implementation	U.H. Acharya	SQC & OR Unit, Bangalore	FIAT, Pune
8.	Facilitation and guidance for statistical modelling	B. John	SQC & OR Unit, Bangalore	Hewlett Packard (Global Soft)
9.	Certification program on Six Sigma Black Belt	K.K. Chowdhury & B. John	SQC & OR Unit, Bangalore	Huawei Technologies
10.	Training program on Six Sigma tools and techniques	B. John	SQC & OR Unit, Bangalore	MeritTrac Services
11.	Program on business analytics	A. Banerjee & B. John	SQC & OR Unit, Kolkata & Bangalore	Infosys
12.	Program on business analytics	A. Banerjee, B. John	SQC & OR Unit, Kolkata,	L&T Infotech

Projects

		& A. Sarkar	Bangalore & Mumbai	
13.	Six Sigma Training & Implementation	S. Ray & U.H. Acharya	SQC & OR Unit, Bangalore	DU, Dubai
14.	Six Sigma Training & Implementation	S. Ray	SQC & OR Unit, Bangalore	Aditya Birla Fashion & Retail Limited, Bangalore
15.	Six Sigma Training & Implementation	S. Ray	SQC & OR Unit, Bangalore	Mother Dairy, New Delhi
16.	Program on Design of Experiments	B. John	SQC & OR Unit, Bangalore	Titan Jewellery Division (Tanishq), Hosur
17.	Program on Business Analytics	A. Sarkar & B. John	SQC & OR Unit, Mumbai & Bangalore	Adani Power, Ahmedabad
18.	Program on Business Analytics	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Airbus India, Bangalore
19.	Design & Development of Risk Based Sampling Methodology	G. Murali Rao & A.L.N. Murthy	SQC & OR Unit, Hyderabad	SBI Associate Banks
20.	Six Sigma Training and Guidance on Six Sigma Projects	A.L.N. Murthy & G. Murali Rao	SQC & OR Unit, Hyderabad	ITC Limited – PSPD, Bhadrachalam
21.	Design & Development of Risk Based Sampling Methodology for Internal Verification Audit	A.L.N. Murthy & G. Murali Rao	SQC & OR Unit, Hyderabad	State Bank of India
22.	International Passenger Survey	A. Sengupta & S.M. Subhani	ASU, Kolkata & SQC & OR Unit, Hyderabad	Government of India
23.	Evaluation of the Status of Implementation of Robust Methodology for Estimation of Agricultural Power Consumption and Development of Audit System	G.S.R. Murthy	SQC & OR Unit, Hyderabad	Telangana State Electricity Regulatory Commission
24.	Design & Development of Risk Based Sampling Methodology	G. Murali Rao & A.L.N. Murthy	SQC & OR Unit, Hyderabad	SBI Associate Banks
25.	Quality System Implementation at crusher	A. Rajagopal	SQC & OR Unit, Coimbatore	SRC Projects, Salem
26.	Increasing the outsourcing and vender identification for	A. Rajagopal	SQC & OR Unit, Coimbatore	TCTP, Erode
27.	Cotton lot classification and K mean algorithm	A. Rajagopal	SQC & OR Unit, Coimbatore	MYK, Hyderabad

Projects

28.	Revision of QMS and ISO 9001:2015 standards	A. Rajagopal	SQC & OR Unit, Coimbatore	Bannari Amman, Dindigul
29.	Continual Improvement Studies through data analytics ISO compliance	A. Rajagopal	SQC & OR Unit, Coimbatore	Shiva Texyarn Unit - II
30.	QMS Audit	A. Rajagopal	SQC & OR Unit, Coimbatore	SRC Projects, Salem
31.	DFSS implementation	S. Rath	SQC & OR Unit, Pune	Technova Imaging Systems Ltd
32.	Six Sigma Champion Program	S. Rath	SQC & OR Unit, Pune	TACO Group
33.	Six Sigma Champion Program	S. Rath	SQC & OR Unit, Pune	Bilcare
34.	DFSS Champion Programs	S. Rath	SQC & OR Unit, Pune	Asian Paints
35.	Data Analytic Program	S. Rath	SQC & OR Unit, Pune	Vodafone International
36.	Six Sigma Black-Belt Public Program	S. Rath	SQC & OR Unit, Pune	Participants
37.	Six Sigma Master Black-Belt Public Program	S. Rath	SQC & OR Unit, Pune	Participants
38.	Data Analytic Programs	S. Rath	SQC & OR Unit, Pune	Participants
39.	Six Black-Belt Program	S. Rath	SQC & OR Unit, Pune	Gallagher Operations Support Services Pvt. Ltd., Pune
40.	Six Sigma Deployment Program	S. Rath	SQC & OR Unit, Pune	TACO Group
41.	Six Sigma Black-belt Public Program	S. Rath	SQC & OR Unit, Pune	Participants
42.	Six Sigma Green-Belt Program	S. Rath	SQC & OR Unit, Pune	Symbiosys Institute of Business Management, Lavale
43.	Six Sigma Master Black-Belt Public Program	S. Rath	SQC & OR Unit, Pune	Participants
<b>Centre for Soft Computing Research: A National Facility</b>				
1.	J.C. Bose Fellowship	S.K. Pal	CSCR	DST, Govt. of India
2.	DAE Raja Ramanna Fellowship	S. K. Pal	CSCR	Department of Atomic Energy, Govt. of India
3.	Erasmus Mundus External Cooperation Window (EMECW)	A. Ghosh	CSCR	European Commission
4.	DST INSPIRE Faculty Award	S. Das	CSCR	DST, Govt. of India
5.	NavIC-GAGAN Utilization Programme at SAC, Ahmedabad	S. Das	CSCR	ISRO

Projects

**Completed Projects**

Sl. no.	Name of the project	Principal Investigator(s)	Unit(s) involved	Funded by
<b>Theoretical Statistics and Mathematics Division</b>				
1.	Diophantine Equations With Product of integers in Arithmetic Progressions	Shanta Laishram	Stat-Math Unit, Delhi	Ministry of Defence, Government of India
<b>Computer and Communication Sciences Division</b>				
1.	Indo-Japan Cooperative project	Sushmita Ruj & Kouichi Sakurai	CSRU	DST-JSPS
2.	Ontology and Metadata	Biswanath Dutta	DRTC	Youribot Limited, Hong Kong China
<b>Physics and Earth Sciences Division</b>				
1.	Vertebrate microfossils from the Tiki Formation of the Rewa Gondwana basin: an integrated study on Upper Triassic biodiversity	S. Bandyopadhyay	GSU	SERB, DST
2.	Jurassic Gondwana Vertebrates of India: An Integrated Study on Palaeobiology	D. Mukherjee	GSU	SERB, DST
3.	Synchronization, Clustering and death in Networks of Complex Systems (Theory and Application to Biology and Neurophysiology)	D. Ghosh	PAMU	DST, New Delhi and Russian Federation of Basic Research (RFBR), Russia
<b>Social Sciences Division</b>				
1.	Price Escalation Verification	A. Majumder	ERU	Coal India Limited
2.	Estimation of demand for banknotes and coins	N. Chattopadhyay	SOSU	Reserve Bank Of India
3.	ISI-RBI collaboration research project	D. Mukherjee	SOSU	Reserve Bank of India
<b>Statistical Quality Control and Operations Research Division</b>				
1.	Talent Development and Support in the area of Business Analytics	A. Bandyopadhyay, A. Sarkar & B. John	SQC & OR Unit, Bangalore, Mumbai & Kolkata	L&T Infotech Ltd.
2.	Six Sigma training and Implementation	A. Kumar Chakraborty, P. Mandal S. Ray	SQC & OR Unit Kolkata, Bangalore, Hyderabad,	ITC, PSPD

Projects

		A. Roy Chowdhury & D. Sampangi Raman	& Chennai	
3.	Talent Development and Support in the area of Business Analytics	A. Bandyopadhyay & B. John	SQC & OR Unit, Bangalore & Kolkata	Infosys Technologies Ltd.
4.	Development of Sampling Scheme	R. Sett	SQC & OR Unit, Kolkata	ITC LTD., Unit Tribeni
5.	Deployment of Six Sigma	P. Mandal	SQC & OR Unit, Kolkata	J. K. Paper Ltd., Rayagada, Orissa
6.	Module-wise Training on Statistical Techniques	E. V. Gijo, A. Roy Chowdhury & S. Ray	SQC & OR Unit, Bangalore	Biocon Ltd., Bangalore
7.	Six Sigma Black Belt Training	E.V. Gijo	SQC & OR Unit, Bangalore	Crossdomain Solutions, Bangalore (Gallagher Operations Support Services Pvt Ltd)
8.	Certification program on Six Sigma Black Belt	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Hinduja Global Solutions
9.	Program on business analytics	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Deloitte, Hyderabad
10.	Program on advanced data analysis	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Hewlett Packard (Global Analytics)
11.	Certification program on Six Sigma Green Belt	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Hinduja Global Solutions
12.	Program on business analytics	B. John & K.K. Chowdhury	SQC & OR Unit, Bangalore	Deloitte, Mumbai
13.	Program on Business Forecasting	K.K. Chowdhury & B. John	SQC & OR Unit, Bangalore	Society for Indian Automobile Manufacturers
14.	Certification program on "Design for Six Sigma" -Green Belt	K.K. Chowdhury	SQC & OR Unit, Bangalore	Hollingsworth & Vose India, Mysore
15.	Certification program on "Design for Six Sigma" -Green Belt	K.K. Chowdhury & U.H. Acharya	SQC & OR Unit, Bangalore	TVS Motor, Hosur



Projects

16.	SPC Training	P.K. Perumallu	SQC & OR Unit, Bangalore	Centum Electronics
17.	Training Program on Reliability Engineering	P.K. Perumallu.	SQC & OR Unit, Bangalore	Centum Electronics
18.	SPC Implementation	P.K. Perumallu.	SQC & OR Unit, Bangalore	Centum Electronics
19.	DoE for QbD	A.L.N. Murthy & G. Murali Rao	SQC & OR Unit, Hyderabad	Sai Life Sciences Limited
20.	National Haemovigilance Programme of India	G.S.R. Murthy	SQC & OR Unit, Hyderabad	National Institute of Biologicals
21.	Statistical Process Control (SPC)	A. Sarkar	SQC & OR Unit, Mumbai	H&R Johnson (India)
22.	Reliability & Defect prevention	A. Sarkar	SQC & OR Unit, Mumbai	Naval Armament Inspectorate (NAI), Karanja
23.	Six Sigma Green Belt training program	S. Sikder	SQC & OR Unit, Mumbai	L&T EBG, Mumbai
24.	Six Sigma Black Belt (BB) training program	S. Sikder	SQC & OR Unit, Mumbai	Naval Armament Inspectorate (NAI), Karanja
25.	Six Sigma Training	A. Sarkar	SQC & OR Unit, Mumbai	CBE, Aditya Birla Group Companies
26.	Six Sigma Green Belt training program	A. Sarkar	SQC & OR Unit, Mumbai	XIMB, Bhubaneswar
27.	Statistical Process Control (SPC)	A. Sarkar	SQC & OR Unit, Mumbai	Jindal Steel and Power
28.	Development of Buying Propensity Index	A. Sarkar	SQC & OR Unit, Mumbai	Participants
29.	Statistical Techniques for Data Mining and Business Analytics	A. Sarkar	SQC & OR Unit, Mumbai, Bangalore	Adani Power, Ahmadabad.
30.	Development of Incontinence-depression Correlation Index	A. Sarkar	SQC & OR Unit, Mumbai	Noble Hygiene, Mumbai
31.	General Six Sigma Black Belt (BB) Training Program	A. Sarkar	SQC & OR Unit, Mumbai	Participants
32.	General Six Sigma Green Belt (GB) Training program	S. Sikder	SQC & OR Unit, Mumbai	Participants
33.	Training Program on Data mining for Business Analytics (DBMA)	A. Sarkar	SQC & OR Unit, Mumbai & Bangalore	Participants
34.	General Six Sigma Black Belt (BB) training Program	A. Sarkar	SQC & OR Unit, Mumbai	Participants
35.	General Six Sigma Green Belt (GB) Training Program	S. Sikder	SQC & OR Unit, Mumbai	Participants

Projects

36.	Workshop on Design of Experiment (DOE)	A. Sarkar	SQC & OR Unit, Mumbai	Participants
37.	General Six Sigma Master Black Belt (MBB) Training Program	A. Sarkar	SQC & OR Unit, Mumbai & Bangalore	Participants
38.	Training Program on Data mining for Business Analytics (DBMA)	A. Sarkar	SQC & OR Unit, Mumbai & Bangalore	Participants

**North East Projects**

**Ongoing Projects**

Sl. no.	Name of the project	Principal Investigator(s)	Unit(s) involved
<b>Theoretical Statistics and Mathematics Division</b>			
1.	North East Summer Workshop in Analysis and Probability (NE-SWAP)	J. Sarkar	Stat-Math Unit, Bangalore
<b>Social Sciences Division</b>			
1.	Workshop on Official Statistics in North East States	P. Pathak & S. Mitra	PSU & SOSU

**Completed Projects**

Sl. no.	Name of the project	Principal Investigator(s)	Unit(s) involved
<b>Computer and Communication Sciences Division</b>			
1.	Algorithms with special focus on graphs	Faculty Members	ACMU
2.	Activities of MIU for North East region of the country	Faculty Members	MIU
3.	Workshop on Open Source Software for Library Automation	A.R.D. Prasad & D.P. Madalli	DRTC
<b>Social Sciences Division</b>			
1.	The Biaxial Syntax of Inflected Clauses in Assamese and Bangla	P. Dasgupta	LRU
<b>Statistical Quality Control and Operations Research Division</b>			
1.	Program for North East (Bangalore)	S. Ray & A.R. Chowdhury	SQC & OR Unit, Bangalore

#### 4. SYMPOSIA, CONFERENCES, WORKSHOPS, LECTURES AND SEMINARS ORGANISED

##### *Symposia and Conferences*

1. Symposium on "*Model Theory*": Stat-Math Unit, Kolkata held at University of Notre Dame, Indiana, USA, June 20-July 1, 2016.
2. Symposium on "*Polynomial rings, projective modules and related topics*": Stat-Math Unit, Kolkata, November 7-9, 2016.
3. Symposium on "*Advanced Instructional School (AIS) in Algebraic Geometry*": Stat-Math Unit, Bangalore, May 16 – June 4, 2016.
4. Symposium on "*Stat-Math*": Stat-Math Unit, Bangalore by Doctoral and Post-Doctoral Fellows (2016) August 4-5, 2016.
5. Conference on "*TSSRK Fest*": Stat-Math Unit, Bangalore, September 22-24, 2016.
6. Symposium on "*Celebration of N.S. Narasimha Sastry's career*": Stat-Math Unit, Bangalore, November 25, 2016.
7. Symposium on "*Linear Analysis*": Stat-Math Unit, Bangalore in collaboration with the Indian Academy of Sciences, held at Orange County, Coorg; Kodagu, Karnataka, November 27-December 1, 2016.
8. Workshop on "*Statistical Ecology and Related topics*": Stat-Math Unit, Bangalore, December 8-11, 2016.
9. International conference and workshop on "*Recent advances in Operator Theory and Operator Algebras – 2016 (OTOA-2016)*": Stat-Math Unit, Bangalore, December 13-22, 2016.
10. Symposium on "*K-theory and its applications*": Stat-Math Unit, Bangalore, December 26, 2016–January 7, 2017.
11. 2<sup>nd</sup> Symposium on "*Advances in Noncommutative Mathematics (ANCM)*": Stat-Math Unit, Bangalore, January 11-13, 2017.
12. Symposium on "*Stochastic Reflection (An event in celebration of S. Ramasubramanian's career at ISI, Bangalore)*": Stat-Math Unit, Bangalore, January 23, 2017.
13. Symposium on "*Geometric Function Theory and Special functions*": Stat-Math Unit, Chennai August 31, 2016.
14. Symposium on "*Interdisciplinary Statistical Research*": ISRU, Kolkata, June 28, 2016.
15. Conference on "*8th meeting of the Forum for Information Retrieval Evaluation (FIRE 2016)*": CVPR, Kolkata, in collaboration with DA-IICT, Gandhinagar and Information Retrieval Society of India, December 07-10, 2016.
16. National Conference on "*Condensed Matter Physics*": PAMU, Kolkata, February 2–3, 2017.
17. 4<sup>th</sup> International Conference on "*India Biodiversity Meet, 2016*": jointly organized by AERU, Kolkata and Government College of Engineering and Textile Technology, Berhampur, in collaboration with Biomathematical Society of India, October 24 – 27, 2016

## Conferences and Seminars

18. Symposium on "*XIII Annual Group Meeting of the All India Coordinated projects on Nematodes*": organized by AERU, Kolkata in collaboration with Indian Council of Agricultural Research, New Delhi, February 24-25, 2017.
19. Symposium on "*School Psychology: critical issues and challenges*": PRU, Kolkata collaboration with Indian School Psychology Association, May 30, 2016.
20. National Symposium on "*Psychology in Diabetes: issues, challenges and care*": PRU, Kolkata in collaboration with Indian Academy of Health Psychology, March 1, 2017.
21. 6<sup>th</sup> Conference on "*West Bengal Growth*": SOSU, Kolkata in collaboration with IGC and Jadavpur University, held at Jadavpur University, December 26-27, 2016.
22. Conference on "*honor of Lloyd Shapley*": EPU, Delhi, November 23 and 25, 2016.
23. 12<sup>th</sup> Annual Conference on "*Economic Growth and Development*", EPU, Delhi, December 19-21, 2016.
24. 1<sup>st</sup> Symposium on "*Climate Change and Agricultural Yields in Karnataka*": EAU, Bangalore in collaboration with Karnataka Government, April 16, 2016.
25. 2<sup>nd</sup> Symposium on "*Climate Change and Agricultural Yield in Karnataka*": EAU, Bangalore in collaboration with Karnataka Government, November 9, 2016.
26. International Workshop-cum-Conference on "*Game Theory and optimization*": SQC & OR Unit, Chennai, held at IIT, Madras, Chennai, June 6-10, 2016.

## **North-East Symposia and Conferences**

1. Symposium on "*Human Genetics: Techniques and Statistical Analyses*": HGU, Kolkata, held at Assam University, Silchar, March 23-24, 2017.

## **Workshops and Training Programmes**

1. Workshop on "*Growth Curve Model (GCM)*": Stat-Math Unit, Kolkata was organized at ISI Giridih, Jharkhand, February 23-24, 2017.
2. Training Programme on "*Advanced topics on Discrete Logarithms over Finite Fields & Elliptic Curves*": Stat-Math Unit, Delhi, held at DRDO, New Delhi, July 14-22, 2016.
3. Mini Course on "*Random Graphs : Large deviation properties of Dense Graphs*": Stat-Math Unit, Bangalore, January 25 and 27, 2017.
4. Mini Course on "*Several Complex Variables*": Stat-Math Unit, Chennai, December 8-13, 2016.
5. Workshop and Conference on "*Statistical Methods in Finance*": ASU, Chennai in collaboration with Chennai Mathematical Institute, Chennai, December 18-22, 2016.

## Conferences and Seminars

6. Winter School on "*Introduction to Optimization Techniques*": ACMU, Kolkata, in collaboration with IEEE CEDA India Chapter, December 15-20, 2016.
7. Workshop on "*High Performance Computing*": ACMU, Kolkata, December 28-29, 2016.
8. Workshop on "*Machine Learning and Data Mining (WMLDM)*": CVPR, Kolkata, November 10-11, 2016.
9. International Workshop on "*Pattern Analysis and Applications (IWPA 2017)*": CVPR, Kolkata, January 18-20, 2017.
10. 3<sup>rd</sup> Summer School on "*Computer Vision, Graphics and Image Processing*": ECSU, Kolkata, June 1–July 15, 2016.
11. 2<sup>nd</sup> National Workshop on "*Medical Imaging*": ECSU, Kolkata, in collaboration with IASST Guwahati and ECSU, ISI, March 8-9, 2017.
12. Workshop on "*Application of Mathematics and Statistics*": MIU, Kolkata, September 08-09, 2016.
13. Workshop on "*Machine Intelligence and Applications*": MIU, Kolkata, March 30, 2017.
14. International Workshop on "*Open Data Repositories*": DRTC, Bangalore, March 1-3, 2017.
15. Summer Internship in "*Cryptology*": CSRU, Kolkata, May 16- July 15, 2016.
16. Workshop on "*Mathematics, Computer Science and Cryptology*": CSRU, Kolkata in collaboration with Departments of Mathematics, Computer Science and Science Forum, Mrinalini Datta Mahavidyalaya, Birati, Kolkata, August 23, 2016.
17. Workshop on "*Mathematics, Computer Science and Cryptology*": CSRU, Kolkata in collaboration with Vivekananda College, Thakurpukur, Kolkata, September 14, 2016.
18. Workshop on "*Advances in Authenticated Encryption*": CSRU, Kolkata in collaboration with National Mathematics Initiative, September 19-22, 2017.
19. Workshop on "*Mathematics-Cryptology-Computer Science*" (for Higher Secondary students of Kamala Girls' High School and Harinavi Subhasini Balika Sikshalaya): CSRU, Kolkata in collaboration with Netaji Nagar College for Women, Kolkata, September 21, 2016.
20. Workshop on "*Mathematics-Cryptology-Computer Science*" (for Higher Secondary students of A.K. Ghosh Memorial School and Khanpur (Boys') High School): CSRU, Kolkata in collaboration with Netaji Nagar College for Women, Kolkata, September 26, 2016.
21. State-Level Workshop on "*Mathematics, Computer Science and Cryptology*": CSRU, Kolkata held at Department of Mathematics, Brahmananda Keshab Chandra (BKC) College, Kolkata, November 8, 2016.
22. Workshop on "*Physics and Applied Mathematics Researchers' Meet-2017*": PAMU, Kolkata, March 14–16, 2017.
23. Workshop on "*Species distribution modelling with MaxEnt*": AERU, Kolkata, January 9–14, 2017.
24. Training Programme on "*Winter School on Biological Research Methods*" (for Research Scholars and young faculty members of different Universities /Institutes across India): BAU, Kolkata, January 16 – 23, 2017.

## Conferences and Seminars

25. Orientation Training Programme on "*Data analytics in Psychological Research*": PRU, Kolkata, August 11-12, 2016.
26. Orientation Training Programme on "*Data analytics in Psychological Research*": PRU, Kolkata, in collaboration with SQC & OR Unit, held at Indian Statistical Institute, Hyderabad Branch, Hyderabad, February 8-9, 2017.
27. Orientation Training Programme on "*Data analytics in Psychological Research*": PRU, Kolkata held at the Indian Statistical Institute, Giridih Branch, Jharkhand, March 29, 2017.
28. Workshop on "*Political Economy*": SOSU, Kolkata in collaboration with Manchester University December 19, 2016.
29. Workshop on "*Local Level Statistics for policy with various State and Central Government Departments (National Statistical Commission, RBI, NABARD, Ministry of Finance, Ministry of Drinking Water and Sanitation, Ministry of Agriculture and Farmers Welfare, MOS&PI, Govt of Chhattisgarh, Government of Andhra Pradesh, Govt of Gujarat, IFMR)*" : SOSU, Kolkata, March 29, 2017.
30. Workshop on "*Delhi Theory*": EPU, Delhi, August 6, October 1, 2016 and February 4, 2017.
31. 5<sup>th</sup> Workshop on "*Delhi Macroeconomics*": EPU, Delhi, October 21, 2016.
32. Training Program on "*Macro and Microeconomics*" (for ISS Probationers): EPU, Delhi, March 28 - April 8, 2016.
33. Workshop "*CECFEE*": EPU, Delhi, October 15-16, 2016.
34. Mini Workshop on "*Macroeconomics*": EPU, Delhi, November 17, 2016.
35. Workshop on "*Experimental Methods within Surveys*": EPU, Delhi, November 21-24, 2016.
36. Workshop on "*GMO*": EAU, Bangalore, January 25, 2017.
37. Mini Workshop on "*Linear complementarity and its generalizations*": SQC & OR Unit, Chennai, September 24-25, 2016.
38. Short Term Course on "*Mathematical finance, theory and practice*": SQC & OR Unit, Chennai, January 16-21, 2017.
39. Training Programme-cum-Workshop on "*Library Automation with Special Application of KOHA & Creating Library Networks*": Library, Kolkata, March 20-24, 2017.
40. 7<sup>th</sup> Workshop on "*Digital Pictorial Photography and a Photography Exhibition*": Reprography & Photography Unit, Library, Kolkata, February 13-17, 2017.
41. Training Programme on "*Multimedia*" (for School Students): Reprography & Photography Unit, Library, Kolkata, January 09- February 3, 2017.
42. Workshop cum Seminar on "*Eugene Garfield Memorial*": Library, Documentation and Information Science Division, Kolkata, March 6, 2017.

#### Conferences and Seminars

43. Lecture Programme on "*Conservation of Archival Records and Museum Artifacts: Lecture in Memory of Professor P C Mahalanobis*". PCM Memorial Museum & Archives, Kolkata, March 28, 2017.
44. Workshop on "*Data Science and Machine Learning*", CSCR, Kolkata, March 28-31, 2017.

#### **North-East Workshops and Training Programmes**

1. Workshop on "*Mathematical Genomics*": ASU, held at Bioinformatics Centre, Tripura University, Tripura, January 23-28, 2017.
2. Workshop on "*Statistics in Social Sciences*": ASU, held at North Eastern Hill University, Tura, Meghalaya, March 20-24, 2017.
3. Workshop on "*Statistical Methods for Business*": ISRU, Kolkata held at Indian Statistical Institute, North-east Centre, Tezpur, Assam, December 5-9, 2016.
4. Training Programme on "*Economic and Environmental Statistics*": AOSU, Tezpur, held at Indian Statistical Institute North-East Centre, September 26-30, 2016.
5. Winter School on "*Basic Mathematics for College Students*": AOSU, Tezpur, December 26, 2016 – January 3, 2017.
6. Training Programme on "*Banking, Monetary and Financial Statistics, and National Accounts, Statistical Infrastructure, and Accounting of Local Bodies*": AOSU, Tezpur, February 13-17, 2017.
7. Workshop on "*Application of Statistical Techniques in Environmental Science*": AOSU, Tezpur, March 15-27, 2017.
8. 4th Workshop on "*Pattern Analysis and Applications*": CVPR, Kolkata, held at Sikkim Manipal Institute of Technology, Majitar, Rangpo, Sikkim, February 6-10, 2017.
9. Workshop on "*Machine Learning and Applications*": CVPR, Kolkata, held at Tripura University, Agartala, February 22-24, 2017.
10. 19<sup>th</sup> Workshop on "*Computational Information Processing*": ECSU, Kolkata, in collaboration with Department of Electrical and Electronics Engineering, SMIT, Rangpo, Sikkim, March 23-25, 2017.
11. Summer School on "*Soft Computing Paradigm and Machine Intelligence Techniques*": MIU, Kolkata, held at Department of Computer Science and Information Technology, Assam Don Bosco University, Airport Road, Azara, Guwahati, July 07-11, 2016.
12. School on "*Soft Computing Techniques: Theory and Applications*": MIU, Kolkata, held at Department of Mathematics & Computer Science, Mizoram University, Aizawl, March 20-24, 2017.
13. Workshop on "*Open Source Software for Library Automation*": DRTC, Bangalore, in collaboration with Assam Don Bosco University held at Assam Don Bosco University, Guwahati, Assam, January 23-25, 2017.
14. Workshop on "*Modern Ecological and Agricultural Practices with Statistical Methodology and R-Software*": AERU, Kolkata in collaboration with Department of Management, North Eastern Hill University, Tura Campus, Meghalaya, March 30 – 31, 2017.

## Conferences and Seminars

15. Workshop on "*Genetic Analyses of Complex Traits*": HGU, Kolkata, held at Dibrugarh University, Dibrugarh, September 21-22, 2016.
16. Workshop on "*Human Genetics: Techniques and Statistical Analyses*": HGU, Kolkata, held at Assam University, Silchar, March 23-24, 2017.
17. Advanced Academic Programme on "*Linguistics*": LRU, Kolkata held at Dept. of Linguistics, Manipur University, Imphal, Manipur, India, October 17-21, 2016.
18. Advanced Academic Programme on "*Linguistics*": LRU, Kolkata held at Indian Statistical Institute North East Center, Tezpur and Dept. of English and Foreign Languages, Tezpur University, Assam, March 9-11, 2017.
19. Workshop on "*Application of Statistics in Social Sciences and Official Data*": SOSU, Kolkata held at NEHU, Tura Campus, Meghalaya, December 05-11, 2016.
20. Workshop on "*Livelihoods, homestead farming and human development*": EAU, Bangalore in Tripura, Agartala, March 18-19, 2017.

## **Lectures and Seminars**

### **Theoretical Statistics and Mathematics Division**

#### **Stat-Math Unit, Kolkata**

1. Adimurthi, A., TIFR-CAM, Bangalore (12.09.2016): Hyperbolic conservation laws.
2. Adimurthi, A., TIFR-CAM, Bangalore (14.09.2016): Structure theorem for entropy solutions of conservation laws.
3. Asanuma, T., Retd. University of Toyama (06.03.2017): Locally homeomorphisms and simply continuous maps.
4. Bandyopadhyay, Saugata, IISER, Kolkata (04.02.2017): Calculus of Variations with Differential Forms.
5. Bannerjee, Arindam, Purdue University (27.06.2016): Algebra of bipartite graphs.
6. Beelen, Peter, Technical University of Denmark, Copenhagen (25.01.2017): function fields with many rational places.
7. Bisch, Dietmar, Vanderbilt University, USA (22.02.2017): The free product of planar algebras, and subfactors.
8. Chatterjee, Shirshendu, City University of New York, City College (09.01.2017): Phase transition for the threshold contact proves, an "annealed approximation" of Heterogeneous random Boolean networks.
9. Chandgotia, Nishant, Tel Aviv University (04.11.2016): Some Strange Results about Universality among Hom-Shifts and Reflection Positivity.
10. Chakraborty, Partha Sarathi, Institute of Mathematical Sciences (01.09.2016): The essence of Noncommutative geometry and the concept of dimension.



## Conferences and Seminars

11. Correia, Joaquim M.C., University of Evora, Evora, Portugal (02.08.2016): Zero limit of dissipative-dispersive perturbed conservation laws.
12. Darji, Dario, Ashoka University (03.03.2017): Some Examples of Universality in Dynamics.
13. Das, Kajal, ENS de Lyon (01.08.2016): Coarse embedding between box spaces.
14. De, Shyamal Krishn, National Institute of Science Education & Research Odisha (22.11.2016): On Controlling Desired Error Rates of Multiple Hypothesis Testing for Sequential Data.
15. Dhar, Subhra Sanmar, IIT, Kanpur (15.03.2017): study on Robustness and Local Power of a New Test for Independence with Application in Non-parametric Regression.
16. Ganguly, Arijit, TIFR, Mumbai (10.03.2017): Khinchin type theorems in Diophantine approximation.
17. Ghate, Eknath, TIFR, Mumbai (20.01.2017): The tau of Ramanujan.
18. Ghorpade, S., IIT, Bombay (25.01.2017): Polynomial equations over finite fields.
19. Giri, Sumit, Tel Aviv University (21.10.2016): Short average distribution of a prime counting function over families of elliptic curves.
20. Hind, Richard, University of Notre Dame, USA (26.12.2016): Hamiltonian flows.
21. Jana, Subhajit, ETH, Zurich (15.07.2016): Supnorm Problem of Hecke Eigenforms at a Single Place.
22. Jha, Somnath, IIT, Kanpur(23.05.2016): A twisting result in Iwasawa theory.
23. Joardar, Soumalya, JNCASR, Bangalore (25.10.2016): Weyl System for the Hyperbolic place and the Lindbladian.
24. Juneja, Sandeep, TIFR, Mumbai (27.10.2016): Large deviations selecting the best population and multi-armed bandit methods.
25. Kalelkar, Tejas, IISER, Pune (12.12.2016): Taut foliations in 3-manifolds
26. Krishna, Amalendu, TIFR, Mumbai (26.09.2016): Euler class group of affine algebras.
27. Lahiri, Animesh, RKMV, SVRC (08.07.2016): Embeddings of affine algebraic varieties.
28. Mazumdar, Saikat, Universite de Lorraine, France (12.08.2016): Higher order elliptic problems with critical sobolev growth on a compact riemannian manifold: Best constants and existence.
29. Mitra, Debanjana, Department of Mathematics, Virginia Tech, Blacksburg, USA (14.02.2017): Ingham inequality and its application to PDE.
30. Murthy, Chandra R., Electrical communications Engineering, IISc, Bangalore (10.11.2016): Performance analysis of massive MIMO systems under aging channels.
31. Pareekh, Sandeepan, Vanderbilt University (25.07.2016): The Poisson boundary of a group.

32. Penrose, Mathew, University of Bath, UK (16.01.2017): Random Geometric Graphs: A Survey - Public Lecture.
33. Penrose, Mathew, University of Bath, UK (17.01.2017): Optimal Cuts of Random Geometric Graphs.
34. Penrose, Mathew, University of Bath, UK (19.01.2017): (i) The Strong Giant in a Random Digraph & (ii) Recent Results on Variants of Random Geometric Graphs.
35. Penrose, Mathew, University of Bath, UK (24.01.2017): The Strong Giant in a Random Digraph.
36. Penrose, Mathew, University of Bath, UK (25.01.2017): Recent Results on Variants of Random Geometric Graphs.
37. Poddar, Mainak, Middle East Technical University Northern Cyprus Campus, Turkish Republic of Northern Cyprus (11.07.2016): Group actions and non-Kähler complex manifolds.
38. Prasad, Dipendra, TIFR, Mumbai (09.09.2016): harmonic Analysis on Homogeneous spaces, and the Langlands program.
39. Prathamesh, T.V., Institute of Mathematical Sciences, Chennai (29.09.2016): Set Theory, Racks and Legendrian and Transverse Knots.
40. Roy, Rishdeep, IIM, Bangalore (19.01.2017): BRW pressed against a hard wall.
41. Saha, Kumarjit, TIFR Centre for Applicable Mathematics, Bangalore (09.10.2016): Continuum random tree as a scaling limit for drainage network models.
42. Sarkar, Sourav, University of California, Berkley (19.12.2016): Limiting measure for TASEP with a slow bond.
43. Sashiell, Frederick K., Jr. UCLA and Chapman University (20.12.2016): The Baire classes of a Banach Space.
44. Sathaye, Avinash, University of Kentucky (13.06.2016): A curious property of polynomials.
45. Sathaye, Avinash, University of Kentucky (22.06.2016): How to recognize hyperbola?
46. Sen, Subhabrata, Stanford University (14.09.2016): Optimization on Sparse Random Graphs and its Applications.
47. Sengupta, J., School of Mathematics, TIFR (27.01.2017): Non-vanishing and sign changes of Hecke eigenvalues for Siegel cusp forms of genus two.
48. Shrestha, G.B., IIT, Guwahati (17.11.2016): Analytical development of basic concepts for the study of Pnini's code for Sanskrit Grammar.
49. Sinha, K.B., JNCASR, Bangalore (04.05.2016): Lyapunov's Stability Problem, Growth and Spectral Bounds for Positive Semigroups.
50. Sinha, K.B., JNCASR, Bangalore (24.10.2016): Laplacian of the hyperbolic Plane and its diagonalization.
51. Sinha, K.B., JNCASR, Bangalore (26.10.2016): Operator Inequalities and a problem on Positive Semigroups.

## Conferences and Seminars

52. Sinha, K.B., JNCASR, Bangalore (15.03.2017): Spectral Analysis of Semibounded Operators by truncation.
53. Urroz, Jorge Jimenez, UPC Barcelona (16.02.2017): Primitive roots and malleability of RSA moduli.
54. Urroz, Jorge Jimenez, UPC Barcelona (17.02.2017): Some problems on the arithmetic of Elliptic curves over finite fields.
55. Villani, Cedric, Universite de Lyon and Director, Institut Henri Poincare (26.08.2016): Of triangles, gases, prices and men.
56. Villani, Cedric, Institute Henri Poincare and University of Lyon (29.08.2016): On the synthetic theory of Ricci curvature bounds: when geometry, probability theory and calculus of variations happily meet.
57. Vishe, Pankaj, Durbam University (05.09.2016): Quartic forms in 37 variables.
58. Voiculescu, Dan Virgil, University of California, Berkley (02.01.2017): A Glimpse at bi-free probability.
59. Voiculescu, Dan Virgil, University of California, Berkley (04.01.2017): The commutant mod a normed ideal of an n-tuple of operators.
60. Yamashit, Makoto, Ochanomizu University, Tokyo (14.02.2017): Graded twisting of quantum groups, actions and categories.

## **Stat-Math Unit, Delhi**

1. Athreya, Krishna B., Iowa State University (19.08.2016): Glivenko Cantelli theorem for noniid rvs.
2. Baier, Stephan, JNU New Delhi (28.09.2016): On gaps between zeros of Epstein's zeta function.
3. Bapat, Sudeep R., University of Connecticut (23.05.2016): Multistage Estimation of a Negative Exponential Location Under a Modified Linex Loss Function: Illustrations in Health Studies.
4. Basu, Rabeya, IISER Pune (03.04.2017): Unification of Classical Groups.
5. Bhatnagar, Gaurav, University of Vienna (28.12.2016):  $A_n$  generalizations of the elliptic WP Bailey transform and lemma.
6. Deshouillers, Jean-Marc, University of Bordeaux, France (17.04. 2017): Automatic sequences and Sarnak's conjecture.
7. Deshouillers, Jean-Marc, University of Bordeaux, France (19.10.2016): How many integral points on a strictly convex curve?
8. Garg, Naveen, IIT Delhi (02.11.2016): Online Scheduling.
9. Giri, Sumit, Tel Aviv University, Israel (26.10.2016): Short average distribution of a prime counting function over families of elliptic curves.

10. Haq, Rukhsan-ul, JNCASR Bangalore (12.04.2017): Majorana fermions and topological Quantum Computing.
11. Jha, Somnath, IIT Kanpur (11.05.2016) : A twisting result in Iwasawa theory
12. Johnstone, Iain, Stanford University (27.01.2017): Estimating sparse eigenstructure for high dimensional data.
13. Johnstone, Iain, Stanford University (06.02.2017): Low rank structure in highly multivariate models.
14. Kumarjit Saha, TIFR Centre for Applicable Mathematics, Bangalore (27.07.2016): Continuum random tree as scaling limit for drainage network models.
15. Maddaly, Krishna, Ashoka University (22.02.2017): Eigenvalue statistics for random operators.
16. Mishra, Manish, IISER Pune (07.12.2016): Bernstein center of supercuspidal blocks.
17. Murty, M. Ram, Queen's University, Canada (05.09.2016): Twin Primes.
18. Penrose, Mathew, University of Bath, UK (16.01.2017): Random geometric graphs: a survey.
19. Penrose, Mathew, University of Bath, UK (25.01.2017): Recent results on variants of random geometric graphs.
20. Ramare, Olivier, CNRS and University of Marseilles, France (08.02.2017): A gentle stroll around the Goldbach's conjecture
21. Saikia, Manjil, University of Vienna (14.02.2017): Enumeration of Domino Tilings of an Aztec Rectangle with boundary defects.
22. Saradha, N., TIFR, Mumbai (14.09.2016): Thue inequalities.
23. Sethuraman, Prof Sunder, University of Arizona (13.07.2016): Consistency of modularity clustering in random geometric graphs.
24. Sharma, Divyum, University of Waterloo, Canada (26.04.2017): On the multi-base representation of integers.
25. Shorey, T.N., NIAS Bangalore (15.03.2017): Baker's explicit abc conjecture and its new applications.
26. Sinha, Bimal, University of Maryland, Baltimore County (09.05.2016): An overview of data analysis under confidentiality protection - analysis of noise multiplied and synthetic data.
27. Sinha, Kaneenika, IISER Pune (18.01.2017): Fluctuations of Hecke eigenvalues.
28. Srinivasan, Anitha, St Louis University, Madrid Campus (03.08.2016): The Ramanujan Primes.
29. Timer, Adam, Renyi Institute, Budapest, Hungary (11.01.2017): Factors of the Poisson point process.
30. Whitmeyer, Joseph, UNC Charlotte (09.11.2016): Steady States in Population Dynamics.

## Conferences and Seminars

### ***Stat-Math Unit, Bangalore***

1. Adhikari, Prashanth, Research and Development Concur Technologies, USA (5.4.2016): Einstein's road to General Relativity.
2. Athreya, Krishna B., Iowa State University - USA and IIT Bombay (8.8.2016): Glivenko Cantelli theorem for noniid sequences of random variables.
3. Balagopalan, Sonia, Hebrew University of Jerusalem, Israel (28.4.2016): Minimal Triangulations of  $\mathbb{R}P^n$ : Small values of  $n$ .
4. Balakrishnan, Rohini, Indian Institute of Science, Bangalore (12.4.2016): Understanding a natural acoustic communication network.
5. Banerjee, Arindam, Purdue University, USA (28.12.2016): Homological Algebra of Ideals Related to Finite Simple Graphs.
6. Chandrahekhar, C.M., Institute of Mathematics Sciences, Chennai (30.03.2017): Quantum walk as a universal quantum simulator.
7. Chaudhury, Chitrabhanu, IISER Pune (4.4.2016): Moduli of certain Weighted Pointed Rational Curves.
8. Chowdhury, Utsav, RMVU Belur (16.1.2017, 17.1.2017 & 24.1.2017): Nori motives.
9. Dhar, Abhishek, ICTS, Bangalore (22.8.2016): Deriving Fourier's law of heat diffusion from microscopic dynamics.
10. D' Mello, Shane, IISER Pune (24.10.2016): An application of the braid group in constructing real rational representatives of knots.
11. Dutta, Sudipta, IIT Kanpur (8.7.2016): On completely bounded multipliers.
12. Gadgil, Siddhartha, Indian Institute of Science, Bangalore (3.11.2016): Metric Measure spaces, Random matrices and Riemann surfaces.
13. Giri, Varad B., National Centre for Biological Sciences – Bangalore (12.8.2016): Study of amphibians and reptiles.
14. Gomez, Tomas L., ICMAT, Madrid (10.11.2016 & 24.03.2017): Torelli theorem for the parabolic Deligne-Hitchin moduli space & Automorphisms of a symmetric product of a curve.
15. Gupta, Subhojoy, Indian Institute of Science, Bangalore (23.2.2017): Complex domains and Teichmüller space.
16. Hoegel, Michael, Universidad de los Andes, Colombia (14.6.2016): The first exit problem of dynamical systems perturbed by Brownian motion and stable processes.
17. Johnstone, Iain M., Stanford University, USA (2.2.2017): Low rank structure in highly multivariate models.
18. Kannappan, S., University of Michigan, Ann Arbor (5.7.2016 11.7.2016): An Introduction to Perfectoid Spaces.

19. Krishnapur, Manjunath, Indian Institute of Science, Bangalore (6.10.2016): A universality theorem in random matrix theory.
20. Kulkarni, Upendra, Chennai Mathematical Institute, Chennai (06.03.2017): Schur-Weyl duality and a new tensor product for representations of the general linear group.
21. Loehr, Wolfgang, University of Duisburg-Essen (21.11.2016): Concepts of (continuum) trees: R-trees versus Algebraic Trees.
22. Manjunath, Madhusudan, Queen Mary, University of London (1.9.2016): Tropical Algebraic Geometry: an Introduction.
23. Maldeghem, Hendrik Van, University of Ghent, Belgium (15.4.2016): Hack's law for Howard's model.
24. Molnar, Lajos, Bolyai Institute, University of Szeged (26.9.2016): Preserver problems.
25. Mukhopadhyay, Swarnava, University of Maryland (27.7.2016): Topology of hyperplane arrangements and invariant theory.
26. Mytnik, Leonid, Technion, Israel (22.8.2016): On the boundary of the support of super-Brownian motion.
27. Owada, Takashi, Technion, Israel (14.6.2016): Limit theorems for Betti numbers of extreme sample clouds.
28. Penrose, Mathew, University of Bath, UK (19.1.2017): (i) The strong giant in a random digraph & (ii) Recent results on variants of random geometric graphs.
29. Ramachandran, Koushik, Oklahoma State University (4.7.2016): Equidistribution of zeros of Random orthogonal polynomials.
30. Rao, KPSB, Indiana University North West Gary, USA (24.11.2016): Strictly nonzero integer valued charges on Boolean algebras.
31. Sarkar, Jyotirmoy, Indiana University-Purdue University Indianapolis, USA (2.6.2016): Randomized Response and a New Hartley-Politz-Simmons Technique.
32. Sastry, Sivashankar (14.3.2017): Maths through Origami for Indian Schools.
33. Sethuraman, J., Florida State University, USA (16.2.2017): History of the stick breaking representation of the Dirichlet Process.
34. Sethuraman, Sunder, University of Arizona, USA (25.7.2016): A scaling limit or 'consistency' of modularity clustering in random geometric graphs.
35. Singh, Rajneesh Kumar, Ben-Gurion University of the Negev-Beer-Sheva, Israel (13.5.2016): Product formula for Carlitz motive.
36. Singla, Pooja, Indian Institute of Science, Bangalore (24.8.2016): On characterization of monomial irreducible representations of discrete supersolvable groups.
37. Sinha, Debajyoti, Florida State University, USA (29.7.2016): Bayesian Regression Methods for Highly Skewed Multivariate Response.

## Conferences and Seminars

38. Sircar, Swati, Azim Premji University, Bangalore (25.10.2016): Playing Mathematics to Doing Mathematics.
39. Spreer, Jonathan, University of Queensland, Australia (21.9.2016): Telling 3-manifolds apart: Turaev-Viro invariants and generalised normal surfaces.
40. Tappe, Stefan, University of Hannover, Germany (29.9.2016 & 23.03.2017): Invariant manifolds with boundary for jump-diffusions & Invariance of closed convex cones for stochastic partial differential equations.
41. Uma, Divya Bellur, Azim Premji University, Bangalore (21.03.2017): Deceit and cooperation in the eight legged world.
42. Varma, Sandeep, TIFR Mumbai (22.8.2016): On Residues of Certain Intertwining Operators.
43. Voiculescu, Dan-Virgil, University of California, Berkeley (26.12.2016): Topological free entropy.

### ***Stat-Math Unit, Chennai***

1. Singh, Sanjeev, Indian Institute of Technology, Madras (05.12.2016): Turan type inequalities and bounds for some special functions.
2. Agrawal, Sarita, Indian Institute of Technology, Indore (06.12.2016): Geometric Properties of basic Hypergeometric functions.
3. Sahoo, Swadesh Kumar, Indian Institute of Technology, Indore (23.03.2016): On quasihyperbolic metric and its importance.

### **Applied Statistics Division**

#### ***Applied Statistics Unit, Kolkata***

1. Banerjee, Sayantan, OM & QT Area, Indian Institute of Management, Indore, (06.12.2016): Bayesian Nonparametric Graph Clustering: Applications in Pan-Cancer Proteomic Signaling Networks.
2. Ghoshal, Subhashis, North Carolina State University, USA. (21.06.2016): Bayesian Estimation and Uncertainty Quantification for Differential Equation Models.
3. Hassan, Sk. Sarif, Department of Mathematics, University of Petroleum and Energy Studies, Bidholi, Via Prem Nagar, Dehradun, Uttarakhand. (28.06.2016): Understanding Discrete Dynamics of a Three Dimensional System and Possible Applications in Biology.
4. Paul, Debashis, Department of Statistics, University of California, Davis, USA, (03.01.2016): Modeling non-Gaussian Processes on a Sphere Using Multi-resolution Analysis.
5. Sinha, Debajyoti, Department of Statistics, Florida State University, USA, (2.08.2016): Bayesian Regression Methods for Highly Skewed Multivariate Response.
6. Tokdar, Surya, Department of Statistical Science, Duke University, USA, (18.10.2016): Joint Estimation of Quantile Planes over Arbitrary Predictor Spaces.

***Interdisciplinary Statistical Research Unit, Kolkata***

1. Dey, Dipak K, University of Connecticut (25.01.2017): Canonical Variate Regression in the Era of Big Data.
2. Dharmani, Bhavesh, DAIICT, Gandhinagar (05.05.2016): On Large Scale Near Independent Blind Source Separation.
3. Dharmani, Bhavesh, DAIICT, Gandhinagar, (19.01.2017): Robust Estimation Based on a Novel Family of arctan Disparities and the Limitation of the Second Order Influence Function.
4. Ghosh, Abhik, Post-doctoral research at the University of Oslo, Norway (04.08.2016): General Model Adequacy Test and Robust Statistical Inference based on A New Family of Divergence
5. Hazra, Arnab, NC State University (16.06.2016): A non-parametric Bayesian state-space model for the analysis of annual frequency of the North Indian Ocean cyclones.
6. Kuchibhotla, Arun Kumar, Department of Statistics, University of Pennsylvania, Wharton School, USA (29.12.2016): Valid Post-Selection Inference with Random Covariates.
7. Mukhhopadhyay, Sabyasachi, University of Southampton (01.09.2016): Bayesian spatio-temporal point level modelling of air pollution concentration levels of estimating long term exposure in coarser administrative geographies in England and Wales.
8. Rahman, Arshad, IIT Kanpur, (28.02.2017): Flexible Bayesian Quantile Regression in Ordinal Models.

***Applied Statistics Unit, Chennai***

1. Deshpande, Jayant V., Chennai Mathematical Institute (21.04.2017): Some issues Reliability Theory.
2. Koul, Hira L, Michigan State University, East Lansing, USA (23.01.2017): Minimum distance estimation in additive models: A brief review.
3. Sarkar, Jyotirmoy, Indiana University-Purdue University Indianapolis, USA (10.06.2016): A Random Walk on a Cube.

***Computer and Communication Sciences Division***

***Advanced Computing and Microelectronics Unit, Kolkata***

1. Dasgupta, Pallab and Dey, Soumyajit, Dept. of Computer Science & Engg., IIT Kharagpur (07.04.2016): Emerging Research Opportunities in Cyber-physical Systems and related research.



## Conferences and Seminars

2. Drechsler, Rolf, University of Bremen / DFKI, Germany (16.08.2016): Synthesis and Verification of Approximate Circuits.
3. Dutta, Kunal, INRIA Sophia Antipolis - Mediterranee (21.12.2016–23.12.2016): Combinatorial Discrepancy.
4. Easwaran, Arvind, Nanyang Technological University (NTU), Singapore (12.12.2016): Mixed-Criticality Scheduling to Minimize Makespan.
5. Fujita, Masahiro, Dept. of Electrical Engineering and Information, Univ. of Tokyo, Japan, (27.04.2017): Very efficient power gating for higher performance computing.
6. Laskar, Renu, Dept. of Mathematical Sciences, Clemson University (25.01.2017): Beautiful Minds.
7. Rajamani, Sriram, Microsoft Research India (15.09.2016): Security and Privacy in the Cloud.
8. Regan, Kenneth W., Dept. of CSE, University at Buffalo, SUNY, USA (02.08.2016): Statistical Pitfalls and Lessons from a model of Human Decision-Making at Chess.

### ***Electronics and Communication Sciences Unit, Kolkata***

1. Agarwal, S., TCS Innovation Lab (15.11.2016): On Automatic Recognition and Synthesis of Emotional Facial Expressions.
2. Banerjee, S., IIT, Delhi (15.12.2016): On large scale 3D reconstruction from images and videos.
3. Bose, A., Springer India Pvt. Ltd. (09.08.2016): How to write for and get published in scientific journals.
4. Dasgupta, P., University of Nebraska, Omaha (03.11.2017): Fast Learning Robot Navigation Maneuvers from Past Experiences.
5. Saha, P.K., University of Iowa, USA (04.01.2017): Skeletonization and its application to quantitative morphometry.

### ***Machine Intelligence Unit, Kolkata***

1. Dash, Debasis, CSIR-IGIB (30.03.2017): Challenges in Proteogenomics in Exploring Protein Coding Landscapes.
2. Deb, Kalyanmoy, Michigan State University, East Lansing, USA (23.09.2016): Optimization via Nature: Principles, Performance and Promises.
3. Doshi, Amit, MATLAB, INDIA (09.08.2016): Rise of engineering driven data analytics, Accessing Big Data and Analyzing it, Increasing Computation Speed, Data Analytics Demo 1) Health Monitoring 2) Sensor Analytics, Taking analytics to production.
4. Naik, Sarif Kumar, Philips Research India (30.3.2017): Image Analysis for Cervical Cancer Screening.
5. Sarkar, Sudeshna, IIT, Kharagpur (30.3.2017): Deep Learning.

***Documentation Research and Training Centre, Bangalore***

1. Roy Chowdhury, Soudip, Director, Data Science, Fractal Analytics, Mumbai (12.05.2016): Interactive AI - keeping users in the loop.

***Computer Science Unit, Chennai***

1. Chakraborti, Anirban, School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi (23.12.2016): Mesoscopic networks in socio-economic complex systems.
2. Karmakar, Madhuparna, Institute of Mathematical Sciences, Chennai (21.10.2016): Population imbalanced Fermi superfluid.

**Physics and Earth Sciences Division**

***Geological Studies Unit, Kolkata***

1. Basilici, Giorgio, Institute of Geosciences, University of Campina, Sao Paulo, Brazil (01.12.2016): Palaeosols and Deposits in the temporal evolution of a semiarid fluvial distributary system.
2. Beukes, N.J., DST-NRF Centre of Excellence for Integrated Mineral and Energy Resource Analysis (CIMERA), Department of Geology, University of Johannesburg, South Africa. (16.01.2017): Pre GOE (Great Oxygenation Event) Iron Formation.
3. Soares, M.V.T., Institute of Geosciences, University of Campina, Sao Paulo, Brazil (01.12.2016): Proximal portion of a semiarid fluvial system.
4. Shanmugam, G., University of Texas at Arlington, USA and consultant for Exxon Mobil Oil Company (10.11.2016): The fallacy of interpreting soft-sediment deformation structures (SSDS) with different types of breccias as seismites amid the multifarious origins of earthquakes: Implications.
5. Shanmugam, G., University of Texas at Arlington, USA and consultant for Exxon Mobil Oil Company (11.11.2016): The landslide problem
6. Shanmugam, G., University of Texas at Arlington, USA and consultant for Exxon Mobil Oil Company (11.11.2016): Deep-water bottom currents.

***Physics and Applied Mathematics Unit, Kolkata***

1. Ali, Amna, S. N. Bose Centre for Basic Sciences, Kolkata (13.06.2016): The future evolution of the two scale inhomogeneous universe and the analogous scalar field cosmology.
2. Banerjee, Arunima, IUCAA, Pune (29.12.2016): Vertical structure of disk galaxies & their dark matter halos.
3. Banerjee, Saikat, Condensed Matter Physics Nordic Institute of Theoretical Physics, Nordita (02.01.2017): Magnons in a honeycomb ferromagnet.

#### Conferences and Seminars

4. Chakraborty, Mainak, Department of Physics, Saha Institute of Nuclear Physics, Kolkata (13.06.2016): A generalized approach towards diagonalization of neutrino mass matrix and baryogenesis through leptogenesis.
5. Dey, Sanjib, Centre de Recherches Mathematiques, Universite de Montreal, Canada (29.12.2016): Non-commutative spaces with generalized uncertainty principle and their implications in quantum information theory.
6. Ganguly, Nirman, Heritage Institute of Technology, Kolkata (07.06.2016): Existence of hermitian operators to detect non-absolutely separable states.
7. Lala, Arindam, S. N. Bose Centre for Basic Sciences, Kolkata (14.06.2016): Gauge, gravity corrections and black hole physics.
8. Mamon, Al Abdull, Viswa Bharati, Santiniketan, (14.06.2016): Non-canonical scalar field: A new approach to dark energy problem.
9. Mazumdar, Arindam, Theoretical Physics, Saha Institute of Nuclear Physics, Kolkata (19.10.2016): Curvature perturbations from preheating.
10. Modak, Sanhita, Netaji Subhash Engineering College, Techno City Garia, Kolkata (13.06.2016): Renormalization group approach to spinor Bose-Fermi mixtures in a shallow optical lattice.
11. Mohapatra, Abhishek, The Ohio State University, USA (06.01.2017): Dense axion stars.
12. Mukherjee, Abhik, Saha Institute of Nuclear Physics, Kolkata (14.06.2016): Study of high amplitude nonlinear oceanic waves in both deep and shallow water limit.
13. Nath, Palash, Department of Physics, Calcutta University, Kolkata (13.06.2016): Theoretical study of electronic and optical properties of grapheme systems.
14. Poria, Swarup, Department of Applied Mathematics, University of Calcutta (4.05.2016): Existence & uniqueness of solution of ODE; an overview.

#### **Biological Sciences Division**

##### ***Biological Anthropology Unit, Kolkata***

1. Dobe, M., All India Institute of Hygiene & Public Health (16.1.2017): An overview on the role of Statistics in health .

##### ***Human Genetics Unit, Kolkata***

1. Banerjee, Sreeparna, Associate Professor, Department of Biological Sciences, Middle East Technical University, Ankara, Turkey (18.01.2017): Intestinal epithelial cell differentiation and inflammation: dissection of molecular mechanisms.

**Social Sciences Division**

***Economic Research Unit, Kolkata***

1. Bhattacharya, Sourav, Department of Economics, Royal Holloway University of London, United Kingdom (04.08.2016): A Possibility Theorem on Information Aggregation in Elections.
2. Bhattacharya, Sourav, Department of Economics, Royal Holloway University of London, United Kingdom (14.12.2016): Strategic Communication and Group Formation.
3. Bradford, Charles, Scott, Department of Economic, Brigham Young University, Provo, USA (09.01.2017): A General Equilibrium Model of Migration and Poverty.
4. Chatterjee, Kalyan, Department of Economics, The Pennsylvania State University, USA (04.01.2017): Triggering Extremism: Political Consequences of Profit Seeking Media.
5. Chatterjee, Santanu, Department of Economics, University of Georgia, USA (14.12.2016): The Macroeconomic Consequences of Remittances.
6. Chaudhuri, Ananish, Department of Economics, University of Auckland, New Zealand (15.12.2016): Piece-rates and Tournaments: Implications for Learning in a Cognitively Challenging Task.
7. Das, Satadru, Department of Economics, Louisiana State University, Baton Rouge, USA (25.07.2016): Analyzing the Impact of the World's Largest Public Works Project on Family Planning.
8. Kar, Anirban, Department of Economics, Delhi School of Economics, University of Delhi (22.11.2016): Local Institutional Structure and Clientelistic Access to Employment: The Case of MGNREGS in Three States of India.
9. Mallik, Girijasankar, School of Business, Locked Bag 1797, Penrith South DC, NSW 1797, Australia (27.01.2017): Demonetisation: Causes and Consequences.
10. Modak Chowdhury, Subhasish, School of Economics, Centre for Behavioural and Experimental Social Science, and Centre for Competition Policy, University of East Anglia, United Kingdom (21.12.2016): Post-Cartel Tacit Collusion: Determinants, Consequences and Prevention.
11. Lunawat, Radhika, University of California-Irvine, Paul Merage School of Business, Irvine, CA, U.S.A. (29.12.2016): Soft Information Production and Investment in Specific Assets.
12. Roy, Sanchari, Department of Economics, University of Sussex, United Kingdom (12.01.2017): Sex Workers, Self-Image and Stigma: Evidence from Kolkata Brothels.

***Population Studies Unit, Kolkata***

1. Bhattacharya, Gargi, Department of Economics, Mahadevananda Mahavidyalaya, Barrackpore, Kolkata (26.08.2016): Reproductive and Child Health in the Context of Demographic Dividends in India: Some Emerging Policy Issues.
2. Dey, Dilip Kumar, Additional Director, Ministry of HRD, Ministry of Defence and Ministry of Home (24.03.2017): Dynamics of Concept and Definition in Indian Census.

## Conferences and Seminars

3. Haldar, Susil Kr., Centre for Advanced Studies, Economics Department, Jadavpur University, Kolkata (27.02.2017): Determinants of Declining Juvenile Sex Ratio in India: A Panel Data Analysis.
4. Mukherjee, Subrata, Institute of Development Studies, Kolkata (17.02.2017): Measuring the Multidimensionality of Household Catastrophic Health Expenses: Evidence from Rural West Bengal.

### ***Sociological Research Unit, Kolkata***

1. Bhaduri, Amit, Professor Emeritus, Jawaharlal Nehru University, New Delhi & Research Professor, University of Goa, Goa, India (06.09.2016): Danger Zones Of High Economic Growth.
2. Bhattacharyya, Susmita, Department of Sociology, Prasanta Chandra Mahalanabis Mahavidyalaya, Kolkata (27.06.2016): Revisiting Rabindra Sangeet in Contemporary Situation.
3. Bose, Kaushik, Anthropology Department, Vidyasagar University, Medinapore (03.02.2017): Nutritional Profile of Adult Tribal Populations in India: A Review.
4. Chakraborty, Arindam, S.R. Lahiri Mahavidyalaya Majdia, Nadia (27.02.2017): Economic and Social Aspects of MNNAGERA.
5. Chakraborty, Basabi, Department of Sociology, Rabindra Bharati University, Kolkata (16.01.2017): Violence Against Women - A Socio-Legal Perspective.
6. Chatterjee, Subrata, Khejuri College, East Medinipur, W.B. (02.11.2016): Sanitation and Rural Development.
7. Roy Chowdhury, Arnab, PPM Group, IIM-C, Joka (26.08.2016): A Peasant or a Miner? Agrarian Transition, De-peasantisation and Gemstone mining in Western Odisha.
8. Roy Chowdhury, Sarthak, Department of Sociology, Gokhale Memorial Girls' College (04.07.2016): For another complement from Cosmos.

### ***Economics and Planning Unit, Delhi***

1. Aggarwal, Nidhi, IGIDR (06.03.2017): The causal impact of algorithmic trading on market quality.
2. Agnieszka, Wiszniewska-Matyszkiew, Institute of Applied Mathematics and Mechanics, University of Warsaw (17.01.2017): Dynamic oligopoly with sticky prices.
3. Anand, Abhinav, University College Dublin (09.12.2016): Integration among us banks: trends and determinants.
4. Anand, Abhinav, Visiting Scientist (27.01.2017): Who does affirmative action better? China or India?
5. Azariadis, Costas, Washington University (16.12.2016): Credit cycles and business cycles.
6. Banerjee, Ritwik, IIM, Bangalore (25.11.2016): Combatting corruption: Role of monetary and non-monetary interventions.

## Conferences and Seminars

7. Barua, Rashmi, JNU (30.09.2016): Financial education vs. financial access: field experimental evidence from transnational households in the philippines.
8. Basu, Sujata, Jawaharlal Nehru University (07.04.2016): Distance to frontier, human capital and economic growth: a theoretical and cross-country empirical analysis.
9. Bhaskar, Umang, TIFR (28.10.2016): Optimal signaling in bayesian games.
10. Bhattacharya, Prasad, Deakin University (11.11.2016): The political economy of land reform enactment and implementation: new cross-national evidence (1900-2010).
11. Borah, Abhinash, Ashoka University (12.08.2016): Socially justify then choose: a theory of social influence in individual choice.
12. Chaithanya, Jayakumar, University of Siena (01.06.2016): Analysing inflation dynamics in india using time varying SVAR model.
13. Chakraborty, Tanika, IIT Kanpur (16.09.2016): School feeding and cognitive skills: evidence from india's midday meal program.
14. Chatterjee, Swarnendu, Maastricht University (15.03.2017): Frequency Based Analysis of Voting Rules.
15. Das, Piyali, Indiana University, Bloomington (19.08.2016): Fiscal financing components in a simple model of policy interaction.
16. Datt, Gaurav, Monash University (01.04.2016): Growth urbanization and poverty reduction in India.
17. Desai, Sonalde, University of Maryland (03.03.2017): Do public works programs increase women's economic empowerment?.
18. Dubey , Ram Sewak ,Montclair State University (22.07.2016): On construction of social welfare orders satisfying hammond equity and weak pareto axiom.
19. Dutta, Prajit K., Columbia University, New York (16.01.2017): Compromise is key to repeated bargaining.
20. Bahal, Girish, National council of applied economic research (08.03.2017): Estimating transfer multiplier using spending on rural development programs in india.
21. Gupta, Abhimanyu, University of Essex (29.04.2016): Nonparametric specification testing via the trinity of tests.
22. Jha, Chandan Kumar, Le Moyne College (27.07.2016): The role of historical resource scarcity in modern gender inequality.
23. Jha, Nikhil, University of Melbourne (14.10.2016): No time for crime? the effect of compulsory engagement on youth crime.
24. Kakar, Venoo, San Francisco State University (11.01.2017): Asset prices and optimal monetary policy.
25. Kunimoto, Takashi, Singapore Management University (23.02.2017): Rationalizable implementation of correspondences.

## Conferences and Seminars

26. Kumar, Alok, University of Victoria, Canada (24.03.2017): Earning risks, parental schooling investment and old-age income support from children.
27. Lahiri, Abhinaba, Maastricht University (10.03.2017): Strategy-proof location of public bads in a two-country model.
28. Mitra, Shabana, Indian Institute of Management Bangalore (17.03.2017): Wheels of power: Long-term effects of a one time targeted program.
29. Patnaik, Megha, Stanford University (07.03.2017): Financing micro and small firms during the great recession.
30. Ranjan, Priya, UC Irvine (21.07.2016): Optimal labor market regulations in the context of structural transformation.
31. Serizawa, Shigehiro, Osaka University (06.02.2017): Multi-object auction design without quasilinearity: revenue maximization with no wastage.
32. Sethi, Rajiv, Columbia University (21.10.2016): Culture and communication.
33. Sharma, Anisha, Ashoka University (10.02.2017): The impact of a macroeconomic crisis on child schooling outcomes in Indonesia.
34. Spears, Dean, RICE (18.11.2016): Health externalities of India's expansion of coal plants: Evidence from a national panel of 40,000 households.
35. Soundararajan, Vidhya, IIM Bangalore (31.03.2017): The role of political activists in clientelistic settings: evidence from an indian public works program.
36. Sinha, Rishabh, World Bank (05.08.2016): Sectoral productivity gaps and aggregate productivity.
37. Tuteja, Divya, Delhi School of Economics (13.12.2016): Revisiting decoupling and recoupling of bric stock markets with U.S. and Eurozone.

### ***Economic Analysis Unit, Bangalore***

1. Bakshi, Aparajita, TISS, Mumbai (12.09. 2016): Income diversification in Rural India.
2. Panda, Sitakanta, IIT, Delhi (21.09.2016) : Factors in BPL card allocations.
3. Herring, J. Ronald, Cornell University, Itacha (27.01.2017): Political Puzzles of the GMO: It's Not About the Science.
4. Rajeev, Meenakshi, ISEC, Bangalore (03.03.2017): National Accounts Statistics.

### **Center for Soft Computing Research, Kolkata**

1. Basu, Rajendra N., CSIR-Central Glass & Ceramic Research Institute, Kolkata (15.09.2016): Solid Oxide Fuel Cell: An Alternate Source of Power Generation.

## Conferences and Seminars

- 2 Basu Tanmay. University of Michigan, USA (27.02.2017): NLP for Knowledge Discovery in Biomedical text
- 3 Mandal Bappaditya. Institute for Infocomm Research A\*STAR, Singapore (13.12.2016): Assistive Vision Based Methodologies in Wearable Devices.
- 4 Roy Siddhartha Bose Institute, Kolkata (28.02.2017): Genomes, Epigenomes and Beyond.
- 5 Sinha Sitabhra Institute of Mathematical Sciences, Chennai (20.05.2016): Modeling the dynamics of brain activity at the meso-scale.
- 6 Stolkin Rustam. University of Birmingham, U.K. (29.11.2016): Advanced robotics for nuclear decommissioning
7. Tsutsui Shigeyoshi, Hannan University & Osaka Prefecture University, Japan (11.01.2017): Parallel Processing of Evolutionary Algorithms with GPGPUs for Fast Solving Combinatorial Optimization Problems



## 5. SANKHYĀ

The internationally renowned journal *Sankhyā*, an official publication of the Indian Statistical Institute, was founded by Professor P.C. Mahalanobis in 1932 and began publication under his editorship. It is devoted to original research articles in Probability, Mathematical Statistics and Applied Statistics. Reviews and discussion articles on current research activity in the above areas are also published. A rigorous peer review process is followed for acceptance of articles submitted for publication in *Sankhyā*. Many seminal articles in Probability, Theoretical Statistics and Applied Statistics have appeared in *Sankhyā*. The journal is published in two separate series – Series A and Series B. Series A with two issues per year, one in February and the other in August, covers Probability and Theoretical Statistics, while Series B with two issues per year, one in May and the other in November, covers Applied and Interdisciplinary Statistics. The present Editorial Board (2016-2018) of *Sankhyā* is as follows:

Editor-in-Chief	: Dipak K. Dey, University of Connecticut, USA.
Series A Editors	: Krishna Athreya, Iowa State University, Ames, USA : Gopal K. Basak, Indian Statistical Institute, Kolkata, India : Alok Goswami, Indian Statistical Institute, Kolkata, India (till June 2016) : Francisco Louzada, University of Sao Paulo, Sao Paulo, Brazil
Series B Editor	: Sudipto Banerjee, University of California, Los Angeles, USA : Bertrand Clarke, University of Nebraska, Lincoln, USA : Bani Mallick, Texas A & M University, College Station, USA : Sumitra Purkayastha, Indian Statistical Institute, Kolkata, India
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Editorial Office Support	: Kajal De, Indian Statistical Institute, Kolkata, India (till January 2017) : Ranjit Mandal, Indian Statistical Institute, Kolkata, India (from February 2017) : Sarvagnan Subramanian, Springer Journal's Editorial Office, India

Beginning 2010, Springer has entered into a co-publication agreement with the Institute and has taken over exclusive rights for the international distribution of the journal, in both prints and electronic editions from 2010. The editorial system is now completely electronic, that is, the entire process starting from submission of articles to editorial processing ending in final editorial decision for articles is now done online. The free access to the electronic editions of *Sankhyā* is expected to be available for all scientific workers of the Institute through Springer.

The figures below on sale volume (in Indian Rupees) for the year 2016:

Series	Print Edition	Online Subscription	Other	Total	Royalty Received by ISI (After TDS)
A	4,03,432.36	14,93,251.11	7,23,845.54	26,20,529.01	
B	4,03,432.36	6,59,287.94	7,03,911.74	17,66,632.04	<b>16,90,475.00</b>

The following issues have been published during April 2016 to March 2017:

May, 2016	: Volume 78, Part I, Series B [Both Electronic and Print Editions]
August, 2016	: Volume 78, Part II, Series A [Both Electronic and Print Editions]
November, 2016	: Volume 78, Part II, Series B [Both Electronic and Print Editions]
February, 2017	: Volume 79, Part I, Series A [Both Electronic and Print Editions]

## 6. SCIENTIFIC PAPERS AND PUBLICATIONS

(Some Publications may have multiple entries due to collaboration across Units)

### Books Published

#### Theoretical Statistics and Mathematics Division

##### *Stat Math Unit, Kolkata*

1. Goswami, D. and Bhowmick, J.: *Quantum Isometry Groups*, Infosys Science Foundation Series, Springer, New Delhi, 2016.
2. Sarbadhikari, H. and Srivastava, S.M.: *A Course on Basic Model Theory*, Springer, New Delhi, 2017.

##### *Stat Math Unit, New Delhi*

1. Bandyopadhyay, A. and Thacker, D.: *On Pólya Urn Schemes with Infinitely Many Colors. Bernoulli (Journal of Bernoulli Society)*, 23(4B): 3243–3267, 2017.
2. Bhatia, R.: *Linear Algebra and Analysis Masterclasses*, Indian Academy of Science, 2016.

#### Applied Statistics Division

##### *Interdisciplinary Statistical Research Unit, Kolkata*

1. Basu, A. and Basu, S.: *A User's Guide to Business Analytics*, CRC Press (A Chapman & Hall Book), Boca Raton, Florida, 2016.
2. Chandra, T K and Gangopadhyay, S.: *Fundamentals of Probability Theory*, Narosa Publishing House Pvt. Ltd., 2017.
3. Pal, A., and Pal, S.K. (eds.): *Pattern Recognition and Big Data*, World Scientific, Singapore, pages 876, 2017, ISBN: 978-981-3144-54-5 (hardcover).

#### Computer and Communication Sciences Division

##### *Advanced Computing and Microelectronics Unit, Kolkata*

1. Bhunia, S., Ray, S. and Sur-Kolay, S. (eds.): *Fundamentals of IP and SoC Security – Design, Verification and Debug*, Springer, 2017.

## Publications

### **Machine Intelligence Unit, Kolkata**

1. Rodriguez, J.M.C., Mitra, S., Thampi, S.M. and El-Alfy, E.-S.: *Intelligent Systems Technologies and Applications 2016*, Advances in Intelligent Systems and Computing, Springer, 530, 2016.

### **Social Sciences Division**

#### **Economic Research Unit, Kolkata**

1. Ghosh, C. and Ghosh, A.: *Indian Economy: A Macro-theoretic Analysis*, Prentice Hall of India Learning Private Limited, Delhi, 256, 2016.

#### **Linguistic Research Unit, Kolkata**

1. Dasgupta, P., Ertl, S., Jacobsen, J.L. and Moinhos, S. (eds.): *Beletra Almanako 26*, Mondial, New York, 2016.
2. Dasgupta, P., Ertl, S., Jacobsen, J.L. and Moinhos, S. (eds.): *Beletra Almanako 27*, Mondial, New York, 2017.
3. Dash, N.S., Bhattacharyya, P. and Pawar, Jyoti D. (eds.): *The WordNet in Indian Languages*, Springer, Singapore, HB, 275, 2017 (ISBN: 978-981-10-1907-4).

#### **Sociological Research Unit, Kolkata**

1. Ghosh, B.N.: (Bengali translation by Himanshu Ghosh), *Gramin Netritya O Unnayan*, Pragatisil Prakash, Kolkata, 222, 2016, ISBN: 978-81-89846-62-6.
2. Ghosh, B.N.: *Empowerment of Women in North East in India*, Concept Publishing Company (P) Ltd, New Delhi, 183+xxiii, 2016, ISBN-13:978-93-5125-104-0.

#### **Economics and Planning Unit, New Delhi**

1. Ghate, C. and Kletzer, K. (UCSC) (eds.): *Monetary Policy in India: A Modern Macroeconomic Perspective*, Springer Verlag, India, 2016.

#### **Economic Analysis Unit, Bangalore**

1. Swaminathan, M. and Das, A.: *Socio-Economic Surveys of Three Villages in Karnataka*, Tulika Books, New Delhi, 2017, ISBN 9789382381884.

## Statistical Quality Control and Operations Research Division

### SQC & OR Unit, Kolkata

1. Neogy, S.K., Bapat, R.B., Das, A.K. and Pradhan, B., (eds): *Optimization Models with Economic & Game Theoretic Applications, Annals of Operations Research*, Springer Publication, ISSN 0254-5330, Annals of Operations Research, Online Version: DOI: 10.1007/s10479-016-2250-0, 2016.

### SQC & OR Unit, Bangalore

1. Antony, J., Vinodh, S., and Gijo, E.V.: *Lean Six Sigma for Small and Medium Sized Enterprises: A Practical Guide*, CRC Press, New York, 215, 2016.

### Centre for Soft Computing Research, Kolkata

1. Misra, S. and Pal, S.K. (eds.): *Soft Computing Applications in Sensor Networks*, Chapman & Hall/CRC, Boca Raton, Florida, 284, 2017, ISBN No. 13: 978-1-4822-9875-8, 2017.
2. Pal, S.K., Ray, S.S. and Ganivada, A.: *Granular Neural Networks, Pattern Recognition and Bioinformatics*, (Series: Studies in Computational Intelligence), Springer Verlag, Heidelberg, 240, ISBN: 978-3-319-57115-7 (ebook); ISBN: 978-3-319-57113-3 (hardcover); Series ISSN: 1860-949X, 2017.
3. Pal, A. and Pal, S.K. (eds.): *Pattern Recognition and Big Data*, World Scientific, Singapore, 876, ISBN No. 978-981-3144-54-5, 2017.

## Papers Published in Journals

### Theoretical Statistics and Mathematics Division

#### Stat-Math Unit, Kolkata

1. Bhowmik, M. and Sen, S.: An uncertainty principle of Paley and Wiener on euclidean motion group, Online Version: DOI: 10.1007/s00041-016-9510-x, 2016.
2. Banerjee, D. and Bose, A.: Bulk behaviour of some patterned block matrices, *Indian Journal of Pure and Applied Mathematics, Special issue on Stochastic Systems and Applications*, **47(2)**, 273-289, 2016.
3. Basak, G. K. and Biswas, A. : Langevin type limiting processes for adaptive MCMC, *Indian Journal of Pure Applied Mathematics*, **47(2)**, 301-328, 2016.
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### **Applied Statistics Division**

#### **Applied Statistics Unit, Kolkata**

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1. Farzana,A. and Barooah, B.: Educational Attainment and Learning in India, 2004-12, *Regional Growth and Sustainable Development in Asia*, Batabyal and Nijkamp (eds.), **221-236**, Springer, 2017.
2. Ghate, C. and Kenneth, K. (UCSC): Introduction (Chapter 1), *Monetary Policy in India: A Modern Macroeconomic Perspective*, C. Ghate and K. Kenneth (UCSC) (eds.), Springer Verlag, India, 3 – 27, 2016.
3. Ramaswami, B.: Hunger and Food Security Concerns for India, *India and Sustainable Development Goals, The Way Forward*, Research and Information Systems, New Delhi, 13-21, 2016.

### **Economic Analysis Unit, Bangalore**

1. Ramachandran, V. K.: Socio-Economic Classes in the Three Villages, *Socio-Economic Surveys of Three Villages in Karnataka: A Study of Agrarian Relations*, M. Swaminathan and A.Das (eds.), Tulika Books, New Delhi, 69-85, 2017, ISBN 9789382381884.
2. Swaminathan, M. and Das. Y. : Features of Asset Ownership in Three Villages of Karnataka, *Socio-Economic Surveys of Three Villages in Karnataka*, M. Swaminathan and A.Das (eds.), Tulika Books, New Delhi, 140-161, 2017, ISBN 9789382381884.

## **Statistical Quality Control and Operations Research Division**

### **SQC & OR Unit, Kolkata**

1. Basak, I. and Chakraborty, A.K.: Assessment of Classical and Bayesian approach for Estimation of Structural changes in Panel Data, *New Trends in Stochastic Modeling and Data Analysis*, R. Manca, S.McClean and C.H. Skiadas (eds.), Stochastic Modeling Techniques and Data Analysis (SMTDA), 243-255, 2016.

### **Centre for Soft Computing Research, Kolkata**

1. Banerjee, R. and Pal, S. K.: A machine-mind architecture and Z\*-numbers for real-world comprehension, *Pattern Recognition and Big Data*, S.K. Pal and A. Pal (eds.), World Scientific, Singapore, 807-844, 2017.



## Publications

2. Das, S. K., Bera, S., Misra, S. and Pal, S. K.: Introduction to Wireless Sensor Networks, Soft Computing Applications in Sensor Networks, *Soft Computing Applications in Sensor Networks*, S. Misra and S. K. Pal (eds.), Chapman & Hall/CRC, Boca Raton, Florida, 3-20, 2017.
3. Ganivada, A., Ray, S. S. and Pal, S. K.: Fuzzy Rough Granular Neural Networks for Pattern Analysis, *Pattern Recognition and Big Data*, A. Pal and S.K. Pal (eds.), World Scientific, Singapore, 487-512, 2017.
4. Jr. D. M., Lopes, F. M. and Ray, S. S.: Inference of Gene Regulatory Networks by Topological Prior Information and Data Integration, *Emerging Research in the Analysis and Modeling of Gene Regulatory Networks*, I. V. Ivanov, X. Qian and R. Pal (Eds.), IGI Global, Hershey, Pennsylvania, 1-51, 2016.
5. Pal, A. and Pal, S. K.: Pattern Recognition: Evolution, Mining and Big Data, *Pattern Recognition and Big Data*, A. Pal and S.K. Pal(eds.), World Scientific, Singapore, 1-36, 2017.
6. Pal, S. K. and Kundu, S.: Granular social network: model and applications, *Handbook of Big Data Technologies*, A. Zomaya and S. Sakr (eds.), Springer, 617-651, 2017.
7. Pal, S. K.: Playing with fuzziness and ambiguity in patterns - challenges and achievements, *The Mind of an Engineer*, P. Ghosh and B. Raj (eds.), Springer, Singapore, 363-374, 2016.
8. Subudhi, B. N., Ghosh, S., and Ghosh, A.: Moving Object Detection using Multi-layer Markov Random Field Model, *Pattern Recognition And Big Data*, A. Pal and S. Pal (eds.), World Scientific, 687-711, 2017.

## 7. VISITING SCIENTISTS, HONOURS AND AWARDS

### VISITING SCIENTISTS

A number of distinguished scientists from India and abroad participated in the research, training and other scientific activities of the Institute during the year. Some of them came to the Institute on invitation and spent fairly long periods in the Institute to assist in the regular research and teaching programmes, while others came for short periods and gave lectures and seminars. Most of them were available for consultation by the faculty members of the Institute. Names of the visiting scientists are given below.

#### Theoretical Statistics and Mathematics Division

##### *Stat-Math Unit, Kolkata*

1. Adhikari, Kartick, Dept. of Mathematics, IISc. Bangalore, October 19, 2016- March 31, 2017.
2. Asanuma, T., Retd. From University of Toyama, Japan, February 15, 2017- March 15, 2017.
3. Bagchi, Sayan, Dept. of Mathematics, IISc, Bangalore, September 05, 2015- September 30, 2016.
4. Banerjee, Moulinath, University of Michigan, July 01, 2016- July 31, 2016.
5. Bikram, Panchugopal, Dept. of Mathematics, Ben-Gurion University of the Negev, Isreal, April 04, 2015- October 01, 2016.
6. Chakraborty, Partha Sarathi, IMSc., Chennai, August 25 - September 04 and November 09 - December 02, 2016.
7. Chakraborty, Sagnik, School of Mathematics, TIFR, Mumbai, September 01, 2015- June 30, 2016.
8. Chandgotia, Nishant, Tel Aviv University, October 24, 2016- November 07, 2016.
9. Choudhuri, Monoj, Centre for Applicable Mathematics, TIFR, Bangalore, May 25, 2015- August 29, 2016.
10. Dashiell, Fred, Chapan College & UCLA, November 20, 2016- December 20, 2016.
11. Datta, Basudeb, IISc. Bangalore, May 08, 2016- May 22, 2016.
12. De, Shyamal Krishna, NISER, Bhubaneshwar, November 18, 2016- November 22, 2016.
13. Giri, Sumit, Tel Aviv University, October 17, 2016- October 21, 2016.
14. Hemant, Vishe Pankaj, Durham University, September 04, 2016- September 07, 2016.
15. Jahan, Qaiser, IIT, Kanpur, July 22, 2016- July 30, 2016.
16. Jha, Somnath, IIT, Kanpur, May 16, 2016- May 25, 2016.

#### Visiting Scientists, Honours and Awards

17. Joardar, Soumalya, JNCASR, Bangalore, October 06-26, 2016 and December 30, 2016- January 22, 2017.
18. Johnstone, Ian, Dept. of Stanford University, USA, January 25, 2017- February 07, 2017.
19. Khurana, Divya, IIT, Kanpur, June 01, 2016- October 02, 2016.
20. Krishna, Amalendu, School of Mathematics, TIFR, Mumbai, September 26, 2016.
21. Kulkarni, Dheeraj, Dept. of Mathematics, Ramakrishna Mission Vivekananda University, March 01, 2016- February 28, 2017.
22. Lokhande, Swapnil Ashok, IIIT, Vadodara, May 30 - June 30, 2016.
23. Malaviya, Soumya, Department of Sociology, Delhi School of Economics, April 24 – May 06, 2016.
24. Parekh, Sandeepan, Vanderbilt University, July 15, 2016- August 16, 2016.
25. Patil, Alpesh Avinash, IISER, Pune, October 17, 2016- November 15, 2016.
26. Prathamesh, T.V.H., IMSc, Chennai, September 05, 2016- October 02, 2016.
27. Pusti, Sanjoy, Department of Mathematics and Statistics, IIT, Kanpur, December, 18-24, 2016.
28. Quddus, Safder, NISER, Bhubaneswar, February 14-16, 2017.
29. Saha, Kumarjit, TIFR CAM, Bangalore, October 03 -07, 2016.
30. Sathaye, Avinash, University of Kentucky, USA, June 02 - 28, 2016.
31. Sen, Bodhisattva, Columbia University, December 21, 2016- February 03, 2017.
32. Sengupta, Jyotirmoy, TIFR, Mumbai, January 24- 29, 2017.
33. Singh, Saurabh Kumar, School of Mathematics, TIFR, Mumbai, November 05, 2015- June 30, 2016.
34. Sinha, K.B., JNCASR, Bangalore, October 24-26, 2016.
35. Urroz, Jorge Simenge, Universidad Politecnica De Catacuna, February 15-18, 2017.
36. Yamashita, Makoto, Ochnomizu University, February 12-17, 2017.
37. Zinna, Md. Ali, Department. of Mathematics, IIT, Bombay, September 01, 2016-March 31, 2017.

#### ***Stat-Math Unit, Delhi***

1. Ali, Patrick, Chancellor College, Univesrity of Malawi, March 1- 31, 2017.
2. Azimi, Ali, Ferdowsi University of Mashhad, March 10– April 9, 2017.
3. Bose, Anirban, I.M.Sc., December 2-11, 2016.

## Visiting Scientists, Honours and Awards

- 4 Chakraborty, Debopam, IIT, Guwahati, November 10, 2016 – March 31, 2017.
- 5 Chi, TRAN Viet, LILLE 1 University - Science and Technology, December 11- 14, 2016.
- 6 Deshouillers, Jean-Marc, University of Bordeaux, September 20-24, 2016 and October 16- 20, 2016
- 7 Devi, A R Usha, Bangalore University, July 17– August 8, 2016; August 28- October 15, 2016; November 3- 22, 2016; December 25, 2016 – January 31, 2017 & February 16- March 31, 2017.
- 8 Dey, Pallab Kanti, HRI Allahabad, May 30- June 4, 2016; October 19, 2016 – till October 18, 2017
- 9 Estaji, Ehsan, Hakim Sabzevari University, March 10-April 9, 2017.
- 10 Ganesan, Ghurumuruhan, NYU, Abu Dhabi, March 9-12, 2017.
- 11 Giri, Sumit, Tel Aviv University, October 24-27, 2016.
- 12 Jha, Somnath, IIT Kanpur, May 1-14, 2016.
- 13 Kapoor, Girish, Government Degree College Shimla, February 6- 16, 2017.
- 14 Khoshnevisan, Davar, Univeristy of Utah, November 24- 30, 2016.
- 15 Marty, Chandan, IMSc, Chennai, February 15- March 15, 2017 & March 16, 2017– till March 15, 2018
- 16 Majhi, Bibekananda, HRI Allahabad, May 30- June 4, 2016; December 19-26, 2016.
- 17 Manda, Srikanth S, LifeBytes, November 6-13, 2016.
- 18 Mishra, Manish, IISER-Pune, December 6-13, 2016.
- 19 Murty, Ram, Queens University Canada, September 4-6, 2016.
- 20 Niknejad, Amir, College of Mount Saint Vincent, New York, USA, December 1-31, 2016.
- 21 Ramare, Olivier, CNRS and University of Marseilles, France, February 5-12, 2017.
- 22 Rout, Sudhansu Sekhar, HRI Allahabad, May 30- June 4, 2016.
- 23 Saha, Kumarjit, TIFR CAM, December 7- 14, 2016.
- 24 Saikia, Neelam, IIT, Delhi, May 24- November 10, 2016.
- 25 Saradha, N., TIFR, Mumbai, September 1- 15, 2016.
- 26 Saurabh, Bipul, IMSc, Chennai, May 22- 24, 2016.
- 27 Sekhar, Sudhansu, HRI Allahabad, December 19- 30, 2016.
- 28 Setghuram, Sunder, University Arizona, July 11- 15, 2016.

#### Visiting Scientists, Honours and Awards

29. Sharma, Rajesh, HP University, Shimla, April 25-May 13, 2016 and February 6- 16, 2017.
30. Sharma, Vikas, HP University, Shimla, April 25- May 13, 2016.
31. Sinha, Bimal, University of Maryland, May 7- 10, 2016.
32. Sinha, Sneh Bala, Harish Chandra Research Institute, Chhatnag, Jhansi, April 4, 2016 – October 3, 2017.
33. Singh, Maibam Ranjit, Manipur University, October 20- 23, 2016.
34. Sivaramakrishnan, S., Indian Institute of Technology Bombay, September 10- 19, 2016.
35. Srinivasan, Anita, Saint Louis University, Madrid Campus, July 31- August 6, 2016.
36. Thangadurai, R., HRI Allahabad, December 26- 27, 2016.
37. Timar, Adam, Renyi Institute, Budapest, Hungary, January 10- 13, 2017.
38. Upadhyay, Jalaj, Penn State University, May 31- June 2, 2016.
39. Waldschmidt, Michel, University of Paris, Jussieu, France. September 10- 12, 2016.

#### ***Stat-Math Unit, Bangalore***

1. Ambily A.A, CUSAT, Cochin, May 16–June 17, 2016.
2. Banerjee, Kalyan, ISF-UGC visiting scientist, September 30, 2015 – February 8, 2017.
3. Banerjee, Tathagata, Post-doctoral visiting scientist, January 1 – March 31, 2017.
4. Basak, Biplab, NBHM Post-doctoral fellow, September 1, 2015 – December 31, 2016.
5. Chakraborty, Prateep, NBHM Post-doctoral fellow, November 2, 2015 – October 27, 2016.
6. Chattopadhyay, Pratyusha, INSPIRE Faculty Fellow, November 1, 2013 – till date.
7. Das, Bata Krishna, IIT Bombay, August 13-17, 2016.
8. De, Sandipan, Post-doctoral visiting scientist from August 8, 2016 – till date.
9. Dolai, Dhriti Ranjan, Post-doctoral visiting scientist, February 20 – March 31, 2017.
10. Dutta, Sudipta, IIT Kanpur, June 14 - 15, 2016.
11. Ganesan, G., ISF-UGC visiting scientist, January 1 – July 19, 2016.
12. Gopaldaswamy, Arjun, University of Oxford, UK, 1 July 2016–till date.
13. Haria, Kalpesh, INSPIRE Faculty Fellow, June 18, 2015–till date.
14. Johnstone, Iain M., Stanford University, USA, February 1-3, 2017.

#### Visiting Scientists, Honours and Awards

15. Joseph, Mathew, University of Sheffield, UK, July 30– August 6, 2016.
16. Kannappan, S., University of Michigan, June 14-July 15, 2016.
17. Kasilingam, Ramesh, INSPIRE Faculty Fellow, September 24, 2015–till date.
18. Keshari, Dinesh Kumar, INSPIRE Faculty Fellow from April 1, 2015–December 23, 2016.
19. Kumar, Neeraj, IMSc., Chennai, June 20–September 30, 2016.
20. Kumari, Rani, IIT Kanpur, since December 1, 2015 – July 30, 2016.
21. Maji, Amit, NBHM Post-doctoral fellow, October 1, 2015 – till date.
22. Majumder, Souradeep, ISF-UGC visiting scientist, July 31, 2015 – till date.
23. Maldeghem, Hendrik Van, University of Ghent, Belgium, April 5-17, 2016.
24. Mytnik, Leonid, Technion Institute of Technology, Israel, August 20-26, 2016.
25. Owada, Takashi, Technion-Israel Institute of Technology, June 13-18, 2016.
26. Penrose Mathew, University of Bath, UK, January 18-20, 2017.
27. Rajendran, Dhanya, INSPIRE Faculty Fellow, April 20, 2016 – till date.
28. Reddy, Harish, Visiting scientist (ISF-UGC), November 17, 2016 – till date.
29. Reddy, Tulasi Rama, ISF-UGC visiting scientist, March 1 – September 30, 2016.
30. Sahasrabudhe, Neeraja, IIT Bombay, October 23 – 29, 2016.
31. Sahoo, Binod Kumar, NISER Bhubaneswar, June 20 – July 16, 2016.
32. Sahu, Bikramaditya, NISER, Bhubaneswar, May 16 - June 18, 2016.
33. Sarkar, Barun, ISF-UGC Visiting Scientist, July 18, 2016 – March 31, 2017.
34. Sarkar, Santanu, INSPIRE Faculty Fellow, October 31, 2016 – till date.
35. Schepper, Anneleen de, University of Ghent, Belgium, April 5-17, 2016.
36. Shekhar, Atul, ISF-UGC visiting scientist, May 30, 2016 – till date.
37. Srivastava, Sachi, University of Delhi, August 8-9, 2016.
38. Tappe, Stefan, University of Hannover, Germany, September 26 – 30, 2016.
39. Thakur, Ajay Singh, INSPIRE Faculty Fellow, since January 31, 2014 – February 3, 2017.
40. Tripathi, Amit, NISER, Bhubaneswar, June 06 - July 07, 2016.
41. Trivedi, Harsh, IIT Bombay, April 01 - June 27, 2016.
42. Vaish, Vaibhav, INSPIRE Faculty Fellow, since January 4, 2016 – till date.

## Visiting Scientists, Honours and Awards

43. Varadhan S.R.S., Courant Institute of Mathematical Sciences, USA, January 23-27, 2017.

### **Applied Statistics Division**

#### ***Applied Statistics Unit, Kolkata***

1. Basak, Indrani, Department of Mathematics and Statistics, the Pennsylvania State University, Altoona, USA, June 1, 2016-December 31, 2016.
2. Basak, Prasanta, Department of Mathematics and Statistics, the Pennsylvania State University, Altoona, USA, June 1, 2016-December 31, 2016.
3. Sharma, Amit Kumar, NBHM Post-doctoral fellow, June 1, 2016- March 31, 2017.

#### ***Interdisciplinary Statistical Research Unit, Kolkata***

1. Dasgupta, Shibasish, Department of Mathematics & Statistics, University of South Alabama, U.S.A., August 8, 2016 – October 31, 2016.
2. Dharmani, Bahveshkumar C, DAIICT, Gandhinagar, May 1, 2016 – December 29, 2016.
3. Mukhopadhyay, Minerva, Department of Statistics, Bethune College, Kolkata, November 4, 2016 – December 30, 2016.
4. Pal, Satyabrata, Bidhan Chandra Krishi Viswa Vidyalaya, April 1, 2016 – March 31, 2017.

#### ***Applied Statistics Unit, Chennai***

1. Sreelakshmi, N, N-PDF, SERB, DST, Govt. India, April 1, 2016- March 31, 2017.

### **Computer and Communication Sciences Division**

#### ***Advanced Computing and Microelectronics Unit, Kolkata***

1. Chakraborty, Goutam, Iwate Prefectural University, Japan, March 03-18, 2017.
2. Dutta, Kunal, Post Doctoral Researcher, INRIA, Sophia-Antipolis, France, January 18-February 10, 2017.
3. Ho, Tsung-Yi, Department of Computer Science, National Tsing Hua University (NTHU), Taiwan, March 14-17, 2017.
4. Molla, Anisur Rahaman, Inspire Faculty, Post Doctoral Researcher, Department of Computer Science, University of Freiburg, Germany, November 01, 2016-February 28, 2017.
5. Pandit, Supantha, Department of Computer Science, IIT, Ropar, June 03, 2016-January 31, 2017.

6. Paul, Subhabrata, Assistant Professor, IIT Guwahati, December 06-30, 2016.

***Computer Vision and Pattern Recognition Unit, Kolkata***

1. Chakraborty, Nelay, Free University Berlin, April 01, 2016–March 31, 2017.
2. Majumder, Prasenjit, Dhirubhai Ambani Institute of Information and Communication Technology, India, December 01-31, 2016.
3. Roy, Partha Pratim, IIT, Roorkee, December 15-31, 2016.
4. Shivakumara, P., University of Malaya, August 01-20, 2016.

***Electronics and Communication Sciences Unit, Kolkata***

1. Majumder, Angshul, Indraprastha Institute of Information Technology, Delhi, May 16-July 16, 2016.
2. Wang, Jiang, China University of Petroleum, China, March 01-30, 2017.

***Documentation, Research and Training Centre, Bangalore***

1. Amin, Saiful, Library Systems Specialists, Semantic Consulting Services Pvt. Ltd., July 20-November 30, 2016 and January 9-March 31, 2017.
2. Giunchiglia, Fausto, Professor of Computer Science, University of Trento, Italy, February 27-March 5, 2017.
3. Prasad, Arun, Founder and CEO, 1-Enterprise, Bangalore, January 10–March 31, 2017.
4. Sangam, S.L., Professor (Retd.), Karnataka University, Dharwad, September 1–November 30, 2016.
5. Satija, M.P., Professor (Retd.), Dept. of Lib. & Inf. Sc., Guru Nanak Dev University, Amritsar, September 19–October 13, 2016.

***Systems Science and Informatics Unit, Bangalore***

1. Nair, Jaya, International Institute for Information Technology (IIIT), Bangalore, June 1-30, 2016.
2. Rosen, Paul A., Jet Propulsion Laboratories (JPL), NASA-Caltech, August 05, 2016.

***Computer Science Unit, Chennai***

1. Chacko, Daphna, Research Scholar, National Institute of Technology, Calicut, November 6-30, 2016.



Visiting Scientists, Honours and Awards

***Cryptography and Security Research Unit, Kolkata***

1. Bhattacharya, Soumya, Visiting Scientist, April 01, 2016-March 31, 2017.
2. Bhattacharya, Srimanta, Visiting Scientist, April 01, 2016-March 31, 2017.
3. Ghosh, Bappaditya, Visiting Scientist, June 27, 2016-March 31, 2017.
4. Gueron, Shay, Honorary Visiting Professor, University of Haifa, Israel, September 15-25, 2016.
5. Karati, Sabyasachi, Visiting Scientist, April 01-May 31, 2016.
6. Mihaljevic, Miodrag, Research Professor, Mathematical Institute, Serbian Academy of Sciences and Arts, Belgrade, Serbia, September 14-23, 2016.
7. Minematsu, Kazuhiko, Honorary Visiting Professor, NEC Corporation, Japan, September 15-25, 2016.
8. Orlandi, Claudio, Aarhus University, Denmark, December, 2016.
9. Stanica, Pantelimon, Professor, Naval Post-Graduate School, USA, September 14-23, 2016.

**Physics and Earth Sciences Division**

***Geological Studies Unit, Kolkata***

1. Basilici, Georgio Basilici, Institute of Geosciences, University of Campina, Sao Paulo, Brazil, November 4-December 9, 2016.
2. Beukes, N.J., DST-NRF Centre of Excellence for Integrated Mineral and Energy Resource Analysis (CIMERA), Department of Geology, University of Johannesburg, South Africa, January 9 - 26, 2017.
3. Bowden, L.L., DST-NRF Centre of Excellence for Integrated Mineral and Resource Analysis (CIMERA), Department of Geology, University of Johannesburg, South Africa, January 9-17, 2017.
4. Soares, Marcus V.T., Institute of Geosciences, University of Campina, Sao Paulo, Brazil, November 4-December 9, 2016.
5. Shanmugam G., University of Texas at Arlington, USA, and consultant for Exxon Mobil Oil Company, USA., November 9 -12, 2016.
6. Wabo, Herve H., DST-NRF Centre of Excellence for Integrated Mineral and Resource Analysis (CIMERA), Department of Geology, University of Johannesburg, South Africa, January 9-26, 2017.

***Physics and Applied Mathematics Unit, Kolkata***

1. Banerjee, R., SoET-Mathematics, BML Munjal University, Gurgaon, Haryana, June 20-26, 2016.

2. Rahaman, R., Department of Mathematics, Allahabad University, June 20 – July 01, 2016.

### **Biological Sciences Division**

#### ***Agricultural & Ecological Research Unit, Kolkata***

1. Fuwa, Nobu Hiko, Tokyo University, Japan, February 08 –18, 2017.

#### ***Human Genetics Unit, Kolkata***

1. Datta, Shalini, Visiting Scientist, July 01– September 30, 2016.

### **Social Sciences Division**

#### ***Economic Research Unit, Kolkata***

1. Bhattacharya, Sourav, Department of Economics, Royal Holloway University of London, 305, Horton Building, Egham, Surrey TW20 0EX, UK, May 2 – August 31, 2016.
2. Bhowmik, Anuj, Department of Economics, School of Humanities and Social Sciences, Shiv Nadar University, October 3-18, 2016; December 19, 2016 - January 2, 2017 and March 10 - 20, 2017.
3. Bradford, Charles, Scott, Department of Economic, Brigham Young University, Provo, LJT 801-422-8358, USA, January 5-11, 2017.
4. Chatterjee, Arpita, Australian School of Business, School of Economics, University of New South Wales, Australia, September 26 – October 5, 2016.
5. Chakraborty, Bikas, K., Centre for Applied Mathematics & Computational Science, Saha Institute of Nuclear Physics, Kolkata, Since August, 2016.
6. Chatterjee, Kalyan, Department of Economics, The Pennsylvania State University, University Park, PA 16802, USA, June 13 – July 4, 2016 and December 19, 2016 - January 5, 2017.
7. Ghosh, Arghya, School of Economics, UNSW Business School, University of New South Wales, Sydney, NSW 2052, Australia, July 13 – 22, 2016.
8. Goonj, Mohan, 305, Golden Next Apartment, Adugodi, Bangalore, Karnataka – 560030, January 20 – February 6, 2017.
9. Mallik, Girijasankar, School of Business, Locked Bag 1797, Penrith South DC, NSW 1797, Australia, December 7, 2016 - January 30, 2017.
10. Mazumder, Chiranjit, Division of Agricultural Economics, ICAR – Indian Agricultural Research Institute, New Delhi – 110012, December 5, 2016 - March 5, 2017.

### Visiting Scientists, Honours and Awards

11. Mondal, Debasis, Department of Humanities & Social Science, Indian Institute of Technology, New Delhi – 110 016, June 1 – 30, 2016.
12. Mukherjee, Debasri, Department of Economics, Western Michigan University, Kalamazoo, MI 49008, USA, July 12 – August 12, 2016.
13. Sarkar, Jyotirmoy, Department of Economics, Purdue University, Indianapolis, USA, June 15– July 24, 2016 and January 1– till July 31, 2017.
14. Sinha, Bhanu Uday, Department of Economics, Delhi School of Economics, University of Delhi, Delhi – 110 007, June 1 – 21, 2016.

### ***Linguistic Research Unit, Kolkata***

1. Baman, Tapan, Director, Mihup Communications Private Limited, Kolkata, India, October 26, 2016.
2. Bhattacharya, Anupam, Scientist, Mihup Communications Private Limited, Kolkata, India, February 10, 2017.
3. Ehsanul Kabir, Muhammad, Mitcham Institute, Victoria, Australia, September 7-8, 2016.
4. Jana, Ujjwal, Department of English, Pondicherry University, Pondicherry, India, January 4-5, 2017.
5. Sengupta, Tiyasa, Department of language and Communication, University of Denmark, January 9, 2017.

### ***Population Studies Unit, Kolkata***

1. Pasupuleti, Samba Siva Rao, Alfred Deakin Research Institute, Deakin University, Geelong Waterfront Campus, Geelong, Australia, since April 01, 2016 – August 31, 2016.

### ***Psychology Research Unit, Kolkata***

1. Aruru, Meghana V, IIPH Hyderabad, February 9, 2017.
2. Biswas, Gopal Ch, Dy. Director, Non-Communicable Diseases, Govt. of West Bengal, Sasthya Bhawan, March 1, 2017.
3. Das, Koel, Department of Mathematics and Statistics, Department of Biological Sciences, Indian Institute of Science Education and Research (IISER), Kolkata, May 30, 2016.
4. Halder, Santoshi, Department of Education, University of Calcutta. May 30, 2016.
5. Hariharan, Meena, Head, Department of Health Psychology, Central University of Hyderabad, February 9, 2017.
6. Indelicato, Joseph, Touro College School of Health Sciences, New York, USA, March 1, 2017.

### Visiting Scientists, Honours and Awards

7. Kumar, Anand, Indian Academy of Health Psychology, Varanasi, March 1, 2017.
8. Mukherjee, S.P, Centenary Professor of Statistics at the University of Calcutta, August 11, 2016.
9. Mukhopadhyay, Pritha, Department of Psychology, University of Calcutta, May 30, 2016.
10. Mustafi, Joy, Microsoft Artificial Intelligence and Research, Hyderabad, February 9, 2017.
11. Pathak, Pramod, Department of Management Studies, Indian Institute of Technology (Indian School of Mines), Dhanbad, Jharkhand, March 29, 2017.
12. Pyne, Saumyadipta, Indian Institute of Public Health, Hyderabad, August, 12, 2016 and February 8, 2017.
13. Ray, Anjali, Department of Applied Psychology, University of Calcutta, May 30, 2016.
14. Rai, Ravindra Nath, Centre for Distance Education, NEHU (Bijni Campus), May 30, 2016.
15. Sarkar, Pritha, Department of Health & FW & Project Director, WBSAP & CS, Govt. of West Bengal, Sasthya Bhawan, March 1, 2017.
16. Sarkar, Vyjayanthir, Ashoka Fellow, Centre for Science of Student Learning, February 9, 2017.
17. Sinha, Anirban, Department of Endocrinology, Medical College, Kolkata, March 1, 2017.
18. Singh, Gurudeep, Hazaribagh University, Jharkhand, March 29, 2017.
19. Sitamma, M., BS Hyderabad (IFHE, Deemed University), February 8, 2017.

### ***Sampling and Official Statistics Unit, Kolkata***

1. Alam, Moneer, Institute of Economic Growth, New Delhi, April 4-6, 2016.
2. Barman, R.B., Chairman, National Statistical Commission, New Delhi, October 19, 2016.
3. Bhattacharjee, Kaushik, TAPMI Manipal, April 18 - June 15, 2016.
4. Chatterjee, Kiranmoy, Bidhannagar College, Kolkata, November, 2016 - June 2016.
5. Gradin, Carlos, Universidade de vigo Spain, June 4-19, 2016.
6. Jha, Chandan Kumar, Department of Economics, Le Moyne College, June 28, 2016.
7. Sen Gupta, Indranil, Department of Mathematics, North Dakota State University, November 15-December-15, 2016.

### ***Sociological Research Unit, Kolkata***

1. De, Utpal Kumar, Head and Professor of Economics, North Eastern Hill University, Shillong, January, 2017.

Visiting Scientists, Honours and Awards

***Economics and Planning Unit, Delhi***

1. Aggarwal, Nidhi, IGIDR, March 06, 2017.
2. Agnieszka, Wiszniewska-Matyszkiewicz, Institute of Applied Mathematics and Mechanics, University of Warsaw, January 17, 2017.
3. Anand, Abhinav, University College Dublin, December 9, 2016 and January 17, 2017.
4. Azariadis, Costas, Washington University, December 16, 2016.
5. Banerjee, Ritwik, IIM, Bangalore, November 25, 2016.
6. Banerjee, Shesadri, (NCAER), December 12- 17, 2016.
7. Barua, Rashmi, JNU, September 30, 2016.
8. Basu, Parantap, Durham University, December 13- 21, 2016.
9. Basu, Sujata, Jawaharlal Nehru University, April 7, 2016.
10. Bhaskar, Umang, TIFR, October 28, 2016.
11. Bhattacharya, Prasad, Deakin University, July 1- December 31, 2016.
12. Borah, Abhinash, Ashoka University, August 12, 2016.
13. Bradford, Scott, Brigham Young University, July 24- December 31, 2017.
14. Chaithanya, Jayakumar, University of Siena, June 1, 2016.
15. Chakraborty, Tanika, IIT Kanpur, September 16, 2016.
16. Swarnendu, Chatterjee., Maastricht University, March 15, 2017.
17. Coffey, Diane, RICE, July 1, 2016- July 30, 2017.
18. Das, Piyali, Indiana University, Bloomington, August 19, 2016 and November 1- 30, 2016.
19. Dasgupta, Amlan, New Delhi, July 1- December 31, 2016.
20. Dasgupta, Kunal, University of Toronto, January 15- April 30, 2017.
21. Datt, Gaurav, Monash University, April 1, 2016.
22. Desai, Sonalde, University of Maryland, March 3, 2017.
23. Dubey, Ram Sewak, Montclair State University, July 22, 2016.
24. Dutta, Prajit K., Columbia University, New York, January 16, 2017.
25. Girish Bahal, national council of applied economic research, March 08, 2017.
26. Gopalakrishnan, Pawan, RBI, Mumbai, May 1- 5, 2017.

## Visiting Scientists, Honours and Awards

27. Gupta, Abhimanyu, University of Essex, April 29, 2016.
28. Jha, Chandan Kumar, Le Moyne College, July 27, 2016.
29. Jha, Nikhil, University of Melbourne, October 14, 2016.
30. Kakar, Venoo, San Francisco State University, January 11, 2017.
31. Khera, Purva, December 19- 21, 2016.
32. Kohlin, Gunnar, Environment for Development initiative, March 8- 11, 2017.
33. Kumar, Alok, University of Victoria, Canada , March1- 31, 2017.
34. Kunimoto , Takashi, Singapore Management University, February 23, 2017.
35. Lahiri, Abhinaba, Maastricht University, March 10, 2017.
36. Majumdar, Dipiyoti, Concordia University, Canada, July 26-August 2, 2016.
37. Malick, Debdulal, Deakin University, December 18- 27, 2016.
38. Paramanik, Anup, Osaka University, February 1-16, 2017.
39. Patnaik, Megha, Stanford University, March 07, 2017.
40. Ranjan, Priya, UC Irvine, July 21, 2016.
41. Serizawa, Shigehiro, Osaka University, February 06, 2017.
42. Sethi, Rajiv, Columbia University, September 12- December 12, 2016.
43. Shabana, Mitra, Indian Institute of Management Bangalore, March 17, 2017.
44. Sharma, Anisha, Ashoka University, February 10, 2017.
45. Singh, Gurbachan, Visiting Scientist, January 1- April 30, 2017.
46. Sinha, Rishabh, World Bank, August 5, 2016.
47. Soundararajan, Vidhya, IIM Bangalore, March 31, 2017.
48. Spears, Dean, RICE, November 18, 2016.
49. Tuteja, Divya, Delhi School of Economics, December 13, 2016.
50. Wadhwa, Wilima, Visiting Scientist, July 25 to November 24, 2016.
51. Yadav, Sonal, University of Padova, Italy, August 1- 20, 2016 and December 7-January 17, 2017.

### ***Economic Analysis Unit, Bangalore***

1. Athreya, Venkatesh, February – March, 2017.

## Visiting Scientists, Honours and Awards

2. Bakshi, Aparajita, Tata Institute of Social Sciences, Mumbai, August 16 – 30, 2016.
3. Chavan, Pallavi, Reserve Bank of India, Mumbai, September 27–October 3, 2016.
4. Dhar, Niladri Sekhar, Tata Institute of Social Sciences, Tuljapur, July 29–August 13, 2016.
5. Goli, Srinivas, JNU, New Delhi, October 5-6, 2016.
6. Guha, Puja, Azim Premji University, Bangalore, October 01– March 2017.
7. Herring, J. Ronald, Cornell University, Ithaca, New York, January 23-28, 2017.
8. Pais, Jesim, Institute for Studies in Industrial Development, New Delhi, July 3-13, 2016.
9. Panda, Sitakanta, Indian Institute of Technology, New Delhi, October 20–February 20, 2017.
10. Reddy, Bheemeshwar A, Tata Institute of Social Sciences, August 25, 2016.
11. Thomas, Jayan Jose, Indian Institute of Technology, New Delhi, August 28-30, 2016.
12. Vishwanathan, Brinda, Madras School of Economics, March 28-31, 2017.

## **Statistical Quality Control and Operations Research Division**

### ***SQC & OR Unit, Delhi***

1. Bartl, David, University of Ostrava, Czech Republic, August 29 - September 25, 2016.
2. Raghavan, T.E.S., University of Illinois at Chicago, USA, January 8-11, 2017.

### ***SQC & OR Unit, Mumbai***

1. Asokan, M V, Department of Mathematics and Statistics, Memorial University of Newfoundland, Canada, October 6-7, 2016.

## **Center for Soft Computing Research, Kolkata**

1. Tsutsui, Shigeyoshi, Hannan University & Osaka Prefecture University, Japan, January 10, 2017 – January 13, 2017.

## HONOURS AND AWARDS

### Theoretical Statistics and Mathematics Division

#### *Stat-Math Unit, Kolkata*

Gupta, Neena

Awarded: B. M. Birla Science Prize in Mathematics.

#### *Stat-Math Unit, Delhi*

Bandyopadhyay, Antar:

Awarded: IISA 2016 Young Researcher Award in the Theory category from the Indian International Statistical Association (IISA), 2016.

Bhatia, Rajendra

Awarded: The Hans Schneider Prize 2016, The International Linear Algebra Society.

#### *Stat-Math Unit, Bangalore*

Bhat, B.V. Rajarama

Awarded: J C Bose Fellowship.

Sarkar, Jaydeb

Awarded: NASI-Scopus Young Scientist Awards, 2016.

Roy, Parthanil

Appointed: Youth Representative of Bernoulli Society.

Appointed: Member of Scientific Committee and Heavy Tails and Long Range Dependence Conference.

Dhandapani, Yogeshwaran

Selected: Associate of the Indian Academy of Sciences, July 2016.

### Applied Statistics Division

#### *Interdisciplinary Statistical Research Unit, Kolkata*

Ghosh, Abhik

Awarded: International Society for Clinical Biostatistics (ISCB) Conference Awards for Scientists (CASC) for biostatisticians from the countries underdeveloped in clinical biostatistics, 2017.

### Computer and Communication Sciences Division

#### *Advanced Computing and Microelectronics Unit, Kolkata*

Bhattacharya, B.B.

Awarded: INAE Chair Professorship, by Indian National Academy of Engineering, June 2016 - May 2018.



Visiting Scientists, Honours and Awards

***Computer Vision and Pattern Recognition Unit, Kolkata***

Garain, Utpal  
Awarded: JSPS Fellowship (invitational), Japan, 2016-17.

***Electronics and Communication Sciences Unit, Kolkata***

Mukherjee, Dipti Prasad  
Awarded: Best paper award, 10<sup>th</sup> Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2016.

Pal, Nikhil Ranjan  
Elected: Fellow of The World Academy of Sciences (TWAS), 2016.

Paul, Angshuman  
Awarded: Best paper award, 10<sup>th</sup> Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2016.

***Machine Intelligence Unit, Kolkata***

Bandyopadhyay, S.  
Awarded: J.C. Bose Fellowship, Engineering Sciences, Department of Science and Technology, Govt. of India, 2017-2022.  
Fellow: Institution for Electrical and Electronic Engineers (IEEE), 2016;  
Indian National Science Academy (INSA), 2016.

De, Rajat K.  
Awarded: Fulbright-Nehru Academic and Professional Excellence Fellowship (Flex Award), 2016- 2018.

Maji, P.  
Awarded: Sri Visvesvaraya Young Faculty Research Fellowship, Department of Electronics and Information Technology (DeitY), Government of India.  
Elected: Senior Member, IEEE, USA, 2016.

Mitra, S.  
Fellow: International Association for Pattern Recognition (IAPR).

**Physics and Earth Sciences Division**

***Physics and Applied Mathematics Unit, Kolkata***

Pal, Supratik  
Awarded: Alexander von Humboldt Fellowship (Alumni Support Grant), Alexander von Humboldt Foundation, Germany, 2016.

**Social Sciences Division**

***Sampling and Official Statistics Unit, Kolkata***

Mitra, Sandip  
Awarded: Visiting Fellowship, Manchester University, 2017.

***Sociological Research Unit, Kolkata***

Chakraborty, Sonali

Selected for: Dr. K. Srinivasan award jointly with Dr. Molly Chattopadhyay from Indian association for study of Population, 2017.

***Economics and Planning Unit, Delhi***

Bishnu, Monisankar

Awarded: Visiting Fellowship from the Australian National University, 2016.

Ghate, Chetan

Appointed: Monetary Policy Committee of the Reserve Bank of India (for a four-year term),  
Ministry of Finance, Government of India  
(Contribution to research in Indian macroeconomics).

Roy Chowdhury, Prabal

Invited: Panelist in the session on Role of Economics and Economists in Competition  
Law Enforcement, National Conference on Economics of Competition Law and  
the Economists' Conclave, April, 2018, Competition Commission of India.

Sen, Arunava

Elected: Economic Theory fellow, Society for Advancement of Economic Theory, 2016.

***Economic Analysis Unit, Bangalore***

Ramachandran, V.K.

Appointed: Vice Chairman of Kerala State Planning Board, Trivandrum.

**Statistical Quality Control and Operations Research Division**

***SQC & OR Unit, Bangalore***

Boby, John

Awarded: Best Paper, 3rd International Conference on Robust Quality Engineering (ICRQE-2017),  
2017.

**Center for Soft Computing Research, Kolkata**

Pal, S.K.

Awarded: Jawaharlal Nehru Birth Centenary Lecture Award in Physical Sciences, INSA;  
IEEE Tencent Rhino-Bird International Academic Expert, 2017-2018.

Das, S.

Awarded: Young Scientist Award, URSI Asia-Pacific Radio Science Conference, Seoul, South Korea,  
2016.

Ghosh, A.

Fellow: West Bengal Academy of Science and Technology (WAST) Senior Member, IEEE, USA, 2016.

## 8. EDITORIAL AND OTHER SCIENTIFIC ASSIGNMENTS

### EDITORIAL ASSIGNMENTS

#### Theoretical Statistics and Mathematics Division

##### **Stat-Math Unit, Kolkata**

Basak, G.K. (Editor): *Sankhya Series A*, Indian Statistical Institute.

Bose, Arup (Associate editor): *Statistical Methodology*, 2016.

Chaudhuri, Probal (Editor): *International Statistical Review* and *Stat* published by International Statistical Institute.

Maulik, Krishanu (Associate Editor): *Sankhya*.

##### **Stat-Math Unit, Delhi**

Bandyopadhyay, Antar (Associate Editor): *Sankhya Series A*, published by Springer and Indian Statistical Institute; (Associate Editor): *Journal of Statistical Planning and Inference (JSPI)*, Elsevier; (Member of the Scientific Committee & the Editorial Board): *Colombian Journal of Statistics (Revista Colombiana de Estadística, RCE)*, Universidad Nacional de Colombia, Colombia; (Member Editorial Board): *Little Mathematical Treasures*, Ramanujan Mathematical Society (RMS) and Universities Press.

Bhatia, Rajendra (Senior Editor): *Linear Algebra and Its Applications*; (Associate Editor): *Journal of the Ramanujan Mathematical Society*; (Editor): *Operators and Matrices*; (Correspondent): *Mathematical Intelligencer*.

Dewan, Isha (Associate Editor): *Journal Indian Statistical Association*.

##### **Stat-Math Unit, Bangalore**

Athreya, Siva (Associate editor): *Journal of Ramanujan Mathematical Society*.

Bhat, B. V. Rajarama (Chief Editor): *Proceedings of the Indian Academy of Sciences, Mathematics*;

Rajeev, B. (Associate editor), *Sankhya A*.

Ramasubramanian, S. (Associate editor): *Sankhya, Series A*, 77, 2015.

Roy, Parthaniil (Associate Editor): *Sankhya Series A*.

Sury, B. (Editor): *Proceedings of the Indian Academy of Sciences - Mathematical Sciences*; *Indian Journal of Pure and Applied Mathematics*; *Mathematics Student*; *Resonance- journal of undergraduate science education*; *The Mathematics Newsletter of the Ramanujan Mathematical Society*.

## **Applied Statistics Division**

### **Applied Statistics Unit, Kolkata**

Biswas, A. (Associate Editor): *Statistics & Probability Letters*, Elsevier, since July 2011; (Associate Editor): *Sequential Analysis*, since June 2003; (Associate Editor): *Communications in Statistics, Theory and Methods*, since January 2007; (Associate Editor): *Communications in Statistics, Simulation and Computation*, since January 2007; (Associate Editor): *Sri Lankan Journal of Applied Statistics*, since January 2013.

Dewanji, A. (Associate Editor): *Journal of Statistical Planning and Inference*, Elsevier; (Special Invited Editor) *Calcutta Statistical Association Bulletin*, Sage Publications.

### **Interdisciplinary Statistical Research Unit, Kolkata**

Basu, Ayanendranath (Associate Editor): *Computational Statistics*, Springer; (Member, Editorial Advisory Board): *Journal of Applied Statistics*.

Bose, Smarajit (Associate Editor): *Sankhya*.

SahaRay, Rita (Associate Editor): *Sankhya A*, Springer, (Associate Editor): *Journal of Indian Society of Agricultural Statistics*; (Editor): *Archives of Phytopathology and Plant Protection*.

### **Applied Statistics Unit, Chennai**

Sen, Rituparna (Associate Editor): *Applied Stochastic Models in Business and Industry*, Wiley; *Sankhya Series B*, Springer.

## **Computer and Communication Sciences Division**

### **Advanced Computing and Microelectronics Unit, Kolkata**

Bhattacharya, B.B. (Editor): *Journal of Electronic Testing: Theory and Applications*, Springer; *Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization*, Taylor & Francis.

Sur-Kolay, S. (Associate Editor): *ACM Transactions on Embedded Computing Systems*, ACM.

### **Computer Vision and Pattern Recognition Unit, Kolkata**

Chatterjee, Garga (Review Editor): *Frontiers in Psychology (Cognition Section)*.

Garain, Utpal (Associate Editor): *International Journal of Document Analysis and Recognition*, Springer.

Pal, Umapada (Associate Editor): *Pattern Recognition*, Elsevier, since 2016; *Pattern Recognition Letters*, Elsevier, since 2014; *ACM Transactions on Asian and Low-Resource Language Information Processing (TALLIP)*, ACM, since 2012; *Electronic Journal on Computer Vision and Image Analysis*,

## Editorial and other Assignments

CVC Press, since 2010; *International Journal of Document Analysis and Recognition*, Springer, since 2015.

### **Electronics and Communication Sciences Unit, Kolkata**

Mukherjee, Dipti Prasad (Associate Editor): *IEEE Transactions on Image Processing*, since November 2014; *IET Image Processing*, since February 2016; *SADHANA, Academy Proceedings in Engineering Sciences*, Springer, since June 2014.

Pal, Nikhil R. (Associate Editor): *IEEE Transactions on Fuzzy Systems*, IEEE, 2016; *IEEE Transactions on Cybernetics*, IEEE, 2016; *International Journal of Approximate Reasoning*, Elsevier, 2016; *Fuzzy Information and Engineering*, Elsevier, 2016; *Journal of Neuroscience and Neuroengineering*, American Scientific Publishers, 2016.

### **Machine Intelligence Unit, Kolkata**

Bandyopadhyay, S. (Associate Editor): *IEEE Transactions on Systems, Man, Cybernetics: Part A*; (Associate Editor): *BioSystems*, Elsevier.

De, R.K. (Associate Editor): *Sadhana*.

Ghosh, A. (Associate Editor): *IET Computer Vision*.

Mitra, S. (Editor): *IEEE/ACM Trans. On Computational Biology and Bioinformatics*, IEEE; *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, Information Sciences; *Neurocomputing*; *INAE Letters*.

### **Systems Science and Informatics Unit, Bangalore**

Daya Sagar, B.S. (Editorial Advisory Board Member): *Computers & Geosciences*; (Review Editor): *Frontiers: Environmental Informatics*; (Guest Editor): *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*; (Lead Editor): *Handbook of Mathematical Geosciences: Fifty Years of IAMG*, Springer.

## **Physics and Earth Sciences Division**

### **Geological Studies Unit, Kolkata**

Patranabis-Deb, S. (Executive Editor): *Geological Journal*, Wiley-Blackwell Group, UK, since 2014.

Saha, D. (Editor): *Indian Journal of Geology*; (Section Editor): *Current Science*; (Editorial Advisory Board Member): *Indian Journal of Geosciences*.

**Social Sciences Division**

**Economics Research Unit, Kolkata**

Chakravarty, Satya R. (Associate Editor): *Social Choice and Welfare*, Springer Verlag, 2016.

Majumder, Amita (Associate Editor): *International Econometric Review*, Econometric Research Association, since 2009.

Sarkar, Nityananda (Associate Editor): *Indian Growth and Development Review*, Emerald Group Publishing Limited since 2008; *International Econometric Review*, Econometric Research Association, since 2009.

**Linguistic Research Unit, Kolkata**

Dasgupta, Probal (Editor: with István Erti, Suso Moinhos, Jesper Lykke Jacobsen): *Beletra Almanako*. New York: Mondial.

Dash, Niladri Sekhar (Editor-in-Chief): *Journal of Advanced Linguistic Studies* [ISSN: 2231-4075].

**Population Studies Unit, Kolkata**

Pathak, Prasanta (Assistant Editor): *Indian Journal of Regional Science*.

**Sociological Research Unit, Kolkata**

Jana, Rabindranath (Statistical Editor): *Indian Journal of Dermatology*, since 2012.

**Economics and Planning Unit, Delhi**

Mishra, Debasis (Associate Editor): *Mathematical Social Sciences*, *Social Choice and Welfare*, *Journal of Mechanism and Institution Design*, Since 2016.

Ghate, Chetan (Policy Editor): *Indian Growth and Development Review*, Since 2008.

Somanathan, E. (Editor): *Environment and Development Economics*, Cambridge University Press Journal. Since January 2015.

**Statistical Quality Control and Operations Research Division**

**SQC & OR Unit, Chennai**

Ravindran, G.: (Guest Editor) *Annals of Operations Research; Recent Advances in Game Theory, Optimization Theory and Applications*, Special Volume (2016-2017).

**Centre for Soft Computing Research, Kolkata**

## Editorial and other Assignments

Ghosh, A. (Associate Editor): *IET-Computer Vision*.

Pal S.K. (Associate Editor): *Information Sciences* (Elsevier); *Fuzzy Sets and Systems* (Elsevier); *Fundamenta Informaticae* (IOS Press); *Int. J. Pattern Recognition and Artificial Intelligence* (World Scientific); *Int. J. Computational Intelligence and Applications* (World Scientific); *IET Image Processing* (IEE Press); *LNCS Trans. on Rough Sets* (Springer); (Editor-in-Chief): *International Journal of Signal Processing, Image Processing and Pattern Recognition*, SERSC, Korea; (Executive Advisory Editor): *International Journal of Approximate Reasoning*; *International Journal of Computational Science and Engineering*; *International Journal of Image and Graphics*; *International Journal of Business Intelligence and Data Mining*; *International Journal of Machine Intelligence and Sensory Signal Processing*; (Guest Editor): *Pattern Recognition Letters*; *IET Image Processing, Natural Computing* (Springer); (Book Series Editor): *Frontiers in Artificial Intelligence and Applications (FAIA)*, IOS Press, Netherlands; *Statistical Science and Interdisciplinary Research*, World Scientific, Singapore; (Book Editor): *Pattern Recognition and Big Data*, World Scientific Press; *Soft Computing Applications in Sensor Networks*, CRC (Taylor & Francis) Press.

## SCIENTIFIC ASSIGNMENTS/ACADEMIC VISITS ABROAD

### Theoretical Statistics and Mathematics Division

#### *Stat-Math Unit, Kolkata*

Basak, G K.:

(1) International Center for Mathematical Sciences, Edinburgh, UK, June 5-10, 2016; (2) Department of Economics, Harriet-Watt University, May 31-June 4, 2016.

Bose, Arup:

(1) University of Minnesota, May 03, 2016-May17, 2016; (2) The 4th Institute of Mathematical Statistics Asia Pacific Rim Meeting, The Chinese University of Hongkong, June 27--30, 2016, Invited speaker, Also chaired a session; (3) Waseda International Symposium on High Dimensional Statistical Analysis for Time Spatial Processes, Quantile and Empirical Likelihood Analysis for Time Series, Waseda, Japan, October 24-26, 2016, Invited speaker, Also chaired a session; (4) Hokkaido International Symposium on Recent Developments in Statistical Theory in Statistical Science, Sapporo, Japan, October 27-29, 2016, Invited speaker; (5) Simposio de Inferencia y Modelación Estadística, CIMAT, Guanajuato, Mexico, November 21-23, 2016, Invited speaker for a short course (approx four hours) on Random matrices and high dimensional time series; (6) Professor Debashis Pal, University of Cincinnati, Ohio, USA, November 23, 2016—December 02, 2016 to work on collaborative Research, Also delivered a lecture on, White noise test under weak conditions.

Chakraborty, Arijit:

Cornell University, U.S.A., from September 5-9, 2016.

Chaudhuri, Probal:

(1) 2nd Indo-Russian Conference, St. Petersburg, Russia, May 30 - June 3, 2016; (2) International Workshop on New Developments in Econometrics and Time Series, University of Carlos III, Madrid, Spain, October 6-7, 2016; (3) International Workshop on Statistics for High-Dimensional & Complex Data, King Abdullah University of Science and Technology, Saudi Arabia, November 6-9, 2016.

Ghosh, Anil, K.:

## Editorial and other Assignments

(1) Department of Statistics and Applied Probability, National University of Singapore, March 21-24, 2017.

Maulik, Krishanu:

(1) Steklov Mathematical Institute, Moscow, May 25-29, 2016; (2) Euler International Mathematical Institute, St Petersburg, May 30 - June 3, 2016; (3) University of Twente, Twente, the Netherlands, June 6-7, 2016; (4) Eindhoven University of technology, Eindhoven, the Netherlands, 7-11 June 2016; (5) Concluding International RARE Conference, La Baule, France, July 3-8, 2016.

Mukherjee, Goutam:

University of Sheffield, U.K during August 7-20, 2016.

### **Stat-Math Unit, Delhi**

Bandyopadhyay, Antar:

International Centre for Mathematical Sciences (ICMS), Edinburgh, UK, April 2016.

Bapat, R.B.:

(1) Shanghai Jiao Tong University, China, May 10-19, 2016; (2) Binghamton University, New York, USA, November 14-22, 2016.

Bhatia, Rajendra:

(1) University of Como, Italy, May 23-27, 2016; (2) GIPSA Labs, Grenoble France, June 1-8, 2016; (3) INRIA, France, June 9-30, 2016; (4) Shanghai University, China 9 December, 2016 - 7, January, 2017.

Laishram, Shanta:

(1) University of Bordeaux, France, 30 June - 12 July 2016; (2) University of Saint-Etienne, France, June 26-29, 2016; (3) University of Marseilles, France, June 18-25, 2016; (4) Leuca2016 Celebrating Michel Waldschmidt's 70th birthday, Marina di San Gregorio, Patu(Lecce), Italy, June 13-17, 2016.

Sarkar, Deepayan:

(1) Russian-Indian Joint Conference, St. Petersburg, Russia, May 30 - June 3, 2016; (2) DSC 2016 at Stanford University, Palo Alto California, June 29 - July 4, 2016.

### **Stat-Math Unit, Bangalore**

Athreya, Siva:

(1) Bernoulli World Congress in Probability, Toronto, July 11-15, 2016; (2) National University of Singapore, Singapore from March 3-March 10, 2017; (3) Technion, Israel Institute of Technology, Haifa Israel, December 15- 23, 2016.

Bhat, B V. Rajarama:

(1) 37th International Conference on Quantum Probability and Related Topics, International Islamic University Malaysia (IIUM), Kuantan, Pahang, Malaysia, August 22 - 26, 2016; (2) International conference Quantum Information Theory and Related Topics, 2016, Ritusmeikan University, Japan, September 7-11, 2016; (3) Prof. Daniel Markiewicz of the Dept. of Mathematics, Ben Gurion University of the Negev, Israel, through the Indo-Israel Joint Project and gave a lecture in a joint seminar of this University with neighbouring Universities, February 17-27, 2017.

Raja, C R E.

(1) University of Newcastle, Australia, July 9-16, 2016; (2) University of Sydney, Australia, July 17-22, 2016



## Editorial and other Assignments

Rajeev, B.:

(1) Institute for Stochastics, University of Hannover, November 7-11, 2016; (2) Dept. of Math., University of Oslo, November 13-15, 2016.

Rao, T.S.S.R.K:

(1) Co-organizer (with Professor Fernanda Botelho of the Department of Mathematical Sciences, University of Memphis), special secession on Geometry of Banach spaces, Southern Sectional Meeting, American Mathematical Society, October 17-18, 2015; (2) Department of Mathematical Sciences, University of Memphis, September 2015 - May 2016.

Sarkar, Jaydeb:

(1) SUMIRFAS (Workshop in Analysis and Probability), Texas A&M University, USA, July 2016; (2) International Workshop on Operator Theory and its Applications (IWOTA), University at St. Louis, St. Louis, USA, July 2016; (3) Bologna University, Bologna, Italy, March 2017; (4) University of Roma Tor Vergata, Rome, Italy, March 2017.

Sury, B.:

(1) Midrasha conference on Group theory on the occasion of 60th birthday of Alex Lubotzky, Israel Institute for Advanced Studies, Hebrew University Jerusalem, Israel, November 6-11, 2016; (2) International Mathematical Olympiad 2016, Hong Kong University of Science and Technology, July 6-16, 2016.

Yogeshwaran, D:

(1) Workshop on Geometry and Stochastics of Nonlinear, Functional and Graph Data at Bornholm, Denmark, August 15 - 19, 2016; (2) Conference Stochastic Models V at Bedlewo, Poland, September 11 - 17, 2016; (3) Research visit for discussion with Prof. Robert J. Adler and his group, Technion, Haifa, Israel, December 27, 2016 - January 4, 2017.

## **Applied Statistics Division**

### ***Applied Statistics Unit, Kolkata***

Chaudhuri, P. P.:

(1) Purdue University, Dept. of Chemistry, USA, May 24-27, 2016; (2) Tohoku University and delivered lecture, December 7-8, 2016; (3) Iwate Prefecture University, December 9-11, 2016; (4) 5th International TPNC conference, December 12-13, 2016.

Dewanji, A.:

(2) R Samuel McLaughlin Centre for Population Risk Assessment within the Institute of Population Health, University of Ottawa, Canada, during September 2016; (2) , International Conference on Analysis of Repeated Measures Data, Dhaka, Bangladesh, November 25-26, 2016, organized by the department of Applied Statistics, East West University; (3) Duke-NUS Medical School, Singapore, January 23-27 2017.

Sengupta, D:

(1) University of California, Santa Barbara, September-December, 2016; (2) University of California, Davis, October 16, 2016.

### ***Interdisciplinary Statistical Research Unit, Kolkata***

Basu, Ayanendranath:

(1) Department of Statistics, Ankara University, Ankara, Turkey, May 14-17, 2016; (2) International Conference on Information Complexity and Statistical Modelling in High Dimensions, A Festschrift in Honor of Dr. Hamparsum Bozdogan, Cappadocia, Turkey, May 18-21, 2016; (3) International Conference on Robust Statistics (ICORS 2016), Geneva, Switzerland, July 4-8, 2016.

Bose, Smarajit:

(1) 1<sup>st</sup> International Conference on Bioinformatics and Computing Technologies (ICBCT 2017), Hong Kong, January 6-8, 2017.

Pal, Amita:

(1) 1<sup>st</sup> International Conference on Bioinformatics and Computing Technologies (ICBCT 2017), Hong Kong, January 6-8, 2017.

SahaRay, Rita:

(1) International Scientific Research and Experimental Development, 18th International Conference on Statistics and Applications, Singapore, World Academy of Science, Engineering and Technology (WASET), November 21-22, 2016; (2) Department of Statistics and Applied Probability, National University of Singapore, Singapore, November 22-26, 2016; (3) Demography and Health Statistics, The International Conference on Bioinformatics and Biostatistics for Agriculture Health and Environment, University of Rajshahi, Bangladesh, January 20-23, 2017.

### ***Applied Statistics Unit, Chennai***

Sen, R.:

Joint Statistical Meetings, Chicago, July 30-August 4, 2016.

Sreelakshmi, N.:

LINSTAT-2016, Istanbul, Turkey, 22-25 August, 2016.

Sudheesh, K K:

LINSTAT-2016, Istanbul, Turkey, 22-25 August, 2016.

### ***Applied and Official Statistics Unit, Tezpur***

Chungkham, H.S.:

(1) Dr. Linda Magnusson Hanson, Division of Epidemiology, Stress Research Institute, Stockholm University, Stockholm, Sweden, October 16-22, 2016; (2) International Conference on Sequence Analysis and Related Methods (LaCOSA II), University of Lausanne, Switzerland, June 08-10, 2016.

Jyethi, Darpa Saurav:

(1) International Society for Exposure Science (ISES) Annual Meeting, Utrecht, The Netherlands, October 9-13, 2016.

### **Computer and Communication Sciences Division**

#### ***Advanced Computing and Microelectronics Unit, Kolkata***

Banerjee, A.:

(1) National Tsing Hua University (NTHU), Taiwan, November 18-December 1, 2016; (2) Chinese University of Hong Kong (CUHK), Hong Kong, December 2-8, 2016; (3) International Conference on

#### Editorial and other Assignments

Web Services, San Francisco, June 27-July 2, 2016; (4) University of Texas at Arlington, USA, July 2-7, 2016; (5) Faculty Summit, Microsoft Seattle, July 13-15, 2016.

Bhattacharya, B.B.:  
University of Bremen, Germany, November 23-December 2, 2016.

Ghosh, A.:  
Data Shape Group, INRIA, France, April 5-22, 2016, November 8-25, 2016, February 13-24, 2017.

Ghosh, S.C.:  
(1) 31st IEEE International Conference on Advanced Information Networking and Applications (IEEE AINA 2017), Taipei, Taiwan, March 27-29, 2017.

Mukhopadhyaya, K.:  
WALCOM 2017, Taiwan, March 25-April 03, 2017.

Roy, S.:  
Tel Aviv University, Israel, April 4-21, 2016.

Sur-Kolay, S.:  
(1) Group of Computer Architecture, University of Bremen, Germany, April 18-July 15, 2016; (2) Johannes Kepler University, Austria, April 25-26, 2016; (3) TU Munich, Germany, April 28-May 2, 2016; (4) Institute of Microelectronic Systems, Leibniz Universität Hannover, Germany, July 6, 2016.

#### ***Computer Vision and Pattern Recognition Unit, Kolkata***

Bhattacharya, Ujjwal:  
(1) 23rd International Conference on Pattern Recognition, Cancun, Mexico, December 4-8, 2016.

Chatterjee, Garga:  
(1) University of Liberal Arts, Dhaka, Bangladesh, March, 2017; (2) NTU, Singapore, September, 2016; (3) Wellesley College, USA, December, 2016; (4) European Conference on Visual Perception, Barcelona, Spain.

Garain, Utpal:  
(1) Osaka Prefecture University, Japan, February 02-March 31, 2017.

Pal, Umapada:  
(1) International Conference on Pattern Recognition, Cancun, Mexico, December 4-8, 2016; (2) 15th International Conference on Frontiers in Handwriting Recognition, Shenzhen, China, October 23-26, 2016; (3) Dept. of Computer Science, University of Otago, New Zealand, March 26-31, 2017.

Parui, Swapan K.:  
(1) 15th International Conference on Frontiers in Handwriting Recognition, Shenzhen, China, October 23-27, 2016.

#### ***Electronics and Communication Sciences Unit, Kolkata***

Chanda, B.:  
23rd International Conference on Pattern Recognition (ICPR), Cancun, Mexico, December 4-8, 2016.

Das, Swagatam:

(1) 15th International Conference on Artificial Intelligence and Soft Computing (ICAISC 2016), Zakopane, Poland, June 12-16, 2016; (2) 3rd International Conference on the Harmony Search Algorithm (ICHSA 2017), Bilbao, Spain, February 22-24, 2017; (3) Dept. of Computer Science and Artificial Intelligence, University of Granada, Spain, February 16-22, 2017; (4) School of Electronics Engineering, Kyungpook National University, Daegu, Korea, September 7-13, 2016; (5) School of Computer Science and Software Engineering, East China Normal University, Shanghai, September 5-6, 2016.

Mukherjee, D.P.:

(1) IEEE International Conference on Image Processing (ICIP), Phoenix, USA, September 25-28, 2016; (2) Editorial Board Meeting, IEEE Transactions on Image Processing, Phoenix, USA, September 27, 2016; (3) Department of Computer Science, University of Nebraska, Omaha, USA, September 30, 2016; (4) CIMAT, Guanajuato, Mexico, October 6, 2016.

Pal, N.R.:

(1) First International Conference on Hybridized Agriculture (HA 2016), Sojo University, Kumamoto, Japan, October 21-24, 2016; (2) 12th International FLINS Conference (FLIN 2016), Roubaix, France, August 24-26, 2016; (3) IEEE International Conference on Fuzzy Systems, and IEEE World Congress on Computational Intelligence (WCCI 2016), Vancouver, Canada, July 24-29, 2016; (4) IEEE Computational Intelligence Summer School, Universidad de los Andes, Santiago, Chile, December 14-16, 2016; (5) Malaysia Chapter of the IEEE Computational Intelligence Society and Tunku Abdul Rahman University College, Kuala Lumpur, Malaysia, November 1, 2016; (6) Brain Research Center, National Chiao-Tung University, Taiwan, September 17-October 21, 2016.

### ***Machine Intelligence Unit, Kolkata***

Bandyopadhyay, S.:

(1) University of Ljubljana, Slovenia, November 2016; (2) University of Gottingen, Germany, May 2016.

De, Rajat K.:

(1) Biotechnology World Convention, São Paulo, August 15-17, 2016; (2) Department of Medicine, University of California, San Diego, USA, February 06-May 05, 2017.

Ghosh, Ashish:

(1) Kings Monkut's University of Technology, Thonburi, Thailand, March 10-April 18, 2016.

Maji, Pradipta:

(1) 10th IEEE International Conference on Bioinformatics and Biomedicine (BIBM2016), Shenzhen, China, December 2016.

Mitra, Sushmita:

(1) Dept. of Computer Science, Meiji University, Kawasaki, Japan, February 28-March 12, 2017; (2) Autonomous University of Queretaro, Mexico, December 9-10, 2016; (3) Pontifical Catholic University, Rio de Janeiro, Brazil, June 24, 2016; (4) IEEE ARGENCON Congress, Buenos Aires, Argentina, June 17, 2016; (5) Universidad Tecnologica Nacional, Buenos Aires, Argentina, June 16, 2016.

### ***Documentation Research and Training Centre, Bangalore***

Dutta, Biswanath:

(1) Stanford University School of Medicine, Stanford, USA, February 2-3, 2017; (2) 11th IEEE International Conference on Semantic Computing (IEEE ICSC 2017) and International Workshop on Semantics for Engineering and Robotics (IWSER 2017), San Diego, CA, USA, January 31-February 1,

## Editorial and other Assignments

2017.

Krishnamurthy, M.:

(1) University de Lille, France, July 11-13, 2016.

Madalli, Devika P.:

(1) Department of Information Engineering and Computer Science (DISI), University of Trento, Italy, May 2-13, 2016; (2) UNFAO, AGRONKNOW, Crete, Greece, May 18-20, 2016; (3) SciDataCon 2016, Denver, USA and GODAN Summit 2016, New York, USA, September 11-17, 2016; (4) OECD, Paris, France, November 2-5, 2016; (5) Research Management Centre, Universiti Putra Malaysia, Malaysia, November 14-15, 2016; (6) Academy of Science of South Africa (ASSAF), ICC CSIR, Pretoria, South Africa, December 7-9, 2016; (7) Technical Centre for Agricultural and Rural Cooperation (CTA), Wageningen, Netherlands, March 7-8, 2017; (8) Organisation for Economic Co-operation and Development (OECD), Brussels, March 28-31, 2017.

Prasad, A.R.D.:

(1) Department of Information Studies, Nanyang Technological University (NTU), Singapore, August, 2016; (2) Centre for Scientific Documentation and Information, Indonesia Institute of Science (PDII - LIPI), Jakarta, Indonesia, August 8-14, 2016; (3) Research Management Centre, Universiti Putra Malaysia, Malaysia, November 14-15, 2016; (4) Academy of Science of South Africa (ASSAF), ICC CSIR, Pretoria, South Africa, December 9-14, 2016; (5) Mahasarakham University, Thailand, March 6-10, 2017; (6) Department of Information Engineering and Computer Science (DISI), University of Trento, Trento, Italy, March 29-30, 2017.

### ***Systems Science and Informatics Unit, Bangalore***

Sagar, B.S.D.:

(1) University of Cape Town, Cape Town, South Africa, August 27-31, 2016.

### ***Computer Science Unit, Chennai***

Chakraborty, Prabuddha:

(1) American Physical Society March Meeting, New Orleans, USA, March 13-17, 2017.

Francis, Mathew C.:

(1) School of Computing, Simon Fraser University, Canada, June 10-July 10, 2016.

Ghosh, Sujata:

(1) CADILLAC Workshop, Copenhagen, Denmark, May 23-25, 2016; (2) University of Groningen, Groningen, The Netherlands, May 30-July 15, 2016.

Karthick, T.:

(1) 22nd International Computing and Combinatorics Conference (COCOON 2016), Ho-Chi Minh City, Vietnam, August 2-4, 2016.

### ***Cryptology and Security Research Unit, Kolkata***

Paul, Goutam:

(1) Institute of Industrial Science (IIS), University of Tokyo, Japan, August 6-12, 2016.

## **Physics and Earth Sciences Division**

### ***Geological Studies Unit, Kolkata***

Ghosh, Parthasarathi:

(1) 32<sup>nd</sup> International Association of Sedimentologists: International Meeting of Sedimentology, Marrakech, Morocco, May 23-25, 2016.

Patranabis-Deb, S.:

(1) 35<sup>th</sup> International Geological Congress (IGC), Cape Town, South Africa, August 27 - September 4, 2016; (2) Department of Geology (CIMERA Lab), University of Johannesburg, South Africa, September 5 - 29, 2016.

Saha, Dilip:

(1) 35th International Geological Congress Cape Town, South Africa, August 2 -September 4, 2016; (2) University of Johannesburg, Department of Geology (CIMERA Lab), September 5-23, 2016.

Sengupta, Dhurjati Prasad:

IV Annual meeting of European Association of Vertebrate Paleontologists, Haarlem, Netherland July 6- 10.

### ***Physics and Applied Mathematics Unit, Kolkata***

Basu, Banasri :

(1) Jozef Stefan Institute, Ljubljana, Slovenia, August 23-26, 2016; (2) International Centre for Theoretical Physics, August 29 - September 01, 2017; (3) University of Silesia, Katowice, Poland, September 04-08, 2016.

Ghosh, Subir:

(1)International Centre for Theoretical Physics (ICTP), Italy; (2) South American Institute for Fundamental Research (SAIFR), Sao Paulo, Brazil, October 5 – December 16, 2016.

Ghosh, Dibakar :

(1)Saratov State Technical University in Russia, October 17 – November 1, 2016; (2) Nizhny Novgorod State University, Nizhny Novgorod, Russia, October 21-27, 2016.

Maiti, K. Santanu:

(1) Kwansei Gakuin University, Japan, November 17 – December 17, 2016.

Pal, Supratik:

(1) Max-Planck Institute Astrophysics in Garching, Germany, July 5 – September 30, 2016.

Roy, Barnana:

(1) Cinvestav in Mexico City, Mexico, September 19 – October 10, 2016.

Roy, Pinaki:

(1) National Polytechnic Institute (IPN), Mexico City, Mexico, September 18 – October 11, 2016; (2) INFN Sezione di Perugia, Italy, November 20 – December 24, 2016.

Sarkar, Sankar:

(1) Politecnico di Milano, Italy, March 31 – May 28, 2016.

Editorial and other Assignments

## **Biological Sciences Division**

### ***Biological Anthropology Unit***

Mukhopadhyay, Barun:

5<sup>th</sup> International Conference on Geriatric Medicine and Gerontology, Atlanta, Georgia, USA, November 14-16, 2016.

### ***Human Genetics Unit, Kolkata***

Ghosh, Saurabh:

(1) European Mathematical Genetics Meeting, Newcastle, UK, May 11-13, 2016; (2) International Biometric Conference, Victoria, Canada, July 9-14, 2016; (3) International Genetic Epidemiology Society Meeting, Toronto, Canada, October 24-25, 2016; (4) Genetic Analysis Workshop 20, San Diego, USA, March 5-8, 2017.

Mukhopadhyay, Indranil:

(1) American Society of Human Genetics Meeting, Vancouver, Canada, October 18-22, 2016; (2) International Genetic Epidemiology Society Meeting, Toronto, Canada, October 24-25, 2016; (3) Genetic Analysis Workshop 20, San Diego, USA, March 5-8, 2017.

## **Social Sciences Division**

### ***Economic Research Unit, Kolkata***

Banerjee, Priyadarshi:

(1) EEA-ESEM 2016 Congress in Geneva, Switzerland, July 8 -16, 2016; (2) 6<sup>th</sup> Xiamen University International Workshop on Experimental Economics in Xiamen, Fujian, China, December 15 - 19, 2016.

Kabiraj, Tarun:

(1) EcoMod Conference at Universidade de Lisboa, Lisboa, Portugal, July 6-8, 2016; (2) Department of Economics, ISEG, Universidade de Lisboa, Portugal, July 9 -11, 2016; (3) 11<sup>th</sup> Asia-Pacific Conference on 'Global Business, Economics, Finance and Business Management', held in Bangkok, Thailand, February 16 – 18, 2017.

Majumder, Amita:

(1) The 3<sup>rd</sup> Conference of the Economic and Social Measurement (SEM), Thessaloniki, Greece, July 6 - 8, 2016.

Mitra, Manipushpak:

(1) Seoul National University, Seoul, South Korea. February 27 –March 10, 2017; (2) Cardiff Business School, Cardiff University, Cardiff, Wales, 28 November 28 – December 7, 2016; (3) National University of Singapore University, Singapore, August 29 – September 1, 2016; (4) Seoul National University, Seoul, South Korea, July 4 – August 16, 2016.

Munshi, Soumyanetra:

(1) Rutgers University, February 22 - 29, 2017; (2) Eastern Economic Association Conference in New York, February 23 - 26, 2017; (3) Economics Department, UC Berkeley, March, 2017, (4) UC Irvine, March 9, 2017; (5) Auburn University, Alabama, March 24, 2017.

Pal, Manoranjan:

## Editorial and other Assignments

(1) Eötvös Loránd University (ELTE), Department of Health Policy and Health Economics Institute of Economics, Faculty of Social Sciences, Budapest, Hungary on July 15, 2016; (2) Central Bank of Sri Lanka, March 31, 2017.

Sarkar, Abhirup:

UECE Lisbon Meetings 2016: Game Theory and Application in Lisbon, Portugal, November 2 – 7, 2016.

Roy, Souvik:

(1) The 13<sup>th</sup> Meeting of the Society for Social Choice and Welfare, Lund University, Sweden, May 31 – July 2, 2016; (2) Department of Quantitative Economics of Maastricht University, The Netherlands, November 20 – December 15, 2016,

### ***Linguistic Research Unit, Kolkata***

Dasgupta, Probal

(1) 'Originala literaturo Esperanta de azianoj', Interlinguistics Programme, AMU [Adam Mickiewicz University], Poznan, Poland, September 22, 2016; (2) 'Getting the identical infinitives filter under control', Department of General Linguistics, AMU, Poznan, Poland, September 18-23, 2016; (3) 'Universaligi la kulturen suverenecon: la tradukado kaj la esperantismo', ArKonEs, Poznan, Poland, September 23-25, 2016; (4) 'Arbitrariness at the agreement-classifier boundary', Department of Linguistics, Leiden University, Netherlands, September 30, 2016; (5) 'The speech community and Akademio de Esperanto', Esperanto Section, Department of General Linguistics, University of Amsterdam, Netherlands, October 4, 2016.

### ***Population Studies Unit, Kolkata***

De, Partha:

(1) Universitas Indonesia, Faculty of Social and Political Sciences, Bali, Indonesia, October 17-22, 2016.

### ***Psychology Research Unit, Kolkata***

Dutta Roy, D.:

(1) Heriot – Watt- University, Dubai, October 22, 2016.

### ***Sampling and Official Statistics Unit, Kolkata***

Kar, Alope:

(1) Food and Agricultural Organization (FAO) and BPS-Statistics Indonesia, Jakarta, Indonesia October 10 - 21, 2016.

Mitra, Sandip:

(1) Monash University, Australia, February 5-13, 2017; (2) Manchester University, March 5-21, 2017.

### ***Sociological Research Unit, Kolkata***

Bharati, Susmita:



#### Editorial and other Assignments

(1) Economics and Human Biology conference, Tübingen, Germany, October 15-16, 2016; (2) Rajshahi University, Bangladesh, January 20-23, 2017; (3) University of Ruhuna, Sri Lanka, March, 28-29, 2017.

Chakraborty, Sonali:

(1) Rajshahi University, Bangladesh, January 20-23, 2017.

Ghosh, Bhola Nath:

(1) The 3<sup>rd</sup> ISA Forum of Sociology, Vienna University, Vienna, Austria, July 10-14, 2016; (2) International Conference on Social and Political Sciences, University of Indonesia, Bali, Indonesia, October 19-20, 2016; (3) International Conference on Development Governance and Transformation at BARD, University of Dhaka, Bangladesh; (4) Ruhuna University International Conference on Humanities and Social Sciences, University of Ruhuna, Sri Lanka, March, 28-29, 2017; (5) International Conference on "Bioinformatics and Biostatistics for Agriculture, Health and Environment", jointly organized by the Department of Statistics, University of Rajshahi & Bangladesh Bioinformatics and Computational Biology Association (BBCBA), January 20-23, 2017; (6) Special Lecture on "Authority of Khasi Tribal women in Meghalaya" in the Department of Anthropology, Rajshahi University, January 23, 2017; (7) Eotvos Lorand University, Budapest Hungary, Dept. of Health, Policy and Health Economics, Faculty of Social Sciences, July 15, 2016.

Ghosh, Tirthankar:

(1) International Conference on Social and Political Issues (ICSPI) 2016, Universitas Indonesia (Sanur Paradise Plaza Hoel ), Bali, Indonesia, October 19-20, 2016.

Jana, Rabindranath:

(1) International Conference on Social and Political Issues (ICSPI) 2016, Universitas Indonesia, Bali, Indonesia, October 19-20, 2016.

Shome, Suparna:

(1) Economics and Human Biology Conference, University of Tübingen, Germany, October 15-16, 2016.

#### ***Economics and Planning Unit, Delhi***

Afridi, Farzana:

(1) IGC-EPoD Regional Dialogue on Women's Empowerment – Panel discussant, Kathmandu, Nepal, March 23-24, 2017.

Ghate, Chetan:

(1) Faculty of Business and Law, Deakin University, Melbourne, Australia, June 6-28, 2016; (2) International Leaders program, Kuala Lumpur, February 22-23, 2017.

Kapoor, Mudit:

(1) Brookings Institution, Washington DC, USA, June 7-28, 2016; (2) Universidad de Concepcion, Chile, November 7-16, 2016.

Mukhopadhyay, Abhiroop:

(1) Heidelberg University, World Institute for Development Economics Research, United Nations University, Wider and University of Oslo, June 2-15, 2016; (2) University of Connecticut, USA, December 5-15, 2016.

Mishra, Debasis:

## Editorial and other Assignments

(1) Institute of Social and Economic Research, Osaka University, Japan, May 11- June 24, 2016; (2) Lund University, Sweden, June 27- July 1, 2016; (3) World congress of the game theory society, Maastricht, The Netherlands, July 25- 27, 2016; (4) Vanderbilt University, USA, September 16-20, 2016; (5) Singapore Management University, December 14-16, 2016

Sen, Arunava:

(1) Vanderbilt University, USA, September 16-20, 2016; (2) Singapore Management University, Singapore, December 13-16, 2016.

Somanathan, E.:

South Asian Network for Development and Environmental Economics (SANDEE), USA, July 1, 2015 - July 31, 2017.

### ***Economics Analysis Unit, Bangalore***

Swaminathan, Madhura:

(1) Oxford India Centre for Sustainable Development, Somerville College, Oxford, July 12-13, 2016; (2) World Foodprize Dialogue, Des Moines, USA, October 12-14, 2016.

## **Statistical Quality Control and Operations Research Division**

### ***SQC & OR Unit, Delhi***

Neogy, S. K.

5th World Congress of the Game Theory Society, Maastricht University, The Netherlands, July 24-28, 2016.

### ***SQC & OR Unit, Bangalore***

Ray, Sanjit:

(1) Emirates Integrated Telecommunication Company, Dubai, April 18-22, 2016, May 5- 20, 2016, June 27-July 1, 2016, August 29-September 2, 2016, October 17-21, 2016, November 5-11, .2016 and March 13-17, 2017.

### ***SQC & OR Unit, Hyderabad***

Subhani, S M:

University of Berkley (International Association of Engineers), San Franscisco, USA, October 19-21, 2016.

### ***SQC & OR Unit, Mumbai***

Sarkar, Ashok:

(1) G S College of Commerce and Economics, November 18-19, 2016; (2) International conference on Robust Quality Engineering, January 19-21, 2017; (3) international conference on Robust Quality Engineering, January 19-21, 2017.

Editorial and other Assignments

### **Center for Soft Computing Research, Kolkata**

Das, S.:

URSI Asia-Pacific Radio Science Conference Seoul, South Korea, August 18-27, 2016.

Ghosh, A.:

(1) Kings Monkut's University of Technology, Thonburi, Thailand, March, 10 – April, 18, 2016.

Ghosh, K.:

23rd International Conference on Neural Information Processing (ICONIP 2016), Kyoto, Japan October 16-21, 2016.

Pal S. K.:

(1) 5th International Conference on Informatics, Electronics & Vision (ICIEV'16), Dhaka, Bangladesh, May 11-15, 2016; (2) Santander Bank, United Kingdom, June 07-20, 2016; (3) International Joint Conference on Rough Sets (IJCRS 2016), Universidad de Chile, Santiago, Chile, October 05-13, 2016; (4) 27th TWAS General Meeting, Kigali Convention Centre, Kigali, Rwanda, November 11-19, 2016; (5) 1st Mediterranean Conference on Pattern Recognition and Artificial Intelligence (MedPRAI 2016), Tebessi University, Tebessa, Algeria, November 20-24, 2016; (6) International Conference on Imaging, Vision and Pattern Recognition (icIVPR2017), University of Dhaka, Dhaka and the International Conference on Electrical, Computer and Communication Engineering (ECCE-2017), Chittagong University of Engineering & Technology (CUET), Cox Bazar Bangladesh, February 12-21, 2017; (7) Workshop on Big Data Analysis, La Trobe University, Melbourne, March 10-18, 2017.

### **Administrative Division**

#### ***Printing and Publication Unit, Kolkata***

Bhattacharya, Chinmay:

(1) Asian Symposium Printing Technology, Jakarta International Expo, Kemayoran, Jakarta, Indonesia, October 7, 2016.

### **SCIENTIFIC ASSIGNMENTS/ ACADEMIC VISITS IN INDIA**

#### **Theoretical Statistics and Mathematics Division**

##### ***Stat-Math Unit, Kolkata***

Bose, Arup:

(1) North-East Summer Workshop in Analysis and Probability, Rajib Gandhi University, May 31–June 04, 2016; (2) TIMC-AMS conference, Benaras Hindu University, December 14--17, 2016; (3) Workshop on Applied Probability, TIFR, Mumbai, India March 31-April 02, 2017.

Chaudhuri, Probal:

(1) UGC-sponsored National Level Seminar on "Recent Developments in Mathematics and Its Applications", Ramakrishna Mission Vidyamandira, September 26-27, 2016; (2) Workshop on "Big Data, Economics and Finance", Presidency University, October 20-26, 2016; (3) International

2017; (4) Workshop on "Quantitative Methods in Social Science Research", Indian Institute of Technology, Kharagpur, March 20-24, 2017.

Dutta, Amartya:

(1) Ramakrishna Mission Institute of Culture, April-May, 2016; (2) Conference on zero and related topics in number theory, Indian Institute of Science, Bangalore, July 25-26, 2016; (3) Seminar on History of Zero at Ramakrishna Mission Residential College, Narendrapur, August 30, 2016; (3) Calcutta Mathematical Society on its Foundation Day, September 6, 2016; (4) Camp on Mathematics Training for Undergraduate Statistics Students, Department of Statistics, University of Calcutta, October 25, 2016; (5) Department of Pure Mathematics, University of Calcutta, 21 March, 2017.

Ghosh, Anil, K.:

(1) Department of Mathematics and Statistics, Indian Institute of Technology, Kanpur, August, 2016; (2) Department of Mathematics, Indian Institute of Technology, Guwahati, February, 2017.

Gupta, Neena:

(1) 82nd Annual Conference of the Indian Mathematical Society at the University of Kalyani, West Bengal, December 27-30, 2016

Maulik, Krishanu:

(1) Department of Mathematics, NISER, Bhubaneswar, Odisha, October 27, 2016; (2) INSPIRE training camp, KIIT, Bhubaneswar, Odisha, October 28, 2016; (3) INSPIRE training camp, KIIT, Bhubaneswar, Odisha, November 14, 2016; (4) Faculty Development Programme under TEQIP-II, Govt College of Engineering, Cherthala, Kerala, February 3, 2017.

Ray, Swagato K.:

(1) Dept. of Mathematics and Statistics, IIT Kanpur, October, 20-22, 2016; (2) Bhaskaracharya Pratishthana, Pune, November, 14-19, 2016; (3) Kerala School of Mathematics, Kozhikode, December 12-17, 2016; (4) Department of Mathematics, IIT Patna, February, 16-18, 2017.

### ***Stat-Math Unit, Delhi***

Bhatia, Rajendra:

(1) Advanced Instructional School on Matrix Analysis, National Board for Higher Mathematical, Shiv Nadar University, NOIDA, May 2-21, 2016; (2) IISER, Pune, August 18-20, 2016; (3) Indian Academy of Sciences Discussion Meeting on Linear Analysis, Orange County, November 27-December 1, 2016; (4) Jammu & Kashmir Science Congress, March 2-4, 2017.

Dewan, Isha:

(1) IISER Pune, Research Collaboration, June 21-25, 2016 and February 16-18, 2017; (2) Chennai Mathematical Institute, Research Collaboration, September 19-21, 2017; (3) Workshop on Reliability and Survival Analysis, University of Pune, November 3-5, 2016.

Jain, Tanvi:

(1) National Seminar on Algebra and Allied Fields, Department of Mathematics & Statistics, Himachal Pradesh University, March 24-25, 2017; (2) National Symposium on Mathematics and Women in Mathematics, NES Ratnam College, University of Mumbai, January 27-28, 2017; (3) National Conference on Algebra, Analysis, Coding and Cryptography, Department of Mathematics, University of Delhi, October 14-15, 2016; (4) Department of Mathematics, IIT Delhi, September 26, 2016; (5) Annual conference of Indian Women in Mathematics, Hyderabad University, June 29 - July 1, 2016; (6) Advanced Instructional School on Matrix Analysis, Shiv Nadar University, May 16-21, 2016.

Laishram, Shanta:

(1) Combinatorics and Number Theory Meet, Harish-Chandra Research Institute, Allahabad, February 19-23, 2017; (2) International Conference on Number Theory, Kerala School of Mathematics,

## Editorial and other Assignments

Kozhikode, January 9-13, 2017; (3) Conference of the Indian Mathematics Consortium (TIMC) in co-operation with the American Math Society (AMS), Banaras Hindu University (BHU), December 14-17, 2016; (4) Indocrypt 2016, ISI Kolkata, December 11-14, 2016; (5) History of Mathematical Sciences (CHMS) 2016, Conference of the Indian Society for History of Mathematics (ISHM), National Institute of Technology Manipur, Imphal, November 18-20, 2016; (6) Refresher Course in Mathematics, UGC – Human Resource Development Centre, University of Hyderabad, October 3, 2016; (7) MTTs 2016, Shiv Nadar University, Greater Noida, May 30- June 10, 2016; (8) IMO Training Camp, HBCSE, TIFR Mumbai, April 20-23, 2016.

Pal, Arup K :

(1) Institute of Mathematical Sciences, Chennai, September 18-23, 2016.

Thakur, Maneesh:

(1) Conference on Group Theory, I.C.T.S. Bangalore, November 11-15; (2) ISI-Bangalore, November 15-November 18; (3) Lecture Workshop on Algebra and Geometry, Department of Mathematics, Central University of Jammu, March 24- 25.

### **Stat-Math Unit, Bangalore**

Bhat, B. V. Rajarama:

(1) RV College of Eng., Bangalore; (2) North-East Summer Workshop in Analysis and Probability (NE-SWAP) , Rajeev Gandhi University, Arunachal Pradesh, May 31-June 4, 2016; (3) DST-INSPIRE INTERNSHIP SCIENCE CAMP, Shri Ganambika Degree College , Madanapalli, Chittoor Dist, Telangana, October 15-19, 2016; (4) National Science (Vijyoshi) Camp 2016, J N Tata Auditorium, I.I.Sc Bangalore, December 3 – 5, 2016; (5) National Seminar on Functional Analysis and Harmonic Analysis 2017, Sardar Patel University, Vallabh Vidyanagar, Gujarat, January 16-18, 2017; (6) National seminar on Algebra and allied fields, Dept.of Mathematics, Himachal Pradesh University, Shimla, March 24-25, 2017; (7) Dept. Of Mathematics, University of Delhi, South Campus, February 28, 2017.

Kasilingam, Ramesh:

(1) North-Eastern Hill University, Shillong, March 14-16, 2017; (2) Annual Foundation Schools (AFS-I), School of Mathematics, IISER, Thiruvananthapuram, December 5- 31, 2016.

Raja, C. R. E.:

(1) conference ICTIMC-AMS, BHU, Varanasi, December 14- 17, 2016.

Rajeev, B.:

(1) Dept. of Mathematics, IIT Mumbai, September 11-16, 2016, (2) conference on 'stochastic processes and coding theory', University College, Thiruvananthapuram, March 9-10, 2016; (3) conference on 'stochastic control and related topics', IIT Mumbai, March 11; (4) Math Dept., IISER, Pune January 19.

Sarkar, Jaydeb:

(1) Department of Mathematics, Manipur University, India. February 2017; (2) National Seminar on Functional Analysis and Harmonic Analysis, Sardar Patel University, India. January 2017; (3) International Conference on Mathematical Analysis and its Applications (ICMAA-2016), I.I.T. Roorkee, India, November-December, 2016; (4) Stat-Math Unit, ISI Kolkata, India, November 2016; (5) National Seminar on Recent Developments in Complex Analysis, Operator Theory and Related Areas, Jammu University, India, October 2016; (6) Stat-Math Unit, ISI Delhi, India, September 2016; (7) Department of Mathematics, IISc, Bangalore, India, August 2016.

Sury, B.:

(1) Factorization in domains and zero-sum problems, Conference on zero and related topics, Indian Institute of Science, Bengaluru, July 25-26, 2016; (2) Mathematical Puzzles and analogy as an aid to teaching, NBHM National Conference on algebra, Department of Mathematics, Maris Stella College, Vijayawada, February 17-18, 2017; (3) Matrix groups over rings, Annual conference of the Ramanujan Mathematical Society, National College Tiruchirapalli, June 21, 2016; (4) Undergraduate mathematics curriculum, its practice and students' queries, Symposium on mathematics education, National College Tiruchirapalli, June 20, 2016; (5) Mathematicians turn coffee into probably tea in groups, Science Academies' workshop on Analysis and Probability, Vijaya College, Bengaluru, March 6-7, 2017; (6) Polynomials, Primes, Progressions and Puzzles, APU-RMS workshop, Jain University Bengaluru, December 9, 2016; (7) Six Lectures on K-theory, School on K-theory and applications, ISI Bengaluru, December 26 - January 7, 2017.

Yogeshwaran, D.:

(1) TG/IEEE ITSoc Summer School 2016, IISc, Bangalore, June 27 - July 1, 2016.

### **Applied Statistics Division**

#### ***Applied Statistics Unit, Kolkata***

Dewanji, A:

(1) International Conference of The Indian Mathematics Consortium, Benaras Hindu University (BHU), December 14-17, 2016.

#### ***Applied Statistics Unit, Chennai***

Sen, Rituparna:

(1) Training program on Big Data Analytics, Velammal Institute of Technology, April 28-29, 2016; (2) Mathematics Department colloquium, IIT Madras, November 3, 2016; (3) Conference, Statistical Methods in Finance, Chennai Mathematical Institute, December 18-22, 2016; (4) Utkal University, January 13, 2017; (5) National Workshop on Big Data analytics Tools, SRM Unviersity, February 23-27, 2017; (6) National Workshop on Computational Mathematics, Anna University, Chennai, March, 2-15, 2017.

Sudheesh, K.K.:

(1) Advance training on R at symposium in Research and Data Analysis with Statistical Advanced Tools-RADSAT 2017, Bharathidasan University, Trichi, Tamil Nadu, India, March 28, 2017; (2) VIT Chennai, India, March 07, 2017; (3) Faculty Development Programme on Statistical Computing and R programming, College of Engineering, Cherthala, Kerala, India, February 28, 2017; (4) National conference, St. Thomas College, Thrissur, Kerala, India, 27-28 February 2017; (5) Anna University Campus, Trichy, India, July 16 2016; (6) K. L. N. College of Information Technology, Madurai, India, June 25, 2016; (7) Rajalakshmi Engineering College, Chennai, India, June 8-9, 2016; (8) PSNA College of Engineering and Technology, Dindigul, India, May 26 2016; (9) Sathyabama University, Chennai, India, May 1, 2016; (10) Velammal Institute of Technology, Chennai, India, April 29, 2016.

#### ***Applied and Official Statistics Unit, Tezpur***

Athe Ramesh:

(1) 19<sup>th</sup> Annual National Conference of Society of Statistics, Computer and Applications SKUAST, Jammu, March 06-08, 2017.

## Editorial and other Assignments

Chungkham, H.S.:

(1) LGB Regional Institute of Mental Health, Tezpur, February 13-28, 2017.

Jyethi, Darpa Saurav:

61st Annual National Conference of Indian Public Health Association (IPHA), AIIMS, Jodhpur, February 24-26, 2017.

Maitra, Sanjit:

(1) 4<sup>th</sup> International Conference on Signal Processing and Integrated Networks, Amity University, Noida, February 2-3, 2017.

Mehta, Vishal:

(1) National Conference on Computational Sciences (NCCS-2017), Department of Computer Science, Govt. Holkar Science College, Indore, Madhya Pradesh, March 30-31, 2017.

Yadav, Raj Bhawan:

(1) International Conference on Mathematical Analysis & its Applications (ICMAA-2017), Maharashtra, March 5-9, 2017.

### **Computer and Communication Sciences Division**

#### ***Advanced Computing and Microelectronics Unit, Kolkata***

Bhattacharya, B.B.:

(1) GIAN lectures, Department of Computer Science and Engg., National Institute of Technology, Meghalaya, Shillong, August 8-12, 2016; (2) Inaugural keynote speech, 4th International Conference on Advanced Computing, Networking and Informatics (ICACNI), National Institute of Technology, Rourkela, September 22-24, 2016.

Das, N.:

(1) 18th International Conference on Distributed Computing and Networking (ICDCN 2017), IDRBT Hyderabad, January 4-7, 2017; (2) IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), IISc, Bangalore, November 6-9, 2016; (3) NIT Patna, June 1-5, 2016.

Mukhopadhyaya, K.:

(1) ICDCN 2017, Hyderabad, January 4-7, 2017; (2) CALDAM 2017, Goa, February 13-17, 2017.

Sur-Kolay, S.:

(1) Steering Committee member and paper presentation, 30th International Conference on VLSI Design, Hyderabad, January 9-11, 2016; (3) Workshop on Computation, Sciences and Society, INFOSYS Mysore Campus, Mysore, January 14-15, 2017; (4) Founding Chair, All India Chapter of IEEE Council on Electronic Design Automation.

#### ***Computer Vision and Pattern Recognition Unit, Kolkata***

Bhattacharya, Ujjwal:

(1) 10th Indian Conference on Computer Vision, Graphics and Image Processing, IIT Guwahati, December 18-22, 2016; (2) 2nd Workshop on Computer Vision Applications, IIT Guwahati, December

19, 2016; (3) 4th ISI Workshop on Pattern Analysis and Applications, Sikkim Manipal Institute of Technology, Majitar, Rangpo, Sikkim, February 6-10, 2017.

Chatterjee, Garga:

(1) Invited talk, Ahmedabad University, Ahmedabad; (2) Invited talk, Jadavpur University, Kolkata; (3) Invited talk, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore; (4) Invited talk, TA Pai Management Institute, Manipal.

Garain, Utpal:

(1) External examiner, PhD viva voce examination, Department of Computer Science and Engineering, IIT Kharagpur, July, 2016; (2) External examiner, MTech viva voce examination, Department of Computer Science and Engineering and Department of Electronics and Electrical Communication Engineering, IIT Kharagpur, May 2-3, 2016; (4) Invited talk, TCS, Chennai, July 21-22, 2016; (5) External expert for reviewing an application for PhD in Engg, Dept. of Computer Science and Engineering, Jadavpur University, January 9, 2017; (6) External expert, Progress Review Committee for a PhD scholar, Dept. of Electrical Engineering, Jadavpur University, January 10, 2017.

Mitra, Mandar:

(1) Invited talk, IEST, Shibpur, September 3, 2016; (2) Invited talk, School of Mobile Computing, Jadavpur University, Kolkata, September 3, 2016; (3) External examiner, PhD viva-voce examination, Department of Computer Science and Engineering, IIT, Kharagpur, September 14, 2016.

Pal, Umapada:

(1) 4th ISI Workshop on Pattern Analysis and Applications, Sikkim Manipal Institute of Technology, Majitar, Rangpo, Sikkim, February 6-10, 2017; (2) External examiner, PhD viva voce examination, Jadavpur University, 2016; (3) Invited talk, NIT, Durgapur, March 5, 2017.

### ***Electronics and Communication Sciences Unit, Kolkata***

Chanda, B.:

(1) Invited lecture, International Conference on Advances in Engineering and Technology (ICAET-2016), Govt. College of Engineering & Ceramic Technology, Kolkata, April 4-5, 2016; (2) Invited lecture, DST Sponsored STTP on Video and Image Analysis: Fundamentals and Advances, NIT Goa, May 30-June 4, 2016; (3) Plenary talk, India International Conference on Information Processing (IICIP-2016), Delhi Technological University, New Delhi, August 12-14, 2016; (4) Invited lecture, IAPR Summer School on Document Analysis: Document Informatics, Jaipur, January 23-28, 2017; (5) Invited lecture, Second Workshop on Computing: Theory and Application, Tezpur, February 20-24, 2017; (6) Invited lecture, 2nd National Workshop on Medical Imaging, IASST Guwahati, March 8-9, 2017; (7) Invited lectures, Workshop on Computational Information Processing, SMIT Sikkim, Rangpo, March 23-25, 2017.

Das, S.:

(1) Keynote lecture, IEEE International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS '17), Kalasalingam University, March 23-25, 2017; (2) Keynote lecture, ETAEERE 2016, Sikkim Manipal Institute of Technology, December 17, 2016.

Mohanta, P.P.:

(1) Invited lecture, 19th Workshop on Computational Information Processing, Sikkim Manipal Institute of Technology (SMIT), Rangpo, Sikkim, March 23-25, 2017.

Mukherjee, D.P.:

(1) Random Forest and its application in medical imaging, NIT, Durgapur, March 14, 2017; (2) Image Processing, GE Aviation, Bengaluru, March 11, 2017; (3) Image Processing using Computational Intelligence Technique, CIS Winter School on Computational Intelligence, VIT, Chennai, January 5,



## Editorial and other Assignments

2017; (4) Affective Computing: Recognizing Actions and Emotions from Video, Workshop on Advanced Applications of Algorithms, IEST, Shibpur, December 23, 2016; (5) Can we make a sheep as intelligent as a human being? CII Manufacturing Excellence Meet, Hotel Gateway, December 17, 2017; (6) Can a Computer See? IEEE Student Section, SOA University, Bhubaneswar, September 10, 2016; (7) Research Methodology, Department of Computer Science and Engineering, Jadavpur University, September 1, 2016; (8) Research Methodology, Computer Society of India, Kolkata Chapter, July 30, 2016; (9) Machine Learning and Image Processing, TCS, Chennai, July 21-22, 2016; (10) Research Methodology, Murshidabad College of Engineering and Technology, Berhampur, July 16, 2016; (11) Few Applications of Medical Imaging Research, Machine Learning Workshop, Centre of Excellence in Systems Biology and Biomedical Engineering, University of Calcutta, July 11, 2016.

### **Machine Intelligence Unit, Kolkata**

Bandyopadhyay, S.:

(1) Keynote lecture, National Seminar on Women Leadership in S & T: Opportunities & Challenges, New Delhi, March 9, 2017; (2) Plenary lecture, Soft Computing: Theories and Applications, Amity University, Rajasthan, December 28, 2016; (3) Keynote lecture, 15th International Conference on Information Technology (ICIT 2016), IIIT, Bhubaneswar, December 22, 2016.

Choudhury, Swati:

(1) Speaker, ISI-MZU School on Soft Computing Techniques: Theory and Applications, Mizoram University, Aizawl, Mizoram, March 20-24, 2017.

Ghosh, Ashish:

(1) Member, Board of Studies, Department of Computer Science & Engineering, C.V. Raman College of Engineering, Bhubaneswar; (2) Chairman, IEEE Geoscience and Remote Sensing, Kolkata Chapter; (3) Member, DST PAC meeting held at IIT, BHU and Jamia Millia University; (4) PhD viva voce examiner, Anna University, Chennai, July 26-27, 2016; (5) Invited lectures, IDBRT June 6-10, 2016, South Asian University, Delhi, August 19-22, 2016, February 24-27, 2017; (6) Invited talk, SJS College of Engineering, Bangalore, January 22-25, 2017; (7) Summer School on Soft Computing Paradigm and Machine Learning Techniques, Assam Don Bosco University, Guwahati, Assam, July 2016; (8) Recent Trends in Communication, Signal Processing and VLSI, NIT, Silchar, February 17-18, 2017; (9) One week workshop on Application in Machine Learning, NIT, Silchar, March 22-23, 2017; (10) ISI-MZU School on Soft Computing Techniques: Theory and Applications, Mizoram University, Aizawl, Mizoram, March 19-21 2017.

Ghosh, Kuntal:

(1) Invited lecture, Department of Applied Sciences, Indian Institute of Information Technology, Allahabad, April 8, 2016; (2) Judge, KVS National Children Science Congress 2016, November 28-December 1, 2016; (3) Speaker, Winter School on Basic Mathematics for College Students of North Eastern States, ISI NE Center, Tezpur, Assam, December 26, 2016-January 3, 2017; (4) Technical Program Committee member, 8th International Conference on Intelligent Human Computer Interaction (IHCI), CSIR-CEERI and BITS, Pilani, December 12-13, 2016.

Maji, Pradipta:

(1) Invited talk, Workshop on IoT and Data Mining, Jadavpur University, Kolkata, March 2017; (2) Invited talk, ISI-MZU School on Soft Computing Techniques: Theory and Applications, Mizoram University, Aizawl, Mizoram, March 20-22, 2017; (3) Invited talk, National Level Faculty Development Program under TEQIP-II on Advanced Data Mining for Big Data Analysis, RCC Institute of Information Technology, Kolkata, West Bengal, March, 2017; (4) Invited talk, Summer School on Soft Computing Paradigm and Machine Learning Techniques, Assam Don Bosco University, Guwahati, Assam, July, 2016.

Mitra, Sushmita:

(1) Member, Board of Studies, Dept. of Computer Science & Engineering, Tezpur University; (2) Member, Board of Studies, Dept. of Information Technology, Govt. College of Engineering and Ceramic Technology, Kolkata (autonomous); (3) Invited talk, MAKAUT sponsored seminar, Govt. College of Engineering & Ceramic Technology, Kolkata, March 28, 2017; (4) Invited talk, First International Conference on Computational Intelligence, Communications & Business Analytics, Calcutta Business School, Kolkata, March 25, 2017; (5) Invited talk, TEQIP II Seminar, Maulana Abul Kalam Azad University of Technology, Kolkata, March 21, 2017; (6) Invited talk, IEEE CIS Kolkata Chapter sponsored One Day Symposium, Visva-Bharati University, Santiniketan, February 25, 2017; (7) Invited talk, TEQIP II Short Term Course, College of Engineering and Management, Kolaghat, January 24, 2017; (8) Invited talk, TEQIP Workshop, Jadavpur University, October 20, 2016; (9) Keynote lecture and panel member, IEEE Students' Technology Symposium, IEEE Kharagpur Section and IEEE Women in Engineering Affinity Group, Kharagpur, September 30, 2016.

***Documentation, Research and Training Centre, Bangalore***

Dutta, Biswanath:

(1) National Institute of Technology, Durgapur, April 4-8, 2016.

Madalli, Devika P.:

(1) INFLIBNET, Gandhinagar, Gujarat, July 14-15 and August 4, 2016; (2) BMS Institute of Technology & Management, Bangalore, January 18, 2017.

Krishnamurthy, M.:

(1) Department of Library Science, Bharathidasan University, Tiruchirappalli, June 1, 2016; (2) Karnataka State Women's University, Vijayapura, July 5, 2016; (3) Library and Information Centre, PES College of Engineering, Mandya, July 25-26, 2016; (4) Bharathiar University, Coimbatore, August 16 and November 15, 2016; (5) Goa University, October 3-4, 2016; (6) Sri Devaraj Urs Academy of Higher Education and Research, Kolar, October 26, 2016 and February 17, 2017; (7) Periyar University, Salem, November 3, 2016 and February 15, 2017; (8) Dept. of Library and Information Science, Mangalore University, January 2 and March 13-15, 2017; (9) Dr. Ambedkar Institute of Technology, Bangalore, February 27-28, 2017; (10) NPC IT Groups residential training programme, Kanyakumari, March 6-9, 2017.

Prasad, A.R.D.:

(1) Centre for Library and Information Management Studies, Sir Dorabji Tata Memorial Library, Tata Institute of Social Science, Mumbai, May 16-18 and July 29, 2016; (2) IGNOU, Delhi, June 28-July 1, 2016; (3) Dept. of Computer Application, School of Computer Science and Engg., Bharathiar University, Coimbatore, July 11, 2016; (4) University of Calcutta, Kolkata, August 22-23, 2016; (5) Vellore Institute of Technology, Vellore; (5) UNESCO's International Day for Universal Access to Information, The Viceroy Hall, The Claridges Hotel, New Delhi, September 29, 2016; (6) NACLIN, Delhi, October 26-28, 2016; (7) NVLI Meeting (IGNOU), RRLF, Kolkata, January 16-17, 2017; (8) Malayalam University, Cochin, February 8-9, 2017; (9) DELNET, New Delhi, February 14, 2017; (10) Department of Meteorology & Oceanography, Andhra University, Visakhapatnam, February 21-28, 2017; (11) Department of Library and Information Science, Banaras Hindu University, Varanasi, March 20-22, 2017.

***Systems Science and Informatics Unit, Bangalore***

Majumdar, K.K.:

1) A novel interpretation of one dimensional time domain signals, Computer and Data Science, Indian Institute of Science, April 1, 2016; (2) Cortical rhythms in health and disease, IEEE Conference on

## Editorial and other Assignments

Norbert Wiener in the 21st Century, National Institute of Advanced Studies, Bangalore, April 22-23, 2016; (3) Dept. of Electrical Engineering, IIT, Delhi, July 12-15, 2016.

Meher, S.K.:

(1) Tutorial talk on "Information Granulation for Neural Network: An approach to Natural Computing Paradigm", Training Programme on Advances in Statistical Modeling and Forecasting in Agriculture, Indian Agricultural Statistics Research Institute (IASRI), New Delhi, December 23, 2016-January 12, 2017; (2) Tutorial talk on "Trends, scope and opportunities in Signal Processing", HKBK College of Engineering, Bangalore, October 24-25, 2016; (3) Tutorial talk on "An Inevitable Bonding of Machine Learning with Big Data", IEEE Bhubaneswar Sub-section and Sophitorium group of institutions, SCE College, Bhubaneswar, August 20, 2016; (4) Tutorial talk on "Granular Neural Networks: Theory and Applications", IEEE CIS Summer School on Advanced Topics in Computational Intelligence – Theory and Applications, PES University, Bangalore, August 8-12, 2016; (5) Tutorial talks on "Granular Pattern Recognition: Application of remote sensing images", Short Term Training Program on Soft Computing: Machine Learning, Parul University, Vadodara, May 16-20, 2016; (6) Tutorial talk on "Machine Learning and Big Data: An ENVIABLE bonding", International Workshop On Machine Learning & its Applications, South Asian University, New Delhi, April 29-30, 2016; (7) Tutorial talk on "Granular Neural Networks for Land Use/Cover Classification of Hyperspectral Images", National Seminar on Techniques and Applications of Hyperspectral Image Analysis, Amrita University, Coimbatore, Tamil Nadu, April 10-11, 2016.

Sagar, B.S.D.:

(1) Member, Doctoral Committee, Indian Institute of Technology, Bombay, 2017; (2) Member, Doctoral Committee, University of Hyderabad, 2017; (3) Member, Examination Committee, Masters by Research, Multimedia University, Malaysia, 2017; (4) Keynote Address on "Overview on Mathematical Morphology and its Applications with Emphasis on Morphological Interpolations", International Multi-Conference on Information Processing–2016, Capitol Hotel, August 21, 2016; (5) Six lectures on "Mathematical Morphology and Image Analysis", One Week Faculty Development Programme on "Recent Trends in Signal and Image Processing", PSG College of Technology, Coimbatore, June 06-12, 2016; (6) Three lectures on "Mathematical Morphology", Amrita University, Coimbatore, April 20, 2016; (7) Lecture on "Applications of Mathematical Morphology in Remote Sensing and Geosciences: An Overview", IIT Bombay, April 17-18, 2016.

## **Computer Science Unit, Chennai**

Chakraborty, Prabuddha.:

Harishchandra Research Institute, Allahabad, November, 2016.

Francis, Mathew C.:

(1) Faculty Development Programme, LBS Institute of Technology for Women, Trivandrum, June 6-7, 2016; (2) External examiner, MSc thesis, Department of Computer Science and Engineering, IIT, Madras; (3) Member, Doctoral Committee of PhD student, IMSc, Chennai; (4) Poster presentation, DST-INSPIRE Faculty Monitoring-cum-Interaction Meet, SSN College of Engineering, Kalavakkam, January 22-23, 2017.

Ghosh, Sujata:

(1) Tutorial on 'Modelling strategic reasoning', 6th Indian School on Logic and its Applications (Part II), Kolkata, August 22-27, 2016; (2) Program Co-chair, 7th Indian Conference on Logic and its Applications (ICLA 2017), Kanpur, January 5-7, 2017; (3) Program Co-chair, 9th Workshop on Methods for Modalities (M4M), Kanpur, January 8-9, 2017; (4) Co-organizer, Symposium on Logic, International Conference of The Indian Mathematics Consortium (TIMC) in cooperation with American Mathematical Society (AMS), Varanasi, December 14-17, 2016; (5) Secretary, Association for Logic in India.

Karthick, T.:

(1) Invited talk, Workshop on Graph Theory and its applications, SRM University, Ramapuram, Chennai, April 12, 2016; (2) Invited talks, Faculty Development Programme, LBS Institute of Technology for Women, Trivandrum, June 6-11, 2016; (3) Invited talk, Department of Mathematics, IIT, Madras, August 24, 2016; (4) Invited talk, International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM 2016), Kalasalingam University, Krishnan Koil, Tamil Nadu, December 19-21, 2016.

Venkateswarlu, Ayineedi:

(1) FORAYS 2017, Department of Mathematics, IIT, Madras, January 28, 2017.

## **Physics and Earth Sciences Division**

### ***Geological Studies Unit, Kolkata***

Bandyopadhyay, S.:

(1) Department of Geology and Geophysics, IIT, Kharagpur, October 21-23, 2016;

Mukherjee, Debarati:

(1) Department of Geology and Geophysics, IIT, Kharagpur, October 21-23 2016.

Patranabis-Deb, S.

(1) Department of Geology and Geophysics, IIT, Kharagpur, October 21-23 2016.

### ***Physics and Applied Mathematics Unit, Kolkata***

Ghosh, Dibakar:

(1) IISER, Kolkata, India, December 16-18, 2016.

Kar, Guruprasad:

(1) Institute of Mathematical Sciences (IMSc), Chennai, June 8 – 17, 2016; (2) International Conference on "Quantum Foundations 2016 (ICQF16)", National Institute of Technology, Patna, October 17 – 21, 2016; (3) School in the Institute of Mathematical Sciences (IMSc), Chennai December 5 – 12, 2016.

Maiti, Santanu, K.:

(1) Hans Raj Mahila Maha Vidyalaya, Jalandhar, Punjab April 25 – May 01, 2016; (2) RCC Institute of Information Technology, Kolkata, July 11-15, 2016; (3) DAV College Jalandhar, Punjab, September 29 – October 5, 2016.

Pal, Supratik:

(1) Astronomical Society of India, Jaipur, March 6-10, 2017; (2) The Asiatic Society, Kolkata, February 15-16, 2017; (3) IACS, Kolkata, January 30 - February 01, 2017; (4) Jadavpur University, January 11, 2017; (5) Techno India-Batanagar, October 20, 2016; (6) IACS, Kolkata, March 25, 2017; (7) Saha Institute of Nuclear Physics, Kolkata, January 16-20, 2017.

Editorial and other Assignments

## **Biological Sciences Division**

### ***Human Genetics Unit, Kolkata***

Chatterjee, Raghunath:

(1) Translational Health Science And Technology Institute (THSTI), Faridabad, Haryana, March 30-31, 2017; (2) 18<sup>th</sup> International Congress on Oral Pathology and Medicine (IAOP) and the XXV National Conference of the Indian Association of Oral and Maxillofacial Pathology (IAOMP), Chennai, India, September 8 - 11, 2016: "Genome wide DNA methylation profile identified a distinct set of differentially methylated CpGs in Oral squamous cell carcinoma patients of India"; (3) Faculty Development Programme on Statistical Tools in Biological Data Analysis, TEQIP-II, Department of Biotechnology, Heritage Institute of Technology, Kolkata, July 8-25, 2016: "Next generation sequencing and epigenetics".

Mukhopadhyay, Indranil:

(1) 15<sup>th</sup> International Symposium on Mathematical and Computational Biology, Rourkee, India, October 2015.

## **Social Sciences Division**

### ***Economic Research Unit, Kolkata***

Chakravarty, Satya R.:

(1) Workshop on Official Statistics, Pachhunga University College Aizawl, Mizoram, November 7-11, 2016, (2) Birla Institute of Technology and Science, Goa, Economics Conclave, March 20 – 21, 2017.

Kabiraj, Tarun:

(1) Economics Department, Calcutta University, January-March, 2017, (2) Coal India Limited, September– November, 2016.

Majumder, Amita:

(1) Meeting of the Expert Committee for Syllabus review in the area of Econometrics, IGIDR, Mumbai, July 25, 2016.

Munshi, Soumyanetra:

(1) IIT, Madras, December 21, 2016.

Sarkar, Nityananda:

(1) Summer School on Research Methodology: Applications of Econometrics and Statistics, National Institute of Technology Durgapur, May 25-27, 2016; (2) Workshop on Some Statistical Tools for Social Science Research, Department of Business Administration, Tezpur University, September 28 - 29, 2016; (3) International Conference on Computational Mathematics and Statistics, Banasthali University, January 24, 2017.

### ***Linguistic Research Unit, Kolkata***

Dasgupta, Probal:

(1) Workshop on Cognitive and Computational Linguistics, Manipur Univ, Imphal, October 11, 2016; (2) Seminar on 225 years of German translation of Kalidasa's drama *Abhijnanasakuntala* and the science of comparative philology, Asiatic Society, Kolkata, December 7, 2016; (3) Seminar on Multilingualism as a resource, Asiatic Society, Kolkata, January 12, 2017; (4) Seminar on Traversing

the margin, IIT Madras, February 4, 2017; (5) Seminar on the Indian Grammatical Tradition, Asiatic Society, Kolkata, February 20, 2017; (6) Seminar on Problems and prospects of lexicographic studies in Bangla, Kolkata University, February 22, 2017; (7) Workshop on Cognitive and Computational Linguistics, ISI Tezpur and Tezpur Univ, Tezpur, March 9, 2017.

Dash, Niladri Sekhar:

(1) Dept. of Linguistics, Manipur University, Imphal, Manipur, India, October 17-21, 2016; (2) Kuvempu Bhasha Bharathi Pradhikara, Bangalore 560056, India, April 29-30, 2016; (3) Dept. of English, Vidyasagar University, Medinipur, West Bengal, India, April 28-29, 2016; (4) Central Institute of Indian Languages, Mysore, Ministry of HRD, Govt. of India, June 28 - July 18, 2016; (5) National Translation Mission, Central Institute of Indian Languages, Mysore, Ministry of HRD, Govt. of India, November 23–December 13, 2016; (6) Dept. of Mizo, Mizoram University, Aizawl, India, November 1-21, 2016; (7) Dept. of Computer Science and Applications, Utkal University, Bhubaneswar, India, October 24-26, 2016; (8) International Conference on Information Science 2016, Dept. of Computer Science & Engineering, College of Engineering Cherthala, Kerala, August 12-13, 2016; (9) School of Languages and Linguistics, Jadavpur University, Kolkata, October, 2016; (10) International Student Workshop-cum-Seminar on Process in Language Formation, Change, Variation: Their Motivation in Linguistic Theories: Dept. of Linguistics, Osmania University, Hyderabad, India, December 8-12, 2016; (11) Dept. of English and Foreign Languages, Centre for Endangered Languages, Tezpur University, Assam, July 27-29, 2016; (12) Ali Yavar Jung National Institute for the Hearing Handicapped, Eastern Regional Centre, B.T. Road, Bon Hooghly, Kolkata-700090, May-July, 2016; (13) UGC E-PG Pathshala (MOOC) Programme, Dept. of Linguistics, JNU, New Delhi, August 31- September 02, 2016; (14) Department of Linguistics, Central University of Kerala, Vidyanagar (PO), Kasaragod (DT), Kerala, India, September, 2016; (15) Office of the Registrar General-India (ORGI), Language Division, Ministry of Home Affairs, Govt. of India, January, 2016; (16) Dr. Hanne-Ruth Thompson of the School of Oriental and African Studies (SOAS), University College London, United Kingdom and published by Hippocrene Books Inc. New York, USA; (17) 13<sup>th</sup> International Conference on Natural Language Processing (ICON-2016), Department of Computer Science & Engineering, IIT (BHU), Varanasi, Uttar Pradesh, December 17-20, 2016; (18) 26th International Conference on Computational Linguistics (COLING-2016), Osaka, Japan, December 11-16, 2016; (19) 38th International Conference of the Linguistic Society of India (38 ICOLSI), Indian Institute of Technology-Guwahati, Assam, India, November 10-12, 2016; (20) 3rd Workshop on Indian Language Data, Resources and Evaluation (WILDRE-3), Grand Hotel Bernardin Conference Center, Portorož, Slovenia, May 24, 2016 (Organized under LREC-2016, 23-28 May 2016); (21) 3rd PRSG meeting of the ILCI-2 at the DeitY, MCIT, Electronics Niketan, CGO Complex, Lodhi Road, New Delhi, India, Govt. of India, May 6, 2016; (22) National Seminar on Coloniality and Post-Coloniality: Adivasi Society and Culture in Transition, Humanities and Social Sciences, Vidyasagar University, Midnapore, India, April 27-28, 2016; (23) International Conference on Information Science 2016 (ICIS'16), Department of Computer Science & Engineering, College of Engineering Cherthala, Kerala, August 12- 13, 2016; (24) Modern Perspective of NLP for Hindi and other Indian Languages, Centre for Technology Studies and Computational Linguistics, School of language, MGAHV, Wardha, August 17-19, 2016; (25) National Seminar on Bangla Bhasa o Sahitye Prayuktigata Sambhabana (BLLTP-1), School of Languages and Linguistics, Jadavpur University and Sarsuna College, Kolkata, November 25-26, 2016; (26) 5th International Conference on Advances in Computing, Communications, and Informatics (ICACCI-2016), LNM Institute of Information Technology, Jaipur, Rajasthan, India, September 21-14, 2016; (27) Advanced Academic Programme (Linguistics) for the North Eastern States (AAP(L)NES 2017), ISI North East Centre, and Dept. of English and Foreign Languages, Tezpur University, Assam, March 09-11, 2016; (28) Seminar on Problems and Prospects of Lexicographic Studies in Bangla: Dept. of Linguistics, University of Calcutta, Kolkata, February 22, 2017; (29) Centre for Applied Linguistics and Translation Studies, Central University, Hyderabad, India, March 17-18, 2017; (30) National Conference on Indian Language Computing, Dept. of Computer Applications, Cochin University of Science and Technology, Kerala, India, February 17-18, 2017; (31) Medinipur, West Bengal, India, March 22-24, 2017; (32) National Workshop on Basics to Insights into Linguistics and Phonetics, Dept. of English, Panshkura, Banamali College, West Medinipur, WB, India, January 6, 2017; (33) UGC-SAP Seminar on Dalit and Tribal Identities- The Nation and Globalization, Dept. of English, Vidyasagar

## Editorial and other Assignments

University, Medinipur, West, Bengal, India, March 28-30, 2017; (34) National Seminar on Changing Contours of Adivasi Society and Culture: Crises and Negotiations, UGC sponsored Innovative Research Project, Humanities and Social Sciences Departments, Vidyasagar University, Medinipur, West, Bengal, India, March 22-24, 2017; (35) 23 Himalayan Languages Symposium (HLS-23), Department of English and Foreign Languages, School of Humanities & Social Sciences (HSS), Tezpur University, Tezpur, Assam, India, July 5-7, 2017; (36) e-PG Pathshala Programme in Linguistics: UGC, Ministry of HRD, Govt. of India, February 27-28, 2017; (37) 5th International Endangered and Lesser-known Languages Conference, Centre for Tribal Folklore, Language and Literature, Central University of Jharkhand, Ranchi, India, February 24 – 26, 2017; (38) National Workshop on Basics to Insights into Linguistics and Phonetics, Dept. of English, Panshkura, Banamali College, West Medinipur, WB, India, January 6, 2017; (39) National Conference on Indian Language Computing (NCILC-2017), Dept. of Computer Applications, Cochin University of Science and Technology, Kerala, India, February 17-18, 2017.

### ***Psychology Research Unit, Kolkata***

Bhattacharya, Himani:

(1) International Conference on Contemporary Trends in Clinical Psychology Training, Research and Practice (ICCTCP), Bengaluru (NIMHANS), November 17-19, 2016; (2) Golden Jubilee celebration of Department of Applied Psychology, University of Calcutta, March 3, 2017.

Dutta Roy, D.:

(1) 3rd International Conference by the Department of Applied Psychology of the Pondicherry University and 6th InSPA international conference, Department of Applied Psychology, Pondicherry University, October 13-15, 2016; (2) 2nd International Conference of the Indian Academy of Health Psychology, Gautam Buddha University, Yamuna Expressway, Greater Noida, U.P., December 16-18, 2016; (3) Golden Jubilee celebration of Department of Applied Psychology, University of Calcutta, March 3, 2017; (4) Annual Seminar of Department of Instrumental Music, Rabindra Bharati University, March 9-10, 2017.

### ***Sampling and Official Statistics Unit, Kolkata***

Chakraborty, Asit Baran:

(1) Member of the Advisory Committee on National Accounts Statistics constituted by the Govt. of India, Ministry of Statistics and Programme Implementation (MOSPI); (2) Member of the Working Group on Producer Price Index set up by the Govt. of India, Ministry of Commerce and Industry.

Chattopadhyay, Nachiketa:

(1) Member of the Working group for the 73rd round of NSS, NSSO since 2014.

Chaudhury, Prabir:

(1) Member of the Working Group for the 75th Round of NSS, NSSO, MoSPI.

Dihidar, Kajal:

(1) Institute of Engineering and Management (IEM), IEM Gurukul Campus, Kolkata, February 02-08, 2017.

Kar, Alope:

(1) Member of the Committee on Rural Sector Statistics constituted by the National Statistical Commission; (2) Member of the Working Group on NSS 73rd Round of the Working Group on NSS 74th Round (MoSPI), Gol; (3) Member of the Working Group on NSS 74th Round (MoSPI), Gol;

Mukherjee, Diganta:

- (1) Member of the Core group within the Working group for the 74<sup>th</sup> round of NSS, NSSO, since 2015;
- (2) Member of Survey Monitoring Committee of SEBI, 2014 – 16; (3) Member of the Expert Committee on Disclosure Control, NSSO since 2015.

### ***Sociological Research Unit, Kolkata***

Ghosh, Bhola Nath:

- (1) UGC Sponsored National Seminar on Signifying Values-A Realm of Socio-Pilosophical Understanding, Prasanta Chandra Mahalanobis Mahavidyalaya, Kolkata in collaboration with Hiralal Mazumdar Memorial College for women, Kolkata, December 9, 2016; (2) Indian Association for Social Sciences and Health (IASSH), Gokhale Institute of Politics and Economics, Pune, September 23 -25, 2016; (3) 4<sup>th</sup> Indian Social Work Congress 2016, jointly organised by National Association of Professional Social workers in India (NAPSWI) and Mahatma Gandhi Kasi Vidyapith, Varanasi, October 22-24, 2016; (4) Department of Sociology, Rabindra Bharati University; (5) National Seminar on Marginalization and Development: Issues and Concerns, Dept. of Anthropology, Sambalpur University, Jyoti Vihar, Orissa, March 2-3, 2016; (6) ICSSR sponsored Two Days National seminar on Indigenous Ethnography, Emic Perspective and National Cultural Heritage: Focusing North East India, Department of Anthropology, Assam University (A Central University), Diphu Campus, Diphu, Karbi Anglong, Assam, January 6-7, 2016; (7) Consultation on Situational Analysis for Women and Children in West Bengal, in preparation for Gol-UNICEF Country Programme 2018-22, May 16, 2016; (8) Sociology Department in Rastraguru Surendra Nath Mahavidyalaya, Barrackpore, North 24-Parganas, March 9, 2016; (9) Prasanta Chandra Mahalanobis Mahavidyalaya, 111/3, B.T. Road, Kolkata, September 7, 2016.

### ***Sociological Research Unit, Giridih***

Behera, Hari Charan:

Dept. of Humanities & Social Sciences, National Institute of Technology, Rourkela in the two-day National Conference on "Development, Dispossession and Resistance", November 14-15, 2016.

### ***Economics and Planning Unit, Delhi***

Afridi, Farzana:

- (1) SERI, IFPRI, Delhi, July 9- 10, 2016; (2) Janki Devi Memorial College Annual Lecture series, September 27, 2016; (3) JNU (CITD), September 28, 2016; (4) Ashoka University, November 16, 2016; (5) IGC Jadavpur – ISI Conference, Kolkata December 28- 29, 2016; (6) Annual Economics Symposium (Delhi), January 9, 2017; (7) IEG, February 6, 2017; (8) DSE-ISI-Gothenburg conference, Delhi, March 9, 2017; (9) DSE, March 31, 2017.

Ghate, Chetan:

- (1) IISER, Bhopal, April 4, 2016; (2) IGIDR, Mumbai, July 25, 2016; (3) Reserve Bank of India (RBI), Mumbai, July 15; (4) IIM Indore, August 1, 2016; (5) Reserve Bank of India (RBI), Mumbai, October 3 - 4, 2016; (6) IGIDR, Mumbai, November 9, 2016 (7) Shiv Nadar University, November 24, 2016; (8) Reserve Bank of India (RBI), Mumbai, November 28- December 3, 2016; (9) Reserve Bank of India (RBI), Mumbai, December 5- 7, 2016, (10) Reserve Bank of India (RBI), Mumbai, January 30, 2017; (11) Reserve Bank of India (RBI), Mumbai, February 6-8, 2017;

Kapoor, Mudit:

- (1) ISB, Hyderabad, April 25- 27, 2016; (2) Cecfee, Ranthambhore, October 15- 16, 2016; (3) Collaborative research with AIIMS, March 1, 2017- February 28, 2018.

Mukhopadhyay, Abhiroop:



## Editorial and other Assignments

(1) IIM, Bangalore, May 4- 20, 2016; (2) Central University of Tamil Nadu, November 28- 30, 2016.

Mishra, Debasis:  
IIM Bangalore, January 12, 2017.

Ray, Tridip:  
(1) Indian Institute of Management, Ahmedabad, June 27-28, 2016; (2) IGIDR, Mumbai, July 9-10, 2016; (3) NUEPA, New Delhi, February 16, 2017; (4) Ashoka University, Sonapat, Haryana, March 29, 2017.

Ramaswami, Bharat:  
Ashoka University, January 1, 2016- June 30, 2017.

## ***Economic Analysis Unit, Bangalore***

Swaminathan, Madhura:  
(1) University of Mumbai, Youth Science Congress, February 16, 2016; (2) Centre for Budget and Policy Studies on Food Security and Agriculture: Implications of current policy and budget, Bangalore, April 21, 2016; (3) Vidhan Soudha, Govt. Of Karnataka, Bangalore, June 15, 2016; (4) India International Centre, Indian Perspectives on Social Sector: Issues and Sustainable Development Goals (SDGs), Delhi, July 15-16, 2016; (5) Workshop on Scientific Achievements for Independent India: A Historical Approach Talk. The Green Revolution and after at IISER, Pune, August 12-13, 2016.

## **Statistical Quality Control and Operations Research Division**

### ***SQC & OR Unit, Kolkata***

Anis, M.Z.:  
Statistics Dept., Aligarh Muslim University, March 28, 2017.

Bandyopadhyay, A.:  
Chairman of the Expert Committee formed by NeST for Development of Standards for "Quality, Documentation, and Project Management" for e Governance Projects taken up by central and state governments, 2016.

Chakraborty, A. K.:  
(1) Platinum Jubilee International Conference on Applications of Statistics, Department of Statistics, Calcutta University, December 21-23, 2016; (2) National Conference on Recent Advances in Statistics and their Applications to Society, Department of Statistics and Centre for Advanced Studies, Savitribai Phule Pune University, March 23-25, 2017; (3) National Institute for Orthopedically Handicapped for their Master's students, 2017.

Das, A. K.:  
(1) Conference on Game Theory and Optimization held in Indian Institute of Technology Madras, Chennai Centre, June 9 -10, 2016; (2) Third International Conference on Mathematics and Computing (ICMC 2017), Haldia Institute of Technology, January 17-21, 2017; (3) International Conference on Mathematical Analysis and its Applications (ICMAA-2017), Dayanand Science College, Latur, Maharashtra, March 5-9, 2017.

Das, P

(1) International Conference on Mathematical Techniques in Engineering Application (ICMTEA-16), Graphic Era University, Dehradun, Uttarakhand, April, 2016; (2) Seminar on Uncertainty in Measurement, Indian Chamber of Commerce, Kolkata, May, 2016; (3) Workshop on AMME, SMIT, Sikkim, June, 2016; (4) Workshop on Role of Statistics in Engg. Research, Assam University, Silchar, September, 2016.

Gupta A.:

Workshop on AMME, SMIT, Sikkim, June, 2016.

Mukhopadhyay, A. R.:

(1) Ordnance Factory, Dum Dum, November 19, 2016; (2) IAPQR, 2017.

### ***SQC & OR Unit, Bangalore***

Boby John:

(1) Training program on Big Data Analytics, Vellore Institute of Technology, Vellore, June 21 - 22, 2016; (2) International Conference on Recent Advances in Engineering Sciences, M.S. Ramaiah Institute of Technology, Bangalore, September 8 - 9, 2016; (3) International Conference on Advanced Materials, Manufacturing, Management and Thermal Sciences, Siddaganga Institute of Technology, Tumkur, September 23 - 24, 2016; (4) Workshop on Analytics using R, K.P.R. Institute of Engineering and Technology, Coimbatore, September 29 - 30, 2016; (5) Faculty Development program on Process Modeling and Optimization using Design of Experiments, B. M. S. College of Engineering, Bangalore, December 22, 2016; (6) Workshop on Applications of Design of Experiments in Biotechnology, B.V.B. College of Engineering and Technology, Hubli, January 05 - 07, 2017; (7) 3rd International Conference on Robust Quality Engineering, National Institution for Quality and Reliability, Mumbai, January 19 - 20, 2017; (8) Symposium on Quality Improvement Methodology, Indian Statistical Institute, Mumbai, February 27, 2017; (9) Workshop on Demand Forecasting, Indian Machine Tool Manufacturer's Association, Bangalore, March 10, 2017.

Chowdhury, K.K.:

Faculty Development Program on Advances in Engineering Mathematical Models, BMS Institute of Technology and Management, BMSIT&M Innovation Centre, Bangalore, January 13, 2017.

Gijo, E.V.:

(1) National Workshop on Statistical Computing, Kerala University, Trivandrum, November 17, 2016; (2) International Conference on Statistics for Twenty-first Century – 2016, Kerala University, Trivandrum, December 21-23, 2016; (3) National Conference on Advances in Statistical Sciences, Kannur University, Kannur, February 17-18, 2017; (4) Symposium on Quality Improvement Methodology, Indian Statistical institute, Mumbai, February 27, 2017.

Perumallu, P.K.:

International Conference on Statistics for Twenty-first Century – 2016, Kerala University, Trivandrum, December 21-23, 2016.

### ***SQC & OR Unit, Hyderabad***

Murthy: GSR:

(1) AIS Mathematical Programming, 2016; (2) Workshop and Conference, IIT, Madras; (3) TSERC, Hyderabad, August 10, 2016.

Rao, G Murali:

4th International Conference on Business Analytics and Intelligence, IISc, Bangalore, December 19-21, 2016.

## Editorial and other Assignments

Subhani, S M:

(1) Six Sigma & FMEA, National Remote Sensing Centre to the Scientists, November 30, 2016; (2) Six Sigma to the R & D Scientists, Inogent Laboratories, January 17, 2017; (3) Veljan Hydrair Ltd, January 11, 2017; (4) Heads of Departments, AGI Glass, Bhongir, February 21, 2017.

## Center for Soft Computing Research: A National Facility, Kolkata

Das, S.:

(1) Summer School on Soft Computing, Assam Don Bosco University, July 7-11, 2016; (2) Meghnad Saha Institute of Technology, Kolkata, July 27-30, 2016; (3) National Workshop on Machine Learning and Remote Sensing, Siksha O Anusandhan University, Bhubaneswar, March 14, 2017; (4) ISI-MZU School on Soft Computing Techniques: Theory and Applications, Mizoram University, March 20-24, 2017; (5) National Conference on Machine Learning and Data Science in Internet of Things, Fakir Mohan University, Balasore, March 25-26, 2017.

Ghosh, A.:

(1) Department of Computer Science & Engineering, C. V. Raman College of Engineering, Bhubaneswar; (2) IEEE Geoscience and Remote Sensing, Kolkata Chapter ; (3) IDBRT, June 6-10, 2016; (4) South Asian University, Delhi, August 19-22, 2016; (5) Anna University, Chennai, July 26-27, 2016; (6) Summer School on Soft Computing Paradigm and Machine Learning Techniques, Assam Don Bosco University, Guwahati, Assam, July, 2016; (7) DST PAC meeting, IIT BHU, September 27, 2016; (8) SJS College of Engineering, Bangalore, January 22-25, 2017; (9) DST PAC meeting, Jamia Millia University, February 02, 2017; (10) Short Term Course on Recent Trends in Communication, Signal Processing and VLSI, NIT Silchar, February 17-18, 2017; (11) South Asian University, Delhi, February 24-27, 2017; (12) National Workshop on Machine Learning and Remote Sensing Siksha Anusandhan Kendra, March 13-14, 2017; (13) Winter School on Soft Computing Techniques: Theory and Applications, Mizoram University, Aizawl, Mizoram, March 19-21, 2017; (14) Workshop on Big Data Analytics (WBDA), Jawaharlal Nehru University, March 18, 2017; (15) Workshop on Application in Machine Learning, NIT Silchar, March 22-23, 2017.

Ghosh, K.:

(1) ISI-ADBU Summer School on Soft Computing and Machine Learning, Guwahati, Assam, July 07-11, 2016.

Pal, S.K.:

(1) NIT, Patna, April 25-27, 2017; (2) 22nd BOG Meeting, IPDPM IIITDM, Jabalpur, Madhya Pradesh, May 19-20, 2016; (3) Promotion and Assessment Committee Meeting, IISc, Bangalore, June 23-25, 2016; (4) North-East Workshop, July 06-09, 2016; (5) Cochin University of Science and Technology, Cochin, July 14-16, 2016; (6) NASI meeting, NASI, Allahabad, July 21-23, 2016; (7) Festschrift volume function of Prof. MGK Menon, INSA, New Delhi, August 26-27, 2016; (8) 23rd BOG meeting and 8th Convocation at PDPM-IIITDM, Jabalpur, Madhya Pradesh, August 31- September 03, 2016; (9) Workshop on Fuzzy and Rough Sets (WFRKD'16), JNU, New Delhi, September 04-05, 2016; (10) 64th CSIR-CEERI Foundation Day ceremony, CSIR-CEERI, Pilani, Rajasthan, September 20-22, 2016; (11) Dept. of Statistics, University of Mumbai, November 19, 2016; (12) 24th BOG Meeting, IPDPM IIITDM, Jabalpur, Madhya Pradesh, December 05-06, 2016; (13) IEEE WIECON-ECE 2016, Bangalore, December 23-24, 2016; (14) PAC meeting, IISc, Bangalore, December 23-24, 2016; (15) Council Meeting, NASI, Allahabad, January 22-24, 2017; (16) Dept. of E&TC Engg., IIST Shibpur, February 22, 2017; (17) PRAGYAN'17, NIT-Trichy, Tamil Nadu, March 02-04, 2017; (18) PAC meeting, IISc, Bangalore, March 23-24, 2017; (19) First International Conference On Computational Intelligence, Communications, and Business Analytics (CICBA - 2017), Calcutta Business School, Kolkata, March 25, 2017.

## **9. REGIONAL MATHEMATICAL OLYMPIAD 2016 AND INDIAN NATIONAL MATHEMATICAL OLYMPIAD 2017**

### ***Mathematical Olympiad Programme in India and Indian Statistical Institute, Kolkata***

Regional Mathematical Olympiad 2016-17 in West Bengal was organized by Indian Statistical Institute, Kolkata, and Homi Bhabha Centre for Science Education (HBCSE), on behalf of the National Board for Higher Mathematics (NBHM) of the Dept. of Atomic Energy (DAE), Govt. of India. Prior to RMO 2016, West Bengal held a Pre-RMO examination to select students to appear for RMO. The format of Pre-RMO 2016 paper and the criteria for selecting students for RMO 2016 were at the sole discretion of the Regional Coordinator of West Bengal, decided based on the inputs from the RMO Committee at Indian Statistical Institute, Kolkata. Pre-RMO 2016 in West Bengal was conducted at seven centres across the State -- Baharampur, Bankura, Bardhaman, Kharagpur, Kolkata Central, Kolkata North, and Siliguri -- on 11 September 2016. Participation was based on an online application process (there was no offline application channel this year), and 1137 candidates applied for the test. Finally, 1011 candidates appeared for Pre-RMO 2016, and after a careful grading of the objective answers, 201 candidates were deemed qualified to appear for RMO 2016-17. The total marks for Pre-RMO was 80, equally distributed over 16 problems, and the RMO Committee decided the cut-off to be 30. Out of the 201 candidates selected to appear for RMO, 191 candidates appeared for the test held at Indian Statistical Institute, Kolkata, on 16 October 2016. The RMO Committee at the Institute graded the papers for RMO 2016, scrutinized and re-graded upon requests for re-evaluation, and selected top 30 plus 2 girl candidates to appear for INMO 2017 from West Bengal. This decision was communicated to HBCSE, and the final results were declared centrally. The highest score from West Bengal in RMO 2016 was 68 (out of 102), and the top 30 candidates got greater than or equal to 40. There were 5 candidates from Class IX, 13 from Class X, and 12 from Class XI, in the top 30, with a boy to girl ratio of 28:2. In addition, two girls scoring 36 and 32 were included in the list of candidates selected to appear for INMO 2017. These candidates were invited to take part in a week-long INMO-TC at Indian Statistical Institute, Kolkata, held during 3 to 7 January 2017, where the students were exposed to advanced problem solving skills by ISI Kolkata faculty members and eminent IMO-TC instructors. Finally, 32 candidates from West Bengal participated in INMO 2017, including former INMO awardees, and 2 became INMO awardees in 2017. In addition, 2 girls from West Bengal were qualified to compete for EGMO 2018.

### ***Regional Mathematical Olympiad (RMO) 2016: Karnataka Region***

The mathematical Olympiad activity in Karnataka has been coordinated by the Bangalore Centre of ISI for several years with Dr. Manish Kumar as the regional coordinator for Karnataka. In 2016, the number of Students registered for the Regional Mathematical Olympiad (RMO), Karnataka region was 2486. The exam was held on **16<sup>th</sup> October, 2016**, in **22** centres across the state. With the help of some faculty members at ISI Bangalore, some post-doctoral fellows and research scholars, 1475 answer scripts of RMO were evaluated at ISI Bangalore. Forty-five students qualified to write the national level test Indian National Mathematical Olympiad (INMO). A week long training camp was organized at ISI Bangalore for a total of 59 Students, to make them familiar with advanced problem solving techniques before they appear for the INMO. Several distinguished speakers were invited for this purpose. Participants were provided with food and accommodation at ISI Bangalore. The INMO was held on 15<sup>th</sup> January, 2017 at the Bangalore centre.

The Madhava mathematics competition for undergraduate students is held in various parts of India. This year also, ISI Bangalore coordinated the activities. Prof. B. Sury was the coordinator. The exam was held on **8<sup>th</sup> of January, 2017** across **4** centres in Bangalore. Nearly 188 college students from Bangalore registered for the exam. Again with the assistance of postdoctoral fellows and research scholars, the scripts were evaluated and sent to the national coordinator. Subsequently 7 of the 12 winners at the national level were from Bangalore.

## PART II. ADMINISTRATION AND OFFICE BEARERS

### 10. GENERAL ADMINISTRATION

#### Administrative Services Division

1. The Administrative Services Division at the Headquarters caters to the various needs of the Scientific Workers in all the Scientific Units of the Institute engaged in various scientific, research and academic activities and provides them with necessary infrastructural facilities in their pursuit of excellence. The centres at Delhi, Bangalore, Chennai and Tezpur, each having a number of science units. They are, by and large, getting administrative support from the administrative units/sections there. The Administrative Services Divisions of the Institute has the following units at the Headquarters in Kolkata:

Sl. No.	Name of the Unit	Sl. No.	Name of the Unit
1.	Accounts Section	17.	Import & Travel Cell
2.	Audio-Visual Unit	18.	Internal Audit Cell
3.	Binding Unit	19.	Legal Cell
4.	Canteen	20.	Medical Expenses Reimbursement Unit
5.	Cash	21.	Medical Welfare Unit
6.	CE (A & F)'s Office	22.	Personnel Unit
7.	Central Office & Despatch Unit	23.	Provident Fund Unit
8.	Central Stores & Tailoring Unit	24.	Public Relations Unit
9.	Council Section	25.	Printing and Publication Unit
10.	Director's Office	26.	Official Language Cell
11.	Electrical Maintenance Unit	27.	Retirement Benefit Cell
12.	Engineering Unit	28.	Sankhya Office
13.	Estate Office	29.	Security Unit
14.	Guest House	30.	Telephone Unit
15.	Hostels	31.	Transport Unit
16.	House Building Advance Cell	32.	SC / ST / OBC Cell

2. Apart from the above mentioned Units, there are few cells dealing with Budget, and other issues to take care of the specific needs of the Institute. The Administrative Services Division also looks after the running of Hostels for Students, Research Scholars and International Statistical Education Centre (ISEC) Trainees and also the running of Canteens for the workers and students of the Institute. The other outlying Units are controlled directly by the Headquarters at Kolkata. The Administrative Services Division takes the responsibility for all new constructional activities of the Institute at its Headquarters and also at outlying centres/ branches. A brief report on the construction and other activities during the year is narrated in the subsequent paragraphs.

The Administrative activities in the four Centres, namely Delhi, Bangalore, Chennai and North East Centre at Tezpur and in other outlying branches of the Institute and Giridih Office, are more or less similar to the Headquarters but on a much smaller scale.

3. **Office bearers of the Institute Administration during the year:**

Director

: Prof. Sanghamitra Bandyopadhyay

Professors-in-Charge of  
Scientific Divisions

: Prof. Arup Bose (Theoretical Statistics & Mathematics)

Prof. Ayanendranath Basu (Applied Statistics)

Prof. Arunava Sen (Social Sciences)

Prof. Tapan Chakraborty (Physics & Earth Sciences)

Prof. Pabitra Banik (Biological Sciences)

Prof. Susmita Sur-Kolay (Computer & Communication Sciences)

Head SQC & OR : Shri Somnath Ray

Head Delhi Centre : Prof. Abhay G. Bhatt

Head Bangalore Centre : Prof. T.S.S.R.K. Rao

Acting Head, Chennai Centre : Prof. S. Ponnusamy

Chairman, Committee for ISI  
North-East Centre, Tezpur : Prof. Nityananda Sarkar

Dean of Studies : Dr. Amita Pal

Chief Executive (A & F) : Col. S. Chakraborty

**4 List of workers joined/ retired/ voluntarily retired/ resigned/ terminated/ died during the year**

**A Appointments**

**(i) Non-Scientific Workers**

Sri No	Name
1	Bijay Singh
2	Md. Abdul Zahangir
3	G Purushothamam
4	Nakul Behera
5	Bhaskar Sahu

**B Retirement/ Voluntary Retirement:**

**Scientific & Technical Workers**

Sri No	Name	Sri No.	Name
1	Rumki Gupta	9.	Swapan Chakraborti
2	Bhomra Chatterji	10.	Narayan Mahato
3	Krishna Bhattacharya	11.	Kajal De

Administration

4.	Subhendu Chakrabarti
5.	Nirmal Das
6.	Kasturi Basu
7.	Premananda Bharati
8.	Ramesh C. Satija
9.	N.S. Narasimha Sastry
10.	Satya P. Das

12.	Sukumar Chandra Paramanik
13.	Kishori Roy
14.	B. Mohan Reddy
15.	Arup Roy Choudhury
16.	Subrata Ghosh
17.	S. Ramasubramanian

(ii) Non-Scientific Workers

Srl. No.	Name	Srl. No.	Name
1.	Bala Krishnan	16.	Munni Devi Balmiki
2.	Kausalya Devi	17.	Ramadhar Bhagat
3.	Churamoni Behara	18.	Sumit Karmakar
4.	Zaheed Hussain	19.	Ratan Chandra Das
5.	Guru Charan	20.	Maheswari Pasi
6.	Pran Krishna Das	21.	Bil Bahadur Machkoti
7.	Neli Beharani	22.	Ram Pujan Singh
8.	Dilip Das	23.	Govinda Kushari
9.	M. Gopala	24.	Kabita Das
10.	N. Ramesha	25.	Chhaya Biswas
11.	Ram Dev Mourya	26.	Somaria Debi
12.	Megh Singh Balmiki	27.	Gopa Goswami (Roy)
13.	Sankar Nath Bera	28.	Rita Ghosh
14.	Aparesh Chattopadhyay	29.	Putul Rani Mallick
15.	Nipen Chandra Biswas		

C. Resignation/ Discontinuation of Deputation

(i) Scientific Worker

Srl. No.	Name
1.	Mainak Paddar
2.	Regil Nadh CM

(ii) Non - Scientific Worker

Srl. No.	Name
1.	Arindam Mukherjee
2.	Narendra Rn. Mukherjee
3.	Sushil Bholanath Pakhide
4.	Sibdas Sikdar

D. Death

(i) Scientific Worker

Srl. No.	Name
1.	Jayanta Kumar Sinha

(i) Non - Scientific Worker

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Srl. No.	Name
1.	Alpana Das
2.	Sankar Kr. Gayen

### 5. Number of workers in the Institute as on 31<sup>st</sup> March 2017

Number of workers in the Institute as on 31<sup>st</sup> March 2017:

(i)	Scientific and Technical Workers	-	392
(ii)	Non-Scientific Workers	-	<u>471</u>
	Total	:	<u>863</u>

### 6. Breakup of manpower by Gender, Social Category and Disability group as on 31<sup>st</sup> March 2017

Total Strength		Persons with Disabilities (PWD)	Scheduled Caste (SC)	Scheduled Tribe (ST)	Other Backward Classes (OBC)	Minorities
Male	735	04	92	24	66	20
Female	128	Nil	13	01	03	02
Total	863	04	105	25	69	22

### 7. Annual Return on Cases of Sexual Harassment

1	Number of complaints of sexual harassment received in the year	Nil
2	Number of complaints disposed off during the year 2016-17	Nil
3	Number of cases pending for more than 90 days	Nil
4	Number of workshops on awareness programmes against sexual harassment conducted during the year	Nil
5	Nature of action	NA

### 8. Applications received and action taken by the Institute under RTI Act, 2005

Name of the Appellate Authority : Prof. Sanghamitra Bandyopadhyay, Director, ISI Kolkata

Name of Central Public Information Officer: Shri A.K. Biswas, Dy. Chief Executive (Admn.), ISI Kolkata



Administration

The summary statement in this regard for the year 2016-17 is given below: -

No. of Applications received	No. of cases accepted	Decisions where requests were fully or partially rejected		No. of decisions from Appellate Authority	C I C decision			Amount collected (Rs.)		
		Fully rejected	Partially rejected		No. of decisions received	Penalty imposed	Disciplinary action, if any	Fee	Other Charges	Penalty amount
107	107	Nil	Nil	13	3	NIL	NIL	570	4442	NIL

## 9. Budget and Finance

For the year 2016-2017, Section 8(1) Committee recommended Rs.21636.00 lakhs (Government Grant Rs.21186.00 lakhs and ISI internal receipt Rs.450.00 lakhs) under Non-Plan (BE) and Rs.21145.06 lakhs under Plan (BE). The Government approved a sum of Rs.18881.10 lakhs and of Rs.8000.00 lakhs for Non-Plan and Plan expenditure respectively. At the revised estimate stage, the Institute sought for a grant of Rs.20369.86 lakhs and Rs.11800.00 lakhs under Non-Plan and Plan respectively, which was also recommended by the Section 8(1) Committee. The Government sanctioned a grant of Rs.16715.52 lakhs (including the negative balance of Rs.10.98 lakhs during the financial year 2015-2016) under Non-Plan and the Plan RE allocation was fixed at Rs.6089.85 lakhs (including the amount of Rs.1160.15 lakhs expenditure over income during the financial year 2015-2016). The non-plan expenditure was less by Rs.618.69 lakhs from the fund allotted by the Ministry and Miscellaneous receipt. Plan Expenditure was Rs.813.46 Lakhs over the fund allotted. The Audited Annual Accounts of the Institute for the year 2016-2017 has been furnished in Part IV of this report.

## 10. Major Construction / Repair works taken up by the Institute during 2016-2017

### A. Kolkata

#### R. C. Bose Centre for Cryptology and Security

The centre is located at Gupta Niwas campus of the Institute. Planning, Design-Engineering, Execution and overall Project Management for construction of buildings and other infrastructure of the campus was awarded to M/s NBCC as deposit work. Construction activity started in May, 2015. Construction of the Cryptology Centre (G+7), Hostel Building (G+7) and two Residential Blocks (G+10 & G+4) is in progress. Structure of the buildings is almost completed and different services have started. Estimated project cost is about Rs.80 crore and during the year 2016-17 Rs.13 crore was deposited to NBCC. The work-progress has been adversely affected due to inadequate flow of fund. Following major construction & repair-renovation works have been undertaken as deposit work through M/s Bridge & Roof Co. (India) Ltd which is the implementing agency:

- Construction of New Academic Building and New Students' Hostel – Concept Plan of Academic Building has been finalised by the empowered committee after a number of iteration.
- Repair, Renovation & Restoration work of R. A. Fisher Bhavan & S.N. Bose Bhavan – Work awarded through tendering and started from January, 2017. Repair work is in progress in both the buildings.

Augmentation & Distribution of Electric Power – Survey completed; Project Report and cost estimate under preparation. Rs.75 lakh (approx) has been deposited (for the whole package) as per the provision of agreement of the Institute with the implementing agency.

**B. Delhi**

**Civil works**

- |       |                                                                                                                                |                    |
|-------|--------------------------------------------------------------------------------------------------------------------------------|--------------------|
| (i)   | Repair & Renovation Works of the Community Hall in ISI Delhi Centre, New Delhi-110016                                          | - Rs.12,36,000     |
| (ii)  | Replacement of old Windows in C- Block in ISI Delhi Centre, New Delhi-110016                                                   | - Rs.12,37,718     |
| (iii) | Repair and Renovation Works of 6 Nos of D- Block qtrs. in ISI Delhi Centre, New Delhi-110016                                   | - Work in progress |
| (iv)  | Reports of Condition Assessment using NDT Test of New PJH Building in ISI Campus Delhi Centre New Delhi-110016                 | - Rs.3,00,000      |
| (v)   | WAC Meeting held at ISI Delhi Centre dated 08/07/2016 discuss and finalize the revised proposal / estimates submitted by CPWD. |                    |

**Electrical Works**

- |      |                                     |                                |
|------|-------------------------------------|--------------------------------|
| (vi) | Automatic Switchgear for substation | - Rs.9,00,000<br>approximately |
|------|-------------------------------------|--------------------------------|

**C. Bangalore**

*Major construction / renovation works completed / undertaken by the Bangalore Centre during the FY 2016 -2017*

- (i) Construction of rain water harvesting structures and aquifer measures (Phase-01): The work has been fully completed.
- (ii) Construction of biogas plant: the construction of biogas plant was completed and commissioned successfully.
- (iii) Construction of first floor of gymnasium: The work was fully completed and opened for use.
- (iv) Construction of second floor of guest house: The construction work was awarded to the NPCC Ltd.
- (v) Construction of 5-Storey new academic block: Plan budget proposal is placed to take up project in the F.Y. 2017-18. The necessary ground work such as identification of location, preparation of preliminary plan, estimates and other works were undertaken.
- (vi) Extension of canteen building: Plan budget proposal was placed to take up project in the F.Y. 2017-18. The necessary ground work such as identification of location, preparation of preliminary plan, estimates and other works were undertaken.

Administration

*Other Activities:*

- (i) Swacch Bharat Campaign was observed from 16<sup>th</sup> to 31<sup>st</sup> May 2016.

**D. Chennai**

**Construction:**

- (a) **Boundary Wall:** Government of Tamil Nadu allotted 8 acres of cost free land to ISI Chenna Centre in Karapakkam. Construction of Boundary wall on the said land for "New proposed campus of ISI- Chennai Centre at Karapakam", has been completed successfully. This construction project for estimate of Rs.5,76,94,409/- (Rupees five crore, seventy six lakhs ninety four thousand four hundred and nine only). was handed over to National Buildings Construction Corporation Ltd. (NBCC).
- (b) **Earth Filling:** ISI, Chennai Centre signed a MOU with CPWD for the earth filling at low lying land at Karapakkam. Earth filling project for an estimate of Rs. 6,16,80,000/- (Rupees six crores, sixteen lakhs eighty thousand only) was signed.
- (c) **Master Plan:** The draft master plan for the proposed ISI Campus at Karapakkam has been prepared.

**Other Activities:**

The Centre Head and faculty members visited various Institutes and colleges to create awareness about the importance of ISI. Encouraged and motivated students to participate in the admission test of the Institute. Explained the activities of the Institute as they are not so much familiar with the Institute in the southern part of our country.

**E. Tezpur**

The construction of the campus of the North-East Centre of the Institute started at the Institute's own site during the last quarter of 2016-17.

**11. Society Type Activities**

**A. Membership: April 2016 – March 2017**

During the period 28 persons enrolled as Ordinary Members of the Institute and 15 Ordinary Members became Life Members of the Institute.

The membership position as on 31 March, 2017 is as follows:

Ordinary Members	-	269
Life Members	-	1026
Institutional Members	-	04
<b>Total</b>	-	<u>1299</u>

**Finance Committee Meeting.** The Finance Committee met on 19<sup>th</sup> October, 2016. Besides the decisions taken on various financial matters, the Finance Committee recommended RE 2015-16 and BE 2016-17 (both Plan and Non-Plan) in this meeting held on 19<sup>th</sup> October, 2016. The Annual Report including Audited Statement of Accounts for the year 2015-2016 was considered and also recommended in this meeting.

**Council Meetings** During the period under Report (2016-17), the Council met seven times on 22<sup>nd</sup> April, 2016, 30<sup>th</sup> June, 2016 (adjourned), 15<sup>th</sup> July, 2016 (subsequently), 9<sup>th</sup> September, 2016, 14<sup>th</sup> October, 2016, 2<sup>nd</sup> November, 2016 and 18<sup>th</sup> February, 2017 to take decisions on various academic and administrative matters of the Institute. The Budget Proposals of the Institute both for Plan and Non-Plan (RE 2016-17 and BE 2017-18) were considered in the meeting of the Council held on 2<sup>nd</sup> November, 2016, as recommended by the Finance Committee in its meeting held on 19<sup>th</sup> October, 2016. The Annual Report including the Audited Statement of Accounts for the year 2015 – 2016 was considered and approved by the Council in its meeting held on 2<sup>nd</sup> November, 2016.

Please refer to the Back Cover Page and Chapter 12 for details regarding composition of the Council and different committees constituted by the Council.

**Annual General Meeting** During the period under Report (2016-17), the Annual General Meeting was held on 30<sup>th</sup> November, 2016. The Annual Report of the Institute for the year 2015-2016 and Audited Statement of Accounts for the year 2015-2016 together with the Auditor's comments and replies of the Administration thereto were adopted in the meeting of the General Body held on 30<sup>th</sup> November, 2016.

## **2 Awareness programmes conducted by Medical Welfare Unit**

Medical Welfare Unit of the Institute organized various awareness programmes throughout the year for the welfare of the workers and students. A large number of workers and students participated in the following seminar and workshop

Coping with Stress, held on 19<sup>th</sup> April 2016

Speakers: Dr Jyotirmoy Samajder  
Mr Mohit Ranadip  
Ms Swati Mitra

i Seminar on Cancer Awareness, held on 18<sup>th</sup> November 2016

Speaker: Dr Anshu Gupta

ii Alcohol to Facebook: Danger of Dependence, held on 07<sup>th</sup> February 2017

Speakers: Ms Swati Mitra  
Mr Mohit Ranadip  
Dr Jyotirmoy Samajder

Administration

**13. Training Programme on Comprehensive end-to-end e-Procurement**

Central Stores of the Institute organized one-day e-procurement training programme on 18<sup>th</sup> July 2016, for the workers of the Institute who are involved in public procurement.

Speaker: Mr. Paul Mathai

**14. Celebration of Hindi Diwas & Hindi Pakhwada**

The Official Language Cell of the Institute organized various events including essay writing competitions, extempore, recitation etc. from 14.09.2016 to 28.09.2016 to celebrate Hindi Diwas and Hindi Pakhwada. The Institute recognized the participants and awarded prizes to them for their performance in the said competition.

## 11. LIST OF MEMBERS OF THE ACADEMIC COUNCIL AND OTHER COMMITTEES OF THE INSTITUTE AS ON 31 MARCH 2017

### 1 Academic Council

Sanghamitra Bandyopadhyay, Director (Chairman)

Amita Pal, Dean of Studies (Convener)

#### A Theoretical Statistics and Mathematics Division

T.S.S.R.K. Rao, B.V. Rajarama Bhat, N.S. Narasimha Sastry, Bhaskar Bagchi, S. Ramasubramanian, K. Ramamurthy, Mohana Delampady, Sunanda Bagchi, B. Rajeev, V. Pati, B. Sury, V.R. Padmawar, Siva Athreya, C. Robinson Edward Raja, S.M. Srivastava, Probal Chaudhuri, Rana Barua, Alok Goswami, Arup Bose, Goutam Mukherjee, Ratan Dasgupta, Gopal Krishna Basak, Pradipta Bandyopadhyay, Amartya Kumar Dutta, Debashish Goswami, Rudra Pada Sarkar, Mahuya Datta, S. Pannusamy, Rajendra Bhatia, Rahul Roy, R.B. Bapat, Abhay Gopal Bhatt, Arup Kumar Pal, Isha (Baga) Dewan, Anish Sarkar, Swagato Kumar Ray, Ritabrata Munshi, Ramesh Sreekantan, Rajat Subhra Hazra.

#### B Applied Statistics Division

Sushama M. Bendre, Bimal Kr. Roy, Debasis Sengupta, Anup Dewanji, Mausumi Bose, Palash Sarkar, Ashis SenGupta, Debapriya Sengupta, Tapas Samanta, Atanu Biswas, Subhamoy Maitra, Pabitra Pal Choudhury, Ayanendranath Basu, Tapas Kumar Chandra, Subir Kumar Bhandari, Smarajit Bose, Rita Saha Ray, Arun Kumar Adhikary, Sumitra Purkayastha, Mridul Nandi, Kiranmoy Das.

#### C Social Sciences Division

V.K. Ramachandran, Madhura Swaminathan, Satya Ranjan Chakravarty, Amita Majumder, Abhirup Sarkar, Nityananda Sarkar, Manash Ranjan Gupta, Tarun Kabiraj, Monoranjan Pal, Manipushpak Mitra, Indraneel Dasgupta, Arunava Sen, Bharat Ramaswami, Satya P. Das, E. Somanathan, Prabal Roy Chowdhury, Probal Dasgupta, Tridip Ray, Chetan Ghate, Abhiroop Mukhopadhyay, Souvik Roy, Debasis Mishra.

#### D Biological Sciences Division

Joydev Chattopadhyay, Anjana Dewanji, Arunava Goswami, Premananda Bharati, Barun Mukhopadhyay, Subrata Kr. Roy, Parasmani Dasgupta, P.P. Majumder, Bidyut Roy, Saurabh Ghosh, Sabyasachi Bhattacharya, Indranil Mukhopadhyay, Pabitra Banik, Susmita Mukhopadhyay.

#### E Physics and Earth Sciences Division

Dilip Saha, Chandan Chakraborty, Dhurjati Prasad Sengupta, Soumendra Nath Sarkar, Saswati Bandyopadhyay, Pinaki Roy, Subir Ghosh, Barnana Roy, Banasri Basu, Guruprasad Kar, Parthasarathi Ghosh, Preeti Parashar, Supratik Pal, Amlan Banerjee.

#### F Computer and Communication Sciences Division

Bhabani Prasad Sinha, Bhargab Bikram Bhattacharya, Subhas Chandra Nandy, Nabanita Das, Susmita Sur-Kolay, Krishnendu Mukhopadhyay, Sandip Das, Swapan Kr. Parui, Umapada Pal, A.R.D. Prasad, Bhabatosh Chanda, Nikhil Ranjan Pal, Kumar Sankar Roy, Dipti Prasad Mukherjee, Srimanta Pal, C.A. Murthy, Sushmita Mitra, Ashish Ghosh, Sanghamitra Bandyopadhyay, Rajat Kumar De, Devika P. Madalli, B.S. Daya Sagar, Deba Prasad Mandal, Sarbani Palit, Utpal Garain

Administration

**G. Statistical Quality Control and Operations Research Division**

Kalyan Kumar Chowdhury, P.K. Perumallu, Ashim Roy Chowdhury, U. Haridas Acharya, Surajit Pal, A. Rajagopal, Samir Kr. Neogy, B. Mohan Reddy, G.S.R. Murthy, A.L.N. Murthy, Amitava Bandyopadhyay, Dipak Kr. Manna, Arup Kumar Das, Ranjan Sett, Arup Ranjan Mukhopadhyay, Abhijit Gupta, Prasun Das, Ashis Kr. Chakraborty, Nandini Das, Susanta Kumar Gauri, Md. Zafar Anis, Ashok Sarkar, Amit Kr. Biswas, Biswabrata Pradhan, Sanjit Ray, E. V. Gijo

**H. Library, Documentation and Information Sciences Division**

Chief Librarian

**I. Computer and Statistical Service Centre (CSSC)**

Debashis Roy, Amitava Datta,

**J. Member-Secretary, ISEC**

Prof. Prasanta Pathak (Up to 31<sup>st</sup> August 2016)  
Prof. Ayanendranath Basu (From 1<sup>st</sup> September 2016)

**2. Other Committees of the Institute**

**A. Finance Committee**

Director (Chairman), Government Representative (MOS & PI), Government Representative (Ministry of Finance), Professor Abhirup Sarkar, ISI Kolkata, Professor Pabitra Banik, ISI Kolkata, Professor S.M. Srivastava, ISI Kolkata, Professor Dilip Saha, ISI Kolkata, Professor Chetan Ghate, ISI Delhi, Head, Delhi Centre, Head, Bangalore Centre, Head, Chennai Centre, Sh. Somnath Ray, ISI Bangalore, Shri Samar Ray (Former PS, Finance Dept., Govt. of WB; Former Dy. Comptroller and Auditor General, Govt. of India), External Expert, External Expert (to be decided soon), Chief Executive (A&F), Sudip Chakraborty (Convener), DCE (Finance).

**B. Sankhyā Editorial Committee**

(i) Editor-in-chief, *Sankhyā*, Series A and Series B:

Prof. Dipak K. Dey (University of Connecticut, Storrs, CT, U.S.A.)

(ii) Editors, *Sankhyā*, Series A:

Prof. Krishna B. Athreya (Iowa State University, U.S.A.), Prof. Gopal K. Basak, (Indian Statistical Institute, Kolkata), Prof. Francisco Louzada (Universidade De Sao Paulo, Brazil),

(iii) Editors, *Sankhyā*, Series B:

Prof. Sudipto Banerjee (University of California, Los Angeles, U.S.A.), Prof. Bertrand Clarke (University of Nebraska-Lincoln, U.S.A.), Prof. Bani Mallick (Texas A & M University, U.S.A.), Prof. Sumitra Purakayastha, (Indian Statistical Institute, Kolkata),

**C. Works Advisory Committees****(i) Kolkata**

Anandapran Gupta (Chairman), Former Head, Civil Department, IIT Kharagpur, Smarajit Bose (Vice-Chairman), Rajkumar Roychowdhury, Susmita Mukhopadhyay, Indranil Dasgupta, Ashis K. Chakraborty, External Expert (Civil), External Expert (Architecture), External Expert (Electrical), Chief Executive (A&F), Amal K. Biswas, Partha P. Mohanty, Amitava Mukherjee, In-Charge, EMU, In-Charge, Engg. Unit (Convener), External Expert (Environment/Pollution Control to be co-opted/invited by the Chairman when required).

**(ii) Delhi**

Prof. B. Bhattacharjee, Civil Engineering department, IIT Delhi (Chairman), Head ISI Delhi – Member, Mr. G. K.Taneja, Institute Engineer, IIT Delhi– Expert (Electrical), Mr. R. Upadhyay, Executive Engineer (Civil), Shri Lal Bahadur Sanskrit Vidyapeeth – Expert (Civil), Expert Architecture (to be co-opted later), Prof. Arup Pal, ISI Delhi, Prof S. K. Neogy, ISI Delhi, Prof. Chetan Ghate, ISI Delhi, Mr. Sujan Dutta, ISI Delhi, Mr. Kaisar Alam, OSD, ISI Delhi (Convener).

**(iii) Bangalore**

Professor K. S. Nanjunda Rao (Chairperson); Dr K. Keshavan, External expert (Electrical Engineering); Dr S. V. Venkatesh, External expert (Civil Engineering); Head, ISI, Bangalore Centre; Head, Stat-Math Unit, ISI, Bangalore or his/her nominee); Head, DRTC, ISI, Bangalore or his/her nominee; Head, SQC & OR Unit, ISI, Bangalore or his/her nominee; Head, E.A.U., ISI, Bangalore or his/her nominee; Dr. Kaushik Majumder, ISI, Bangalore; Accounts Officer, Bangalore Centre; Shri P.C. Karan, Administrative Officer, ISI, Bangalore (Convener).

**D. Ph.D. / D.Sc. Committees****(i) Statistics**

Director (Chairperson), Dean of Studies, Mausumi Bose, Gopal K. Basak, Mohan Delampady, V. Padmawar, Isha Dewan, Abhay G. Bhatt, Ayanendranath Basu, C.A. Murthy, Atanu Biswas, Tapas Samanta (Convener).

**(ii) Mathematics**

Director (Chairperson), Dean of Studies, B. Sury, Siva Athreya, Anish Sarkar, Arup K. Pal, Mahuya Datta, Swagata K. Ray, Banasri Basu, Debashish Goswami (Convener).

**(iii) Computer Science**

Director (Chairperson), Dean of Studies, Palash Sarkar, Subhas C. Nandy, Susmita Sur-Kolay, Mandar Mitra, Bhabatosh Chanda, Nikhil R. Pal, Sushmita Mitra, C.A. Murthy, Utpal Garain (Convener).

**(iv) Quantitative Economics**

Director (Chairperson), Dean of Studies, Nityananda Sarkar, Manipushpak Mitra, Prabal Roy Chowdhury, Bharat Ramaswami, Debasis Mishra, Anup Dewanji, Tarun Kabiraj (Convener).



Administration

(v) SQC & OR

Director (Chairperson), Dean of Studies, C.A. Murthy, Anup Dewanji, Mohan Delampady, E.V. Gijo, Ashis K. Chakraborty, S. K. Neogy, D. K. Manna, Arup K. Das (Convener).

**E. Policy Planning and Evaluation Committee (PPEC)**

Chairman of ISI Council (Chairman); Director (Vice-Chairman); Director General, CSO; Financial Advisor, MOS & PI; Professor Kalyan B. Sinha, Former Director, ISI; Professor B.L.S. Prakasa Rao, Former Director, ISI; Professor Partha P. Majumder, ISI; Professor Partha P. Chakraborty, Director, IIT Kharagpur; Professor T.S.S.R.K. Rao, Head ISI Bangalore; Professor Bharat Ramaswami, ISI Delhi; Professor Dhrubojyoti Chattopadhyay, Former Pro-VC (Acad), Calcutta University; VC Amity University; Professor Dipti P. Mukherjee, ISI (Convener).

**F. Technical Advisory Committees of different Divisions**

(i) Theoretical Statistics and Mathematics Division

Director, ISI (Chairperson), Professor V. Balaji, Professor Ravi Rao, Professor Indranil Biswas, Professor Tathagata Bandyopadhyay, Professor B.L.S. Prakasa Rao, Professor V.S. Borkar, Professor-in-Charge, Statistics & Mathematics Division (Convener).

(ii) Applied Statistics Division

Director, ISI (Chairperson), Professor S.P. Mukherjee, Professor Rahul Mukherjee, Professor Debasis Kundu, Professor Swadheenanda Pattanayak, Professor-in-Charge, Applied Statistics Division, (Convener).

(iii) Computer and Communication Sciences Division

Director, ISI (Chairperson); Professor Partha P. Chakrabarti, Professor Naveen Garg, Dr. Satyanarayana V. Lokam, Prof. Subhasis Chaudhuri, Dr. Ramesh Hariharan, Professor Pushpak Bhattacharya, Professor K.S. Raghavan, Professor-in-Charge, Computer & Communication Sciences Division (Convener).

(iv) Physics and Earth Sciences Division

Director, ISI (Chairperson), Professor Ashok Sahni, Professor S.K. Tandon, Professor Sudipta Sengupta, Prof. M. Lakshmanan, Professor Indrani Bose, Prof. C.S.P. Ojha, Professor-in-Charge, Physics & Earth Sciences Division (Convener).

(v) Biological Sciences Division

Director, (ISI) Chairperson, Professor Nitai P. Bhattacharyya, Professor Himanshu Pathak, Dr. Giriraj Chandak, Dr. A.R. Sharma, Professor S.P. Singh, Professor Aditya Chatterjee, Professor-in-Charge, Biological Sciences Division (Convener).

(vi) Social Sciences Division

Director, ISI (Chairperson), Professor Achla Raina, Professor Rajni Palriwala, Professor Saikat Sinha, Professor Arvind Pandey, Dr. Subrata Lahiri, Professor Manoj Panda, Professor-in-Charge Social Sciences Division (Convener).

(vii) Statistical Quality Control and Operations Research Division

Director, ISI (Chairperson), Professor Ramanuj Majumdar, Professor Debasis Kundu, Mr. Vadiraj Kulkarni, Dr. Richard Lobo, Shri. S. Krishnan, Dr. Gautam Chatterjee, Head, SQC & OR Division (Convener).

(viii) Library, Documentation and Information Sciences Division

Director, ISI (Chairperson), Dr. M. Paul Pandian, Dr. G. Mahesh, Dr. P.R. Goswami, Professor Sachindra Nath Bhattacharya, Chief Librarian/ In-Charge, Library (Convener).

# INDIAN STATISTICAL INSTITUTE

## EIGHTY FIFTH ANNUAL REPORT

STATEMENT OF ACCOUNTS AND AUDITOR'S REPORT FOR THE YEAR 2016-2017

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## **INDIAN STATISTICAL INSTITUTE**

### **Independent Auditors' Report**

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of INDIAN STATISTICAL INSTITUTE, which comprise the Balance Sheet as at 31<sup>st</sup> March 2017, the Income and Expenditure Account for the year then ended and a summary of the significant accounting policies and other explanatory information.

#### **Management's Responsibility for the Financial Statements**

The Institute's management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the Institute in accordance with the accounting principles generally accepted in India, including the Accounting Standards as specified by Institute of Chartered Accountants of India, to the extent applicable. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the relevant Act for safeguarding the assets of the Institute and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the accuracy and completeness of the accounting records relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

#### **Auditor's Responsibility**

1. Our responsibility is to express an opinion on these financial statements based on our audit.
2. We have taken into account the accounting and auditing standards and matters which are required to be included in the audit report.
3. We conducted our audit in accordance with the Standards on Auditing generally accepted in India. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements.

4. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institutes' preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on whether the Institute has in place an adequate internal financial control system over financial reporting and operating effectiveness of such controls. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Institute's management, as well as evaluating the overall presentation of the financial statements.
5. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion.

#### Basis for Qualified Opinion

The Institute's management has not complied with the Accounting Standards as prescribed by Institute of Chartered Accountants of India as referred to in **Annexure - A**.

#### Qualified Opinion

In our opinion and to the best of our information and according to the explanations given to us, except for the possible effects of the matters described in the Basis for Qualified Opinion paragraph read with Annexure A, the aforesaid financial statements give the information required, in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the State of Affairs of the Institute (Balance Sheet) as at 31<sup>st</sup> March 2017 and its Income and Expenditure Account for the year ended on that date.

#### Emphasis of Matters

We draw attention to the matters that has been referred to in **Annexure - B** of the financial statements. *However, our opinion is not qualified in respect of these matters.*

#### Other Matters

We did not visit THREE branches included in the financial statements of the Institute, the financial statements / financial information of which reflect addition of assets to the tune of Rs. ₹ 3,65,44,541/- as at 31<sup>st</sup> March, 2017 and total revenues for Rs. ₹ 37,13,214/- for the year ended on that date, as considered in the financial statements. The financial statements / information of these branches have been audited at the Head Office; hence our opinion in so far as it relates to the amounts and disclosures included in respect of these branches, are based solely on the information furnished at Head Office

Our opinion is not qualified in respect of this matter

Report on Other Legal and Regulatory Requirements

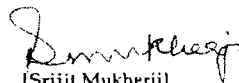
Subject to the qualifications mentioned in the Opinion paragraph, we report that:

- a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
- b) In our opinion, proper books of account as required by law have been kept by the Institute so far as it appears from our examination of those books.
- c) The Balance Sheet, the Income and Expenditure Statement dealt with by this reports are in agreement with the books of account.

Place: Kolkata  
Dated: 12<sup>th</sup> September, 2017



For S. K. Mallick & Co.  
Chartered Accountants  
(Firm Registration No. 324892E)

  
[Srijit Mukherji]

Partner  
Membership No. 050688

## Annexure A

1. Depreciation on fixed assets acquired up to accounting year 1985-86 have not been charged in the accounts from the financial year 1986-87 onwards which is not in compliance with AS-6. [**Refer Note 2.1 on Schedule 24**]
2. Certain employee benefits including retirement benefits are accounted for on cash basis and accordingly compliance with AS 15 *Employee Benefits* cannot be ensured. [**Refer Note 1.2(b) and 4 on Schedule 24**]
3. All transactions pertaining to earlier periods are accounted for as year's transactions under the regular heads of account in the absence of the Head "prior period adjustment account" and accordingly compliance with AS 5, *Net profit or loss for the period, Prior period items and changes in accounting policies* cannot be ensured. [**Refer Note 1.3 on Schedule 24**]
4. Transactions in foreign currencies are recorded at exchange rate prevailing at the time of settlement which is not in compliance with AS 11 *Effect of changes in foreign exchange rates*. [**Refer Note 6 on Schedule 24**]
5. Accounting of interest on house building loans and expenditure on disbursement of share of faculty members respectively has been done on cash basis. [**Refer Note 1.2(a) and 1.2(c) on Schedule 24**]
6. Due to the non completion of physical verification of fixed assets and in absence of a comprehensive physical inventory of fixed assets the book balance thereof could not compared with physical balances. [**Refer Note 1.4 on Schedule 25**]

## **Annexure B**

1. There are old advances that may not be ultimately realizable against which no provisions have been made in the accounts. [*Refer Note 2.3 on schedule 25*]
2. Computer systems having book value of Rs. 7,00,000.00/- were stolen in year 1992-1993 and no adjustment has been made regarding such loss in financial statements. [*Refer Note 1.6 on Schedule 25*]
3. No adjustment of Rs. 20,06,618/- have been done which is included under current liabilities, being sale proceeds of assets disposed off including Rs 16,39,764/- for disposals in an earlier year. [*Refer Note 1.7 on Schedule 25*]
4. There have been projects which has excess of expenditure incurred over and above revenue during the year 2016-17. [*Refer Schedule 3 of Balance Sheet*]
5. Out of the above there have been a few projects which has opening debit balance for the past two financial years. [*Refer Schedule 3 of Balance Sheet*]



INDIAN STATISTICAL INSTITUTE  
BALANCE SHEET AS AT 31/03/2017

(Amount in Rupees)

PARTICULARS	SCHEDULE	CURRENT YEAR	PREVIOUS YEAR
<b>LIABILITIES</b>			
CORPUS/CAPITAL FUND	1	1,29,55,07,167	99,87,30,614
EARMARKED/ENDOWMENT FUNDS	3	74,76,59,917	67,64,52,547
CURRENT LIABILITIES AND PROVISIONS	7	20,68,08,466	23,42,91,525
LIABILITIES FOR FIXED ASSETS OF EXT. AIDED FUND		15,19,04,068	14,88,59,383
LIABILITIES FOR FIXED ASSETS OF ISEC FUND		7,32,894	7,32,894
LIABILITIES FOR FIXED ASSETS OF IGP PROJECT		71,13,633	69,22,213
<b>TOTAL</b>		<b>2,40,97,26,145</b>	<b>2,06,59,89,176</b>
<b>ASSETS</b>			
EARMARKED/ENDOWMENT FUNDS	3	41,01,745	53,66,919
FIXED ASSETS	8	1,31,55,41,644	1,10,97,31,911
INVESTMENTS / ASSETS - FROM EARMARKED/ EARMARKED/ENDOWMENT FUNDS	9	55,31,57,587	43,37,60,769
CURRENT ASSETS, LOANS AND ADVANCES	11	37,71,74,574	36,06,15,087
FIXED ASSETS OF EXT. AIDED FUND		15,19,04,068	14,88,59,383
FIXED ASSETS OF ISEC FUND		7,32,894	7,32,894
FIXED ASSETS OF IGP PROJECT		71,13,633	69,22,213
<b>TOTAL</b>		<b>2,40,97,26,145</b>	<b>2,06,59,89,176</b>
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

(A. Mukherjee/ S.K. Chakraborty)  
Dy. Chief Executive (F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

In terms of our Report of even date.

For S. K. Mallick & Co  
Chartered Accountants  
(Firm Registration No. 324892E)

Srijit Mukherji  
Partner  
Membership No. 050688  
Kolkata, September 12, 2017

**INDIAN STATISTICAL INSTITUTE**  
**INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31-03-2017** (Amount in Rupees)

PARTICULARS	SCHEDULE	CURRENT YEAR		PREVIOUS YEAR	
		PLAN	NONPLAN	PLAN	NONPLAN
<b>INCOME:</b>					
Miscellaneous Receipts	12	23,56,871	6,11,09,005	66,10,747	4,05,58,001
Grant-in-Aid From Govt. of India	13	13,36,17,395	167,16,10,239	11,59,56,104	154,36,63,416
<b>TOTAL (A)</b>		<b>13,59,74,266</b>	<b>173,27,19,244</b>	<b>12,25,66,851</b>	<b>158,42,21,417</b>
<b>EXPENDITURE:</b>					
Establishment Expenses	20	16,52,34,026	154,15,30,517	16,21,59,711	145,45,62,052
Other Administrative Expenses	21	22,81,78,807	12,93,19,716	20,17,89,745	13,06,99,126
<b>TOTAL (B)</b>		<b>39,34,12,833</b>	<b>167,08,50,233</b>	<b>36,39,49,456</b>	<b>158,52,61,178</b>
<b>BALANCE BEING SURPLUS/(DEFICIT) (A - B)</b>					
<b>CARRIED TO CORPUS/CAPITAL</b>		<b>-25,74,38,567</b>	<b>6,18,69,011</b>	<b>-24,13,82,605</b>	<b>-10,39,761</b>
SIGNIFICANT ACCOUNTING POLICIES	24				
CONTINGENT LIABILITIES					
AND NOTES ON ACCOUNTS	25				

(A Mukherjee: S.K. Chakraborty)  
 Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
 Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
 Director

In terms of our Report of even date.

For S. K. Mallick & Co  
 Chartered Accountants  
 (Firm Registration No. 324892E)

Srijit Mukherji  
 Partner  
 Membership No. 050688  
 Kolkata, September 12, 2017

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 1 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017  
CORPUS / CAPITAL FUND

(Amount in Rupees)

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
SCHEDULE 1 - CORPUS - CAPITAL FUND				
Opening Balance		99,87,30,614		77,51,51,487
Less: Recovered during the year on account of Excess of Income over Expenditure for the Previous Year				
Non - Plan Revenue	-10,39,761		-18,64,46,584	
Plan Revenue	-24,13,82,605		-18,15,43,896	
		-24,24,22,366		-36,79,90,480
Add: Contribution towards Capital Fund received during the year 2016-17	48,20,66,456		40,37,90,189	
Less: Recovered during the year	13,20,66,456		17,12,90,189	
		35,00,00,000		23,25,00,000
Add: Transfer of Assets of Dev. Fund		3,77,782		21,40,313
Add: 95% Cost of Books & Journals acquired during the year out of Plan Revenue Grant		10,76,61,175		8,82,12,568
Less: Depreciation on Assets during the year- Schl 8A	20,57,24,887		22,22,49,469	
Dep. on Assets acquired out of Dev. Fund- Schl 8B	23,89,846		25,91,916	
		20,81,14,733		22,48,41,385
Less: Amount written off on Fixed Assets during the year - Schl		481		481
Add: Excess of Expenditure over Income on Non-Plan Grant for the year 2016-17, transferred from Income and Expenditure Account	6,18,69,011		-10,39,761	
Add: Excess of Income over Expenditure on Plan Revenue Grant for the year 2016-17, transferred from Income and Expenditure Account	-25,74,38,567		-24,13,82,605	
		-19,55,69,556		-24,24,22,366
		129,55,07,167		99,87,30,614

(A Mukherjee S.K. Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - earmarked ENDOWMENT FUNDS	GANGA RIVER BAS MANA PLAN PROJECT 201A		CHANGE IN PATR IRRIGATION PROJECT 201K		STAT. STRUCTURAL SOFT COMPUTING PROJECT 202		DEV OF ONLINE HW RECOG PH II PROJECT 202A		AN INVESTIGATION IN ANTIMICROBIAL PROJECT 203	
	MIN. OF ENV FOR		DST.W.B		INDO-BRA/II..DST		I I SC BILORE		DST GOI	
FUNDING AGENCY	4,17,600		-71,830		4,06,050		6,45,000		15,547	
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund										
2. Income From Investment made on account of Funds			4,55,532							
3. Serv. Charg/SQCOR Receipt										
4. OHAdj/Other Income										
5. Service Tax Recd/Receivable			4,55,532				6,45,000			
TOTAL			3,83,702		4,06,050		98,892			
TOTAL (a+b)	4,17,600				4,06,050					15,547
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep & allied work										
- Remuneration & Allowances			3,36,582							
- Travelling & Conveyance			33,467							
- Admn. expenses/Prof/Benv.			38,605				18,105			
- Tax Deducted at Source										
- Service Tax Paid/Payable							5,000			
- Contingencies										
- Share Of Overhead			28,445							
- Trmf To Dev.Fund/Int.Receipt										
TOTAL			4,37,097				23,105			
d) Unsp. Amt/Trf. Ohr Fund	4,17,600						75,787			
TOTAL (c)	4,17,600		4,37,097		4,06,050		98,892			
e) Assets Trmf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a+b-c-e)			-53,395							15,547

As - 2/17

INDIAN STATISTICAL INSTITUTE:  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	INFLUENCE OF BED FORMS PROJECT 204 DST GOI	MSR INDIA RX SUMER INTERSHIP PROJECT 205A MICRO RESH LAB	BIOMEDICAL IMG MACHIN LERNING PROJECT 206 UNIV OF MASTRIH	GENOMY WIDE: AIMS PROJECT 207 D.B.T.G.O.I	EVIDENCE: THEORY BASED UNCERTND PROJECT 207A ANALYSIS
a) Opening Balance of The Funds		4,91,335	1,52,837	168	5,429
b) Additions To The Funds :	4,944				
1. Donation/Grants Othr. Fund					
2. Income From Investment					
3. made on account of Funds					
4. Serv. Charge/SQCOR Receipt					
5. OHAdj/Other Income					
6. Service Tax Recd/Receivable					
TOTAL	4,944	4,91,335	1,52,837	168	5,429
TOTAL (a+b)	4,944	4,91,335	1,52,837	168	5,429
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					1,674
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL					1,674
d) Unsp. Amt/Trf. Othr Fund				168	
TOTAL (c)				168	1,674
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT	4,944	4,91,335	1,52,837		3,755
THE YEAR END (a+b-c-e)	4,944	4,91,335	1,52,837		3,755

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	EVALUATION STUDY BORDER CLUB- PROJECT 208	BOARD OF RESEARCH NUCLEAR SC PROJECT 208A	DESIGNING AND STUDYING MODE PROJECT 209	UNDERSTANDING MOLECULAR BASIS PROJECT 209A	LIBRARY BOOK GRANT 2011-2012 PROJECT 212
FUNDING AGENCY:	PLANNING COMMIS	D.A.E. GOI	ICAR, NAIP.	D.B.T, GOI	NBHM, MUMBAI
a) Opening Balance of The Funds	1,53,918	21,812	67,958	6,65,298	8,35,871
b) Additions To The Funds					
1. Donation/Grants/Othr Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg./SQCOR Receipt					
4. OHADJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	1,53,918	21,812	67,958	6,65,298	8,35,871
c) Utilisation / Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					6,90,985
- Other					
TOTAL					6,90,985
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	24,561				
- Admn. expenses/Prof Items	17,843				
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev Fund Int Receipt					
TOTAL	42,404	21,812			
d) Unsp. Amt. Trnf. Othr Fund					
TOTAL (c)	42,404	21,812	67,958	6,65,298	6,90,985
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	1,11,514				1,44,886

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED ENDOWMENT FUNDS	QUANTIFICATION NEURAL INFORM PROJECT 216 DST. GOI	DEVELOPMENT OF UNIVERSAL KNOW PROJECT 217 DST. B. LORE	ag/INFRA FELLOWSHIP GRAT PROJECT 219 INFRA	INVEST BIOTECH A PAUL PAMU PROJECT 220C DST. GOI	STUDIES OF ENVN ECOLOGICAL ASPT PROJECT 221 C II & PLANT SC.
FUNDING AGENCY					
a) Opening Balance of The Funds	5,72,591	66,694	19,417	71,92,000	4,21,668
b) Additions To The Funds					
1. Donation/Grants Other Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg./SOCOR Receipt					
4. OHAdi/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	5,72,591	66,694	19,417	71,92,000	4,21,668
TOTAL (a+b)	5,72,591	66,694	19,417	71,92,000	4,21,668
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	4,72,721				
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies	8,498				
- Share Of Overhead					
- Trnf To Dev. Fund/Int. Receipt					
TOTAL	4,81,219				4,21,668
d) Unsp. Amu/Trf. Other Fund				71,92,000	
TOTAL (c)	4,81,219			71,92,000	4,21,668
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b+c-e)	91,372	66,694	19,417		

INDIAN STATISTICAL INSTITUTE  
 SCHEME FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEME / FUND	IBMI AWARDS PROJECT 221A IBMI YORK	INT. PASSINGGR SURVEY-ASI PROJECT 222 DEPT OF TOURISM	ADVANCE STAT TECHNICAL PROJECT 222A IBMI KOLKATA	INTERNATIONAL PASSINGGR PROJECT 223A DEPT OF TOURISM
(a) Opening Balance of The Funds	9,79,086	11,66,659	4,312	-2,03,780
(b) Additions To The Funds				61,79,467
1. Donation Grants Other Fund				
2. Income From Investment made on account of Funds				9,26,920
3. Serv. Charge SURCHOR Receipt				
4. Other Income				
5. Service Tax Recd Receivable				71,06,387
TOTAL	9,79,086	11,66,659	4,312	69,02,607
(c) Publication Expenditure				
i) Capital Expenditure				
- Fixed Assets	55,600			
- Books & Journals				
- Other				
TOTAL	55,600			
ii) Current Assets				
- Bills Receivable				
TOTAL				
(iii) Revenue Expenditure				
- Site Prep & allied work				
- Remuneration & Allowances				63,75,232
- Travelling & Conveyance	700			17,00,797
- Admin. expenses Prof Bens	10,910			2,92,433
- Tax Deducted at Source				9,26,920
- Service Tax Paid Payable				6,17,946
- Contingencies				
- Share Of Overhead				
- Trnf To Dev Fund Int Receipt				
TOTAL	11,610			99,13,328
(d) Unsp. Amt Trf. Other Fund				
TOTAL (c)	47,210			99,13,328
(e) Assets Trnf. to Corpus Fund				
NET BALANCE AS AT	9,31,876	11,66,659	4,312	-30,10,721
THE YEAR END (a-b-c-e)				



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - EARMARKED ENDOWMENT FUNDS	POLITICAL CLIEU TELISM GOVT A/C PROJECT 224A INT. GROWTH LOND	IMPACT OF ECO REFORM TRIBAL PROJECT 225 NABARD	DISTRIBUTED KNOW DISCOVERY MONI PROJECT 226 DST.GOI	MGNREGA-CONS ALL INDIA EVAL PROJECT 226A PLANIG COMM	PHYSICAL GROWTH BODY COMP PROJECT 227 N.H.F. NETHERLA
FUNDING AGENCY		867			
a) Opening Balance of The Funds	-3,408		-25,739	1,81,845	3,45,838
b) Additions To The Funds :					
1. Donation Grants/Othr Fund made on account of Funds					
2. Income From Investment					
3. Serv. Chrg./SQCOR Receipt	3,408		25,739		
4. OHAJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,408	867	25,739	1,81,845	3,45,838
TOTAL (a-b)		867		1,81,845	3,45,838
c) Utilisation / Expenditure					
i Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii Current Asset					
- Bills Receivable					
TOTAL					
iii Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv				20,000	
- Tax Deducted at Source				9,251	
- Service Tax Paid/Payable				2,650	
- Contingencies					
- Share Of Overhead					
- Trnf To Dev Fund/Int. Receipt		867			
TOTAL		867			
d) Unsp. Amr/Trf. Othr Fund					
TOTAL (c)		867			
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a-b-c-e)				31,901	3,45,838
				31,901	3,45,838
				1,49,944	

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	UNIVERSAL ONE WAY HASHI FAMILY PROJECT 228 MINIS OF DEFENCE	ATIYAH SINGER INDEX THEOREM G PROJECT 229 DSF-GOI	SENTIMENT ANALS DEV OF PROTYPE PROJECT 229A H CH MAHINDER	INDO MEXICAN PROJECT DR SHANT PROJECT 231F A I AISHRAM	NBHM TRAVEL GRANT PROJECT 231J DAF- MUMBAI
a) Opening Balance of The Funds	15,012	-96,277	1,09,102	35,920	-16,672
b) Additions To The Funds					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds		96,277			16,672
3. Serv. Chrg/SQCOR Receipt					
4. OHAd/Other Income					
5. Service Tax Recd/Receivable					
TOTAL		96,277			16,672
TOTAL (a+b)	15,012	96,277	1,09,102	35,920	
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL					
d) Unsp. Amr./Trf. Othr Fund					
TOTAL (c)					
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT	15,012		1,09,102	35,920	
THE YEAR END (a-b-c-e)					

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	J.C BOSE FELLOW PROF R B BAPAT PROJECT 232 DST, N DELHI	NASI/AWARDED SR SCIENTIST PROJECT 235A NASI	J.C BOSE FELLOW PROF R. BHATIA PROJECT 236 DST, N DELHI	ECONOMICS MACH ANISM TO CREAT PROJECT 237 U. MELBOURN	NIBM TEST SELEC PHD SCHOLARSHIP PROJECT 238 DAE, NIBM
FUNDING AGENCY	6,56,006	4,04,353	8,00,000	7,282	423
a) Opening Balance of The Funds		6,11,040	7,88,917		
b) Additions To The Funds					
1 Donation/Grants/Othr Fund made on account of Funds	9,00,000		8,00,000		
2 Income From Investment					
3 Serv. Charg. SQCOR Receipt					
4 OHADJ/ Other Income					
5 Service Tax Recd/Receivable					
TOTAL	9,00,000	4,04,353	8,00,000	7,282	423
TOTAL (a+b)	15,56,006	10,15,393	15,88,917	7,282	423
c) Utilisation Expenditure					
i Capital Expenditure					
- Fixed Assets			65,000		423
- Books & Journal					
- Other					
TOTAL			65,000		423
ii Current Asset					
- Bills Receivable					
TOTAL					
iii Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	3,91,800				
- Travelling & Conveyance	1,80,262	3,60,000			
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable	60,990	29,350			
- Contingencies	60,000				
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	6,93,052	3,89,350	4,31,937		
d) Unsp. Amu/Trif. Othr Fund					
TOTAL (c)	6,93,052	3,89,350	4,96,937		423
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b+c)	8,62,954	6,26,043	10,91,980	7,282	

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	NBHM TEST FOR SELECT. MA/MSC PROJECT 238A NBHM	INTERVIEW COND MA/MSC AWARD PROJECT 238B NBHM, DAE	NBHM TEST RESH AWARD, PHD SCHO PROJECT 238C NBHM, D A E	NBHM GRANT WORK-II DR.A PA PROJECT 239B I.M.C.E	INSPIRE FELLOW SHIP ASS. OPPR. PROJECT 240A DST, GOI
FUNDING AGENCY	23,005	2,665	50,851	1,76,116	3,77,817
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment					
made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	23,005	2,665	50,851	1,76,116	3,77,817
TOTAL (a+b)	23,005	2,665	50,851	1,76,116	3,77,817
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other	23,005	2,665			
TOTAL	23,005	2,665			
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev. Fund/Int. Receipt					
TOTAL					
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	23,005	2,665			
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)			50,851	1,76,116	3,77,817

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED/ ENDOWMENT FUNDS	ISI & I. S. I. COLLABORATION PROJECT 241 LONDON SCHOL EO	INDO - MAX PLANK CENTRE PROJECT 242 SERB. G O I	STATISTICAL METHODS DECTECT PROJECT 243 SERB. GOI	GRAM JHALAK ASSIGNMENT DEOGH PROJECT 243A GOVT OF JHARKHD	DEV. OF INF. OF AGRICULTURAL & PROJECT 244 D. S. T. WEST BENG
FUNDING AGENCY					
a) Opening Balance of The Funds	52,096	3,30,697	5,72,594	-41,638	-1,984
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt				41,638	1,984
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
. TOTAL				41,638	1,984
TOTAL (a+b)	52,096	3,30,697	5,72,594	41,638	1,984
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	2,677		45,358		
- Admn. expenses/Prof/Benv.		9,800			
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies	263		4,488		
- Share Of Overhead					
- Trmf. To Dev. Fund/Int. Receipt					
TOTAL	2,940	9,800	49,846		
d) Unsp. Amv/Trf. Othr. Fund					
TOTAL (c)	2,940	9,800	49,846		
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT	49,156	3,20,897	5,22,748		
THE YEAR END (a-b-c-e)					

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	GOOGLY RESEARCH AWARD-DR MAN PROJECT 245 GOOGLY INC.MOT	VERTIBRATE MICO FOSILS FROM TAKI PROJECT 245A DST	DEV. OF DEPN. PARSER OF BANGL PROJECT 246 SNLTR	INAE DISTINGUIH TECH.DR.M KUNDU PROJECT 246A INAE	NON-COMMUTATIV GEOMETRY QUAN PROJECT 248 DST. GOI
a) Opening Balance of The Funds	13,281	45,562	2,370	2,70,000	1,25,668
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund				180	
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	13,281	45,562	2,370	2,70,000	1,25,668
TOTAL (a+b)	13,281	45,562	2,370	2,70,000	1,25,668
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
iii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep & allied work				2,70,000	
- Remuneration & Allowances					
- Travelling & Conveyance		2,181	3,500		
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source		1,212			
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL		3,393	3,500	2,70,000	1,25,668
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)		3,393	3,500	2,70,000	1,25,668
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	13,281	42,169	-1,130		

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	CRUSAL EVOLUTIO HIGH GRADE PROJECT 248A DST	CENTRE FOR SOFT COMPUT RESEARCH PROJECT 249 D.S.T., G.O.I.	ESTIMATION OF TECH. MAN POWER PROJECT 250A WBSCTE	J.C. BOSE FELLOW B.B. CHOUDHURY PROJECT 251 DST	IBM FACULTY AWARD-S.S.KOLAY PROJECT 251A IBM, USA, NY, YORK
FUNDING AGENCY	16,787	-1,36,181		1,04,571	1,78,241
a) Opening Balance of The Funds					
b) Additions/To The Funds					
1. Donation/Grants/Othr. Fund					30,062
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt		1,36,181		75,000	
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	16,787	-1,36,181		75,000	30,062
TOTAL (a+b)	16,787			2,38,628	2,08,303
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance			2,025		37,500
- Admn. expenses/Prof/Benv.				13,000	
- Tax Deducted at Source				600	
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trmf. To Dev Fund/Inv. Receipt					
TOTAL	16,787			13,600	37,500
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)	16,787			13,600	37,500
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a, b+c)				2,25,028	1,70,803

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	CENTRE OF EXCELLENCE CRYPT PROJECT 252	DELAY FAULT MODELING & TEST PROJECT 253	LITHOGRAPHY AWARE PHYSICAL PROJECT 253A	A COMPREHENSIVE GENOMICS GENET PROJECT 254A	TECO-ISI ENTER NEURESHIP ENDEV PROJECT 255
FUNDING AGENCY	MIN. OF DEFENCE	INTEL CORP USA	CIL, DST	DBT	TECO CORP
a) Opening Balance of The Funds	45,32,332	57,188	2,56,241	-7,58,163	1,79,900
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds				16,07,000	
3. Serv. Chrg/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable				16,07,000	
TOTAL	45,32,332	57,188	2,56,241	8,48,837	1,79,900
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets	26,489				
- Books & Journal	4,005				
- Other					
TOTAL	30,494				
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	13,73,822		1,05,290	3,70,000	
- Travelling & Conveyance	6,67,959		2,400	16,000	
- Admn. expenses/Prof/Benv	66,801			2,51,247	
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies	2,304				
- Share Of Overhead					
- Trmf To Dev. Fund/Int Receipt					
TOTAL	21,10,886		1,07,690	6,37,247	
d) Unsp. Amv/Trf. Othr Fund					
TOTAL (c)	21,41,380		1,07,690	6,37,247	
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	23,90,952	57,188	1,48,551	2,11,590	1,79,900



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	RESEARCH GRANT FROM IGC PROJECT 255A LONDON SCHOOL	DESIGN AND DEV DATABASE: ANALYT PROJECT 256 DBT, GOI	JURASSIC GONDWA VERTEBRATES IND PROJECT 257A DST	PROCESSING AND ANALYSIS AIRCRT PROJECT 258 US ARMY	INSEAD RESEARCH GRANT(FOREIGN) PROJECT 259 CEDEX, FRANCE
FUNDING AGENCY					
a) Opening Balance of The Funds	3,92,818	1,136	904	21,932	84,973
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund			2,00,000		66,241
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,92,818	1,136	2,00,000	21,932	66,241
TOTAL (a+b)	3,92,818	1,136	2,00,904	21,932	1,51,214
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	2,17,000				
- Travelling & Conveyance	1,24,596				
- Admn. expenses/Prof/Benv.	4,860		900	3,331	66,241
- Tax Deducted at Source				986	
- Service Tax Paid/Payable					
- Contingencies	41,895				
- Share Of Overhead			66,000		
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	3,88,351		66,900	4,317	66,241
d) Unsp. Amv/Trf. Othr Fund					
TOTAL (c)	3,88,351		66,900	4,317	66,241
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	4,467	1,136	1,34,004	17,615	84,973

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: FARMARAD FINANCIAL FUNDS	ANALYSIS OF LINK ATMOSPHERE PROJECT 259A CSIR		ANALYSIS OF CRYPT ALGORITHM PROJECT 260 DST,GOI		AUTOMATIC PREPARATION PROJECT 260A INDIA-TIWAN		R&D CRYPTOGRAPHY PRIMITIVE PROJECT 261 DIT,GOI		INDIAN LANGUAG CORPORAT PH-II PROJECT 262A ILCI	
		25,352		-66,525	4,44,241	4,31,303		-3,83,537	7,59,000	1,96,480
a) Opening Balance of The Funds										
b) Additions To The Funds										
1 Donations/Grants/Other Fund made on account of Funds										
2 Income From Investments										
3 Serv. Chrg. SOCCOR Receipt			66,525				3,83,537			
4 OMA/Other Income										
5 Service Tax Recd/Receivable				66,525						7,59,000
TOTAL		25,352				8,88,986				9,55,480
c) Utilisation Expenditure										
i) Capital Expenditure										
- Fixed Assets									1,511	1,511
- Books & Journal										
- Other										
TOTAL										
ii) Current Asset										
- Bills Receivable										
TOTAL										
iii) Revenue Expenditure										
- Site Prep & allied work									6,00,000	
- Remuneration & Allowances					4,00,777				26,957	
- Travelling & Conveyance					79,822				1,46,513	
- Admn. expenses Prof/Ben					36,832					
- Tax Deducted at Source										
- Service Tax Paid Payable										
- Contingencies										
- Share Of Overhead					21,342				1,13,850	
- Trnf To Dev Fund/Int Receipt										8,87,320
TOTAL						5,38,773				8,88,831
d) Unsp. Amt./Trf. Othr Fund										
TOTAL (c)										
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a+b-c-e)		25,352				3,50,213				66,649

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	BUSINESS ANALYTICS PROJECT 263 T C S	NANOPESTICIDES & NANOFUNGICIDES PROJECT 263A DBT,GOI	J C BOSE FELLOWS ARUP BOSE PROJECT 264 D.S.T, G O I	ERASMUS MUNDUS PROJECT 264A MUNDUS, ITALY	COMVERTING MESH TEXT INTO ENGLISH PROJECT 265 TECH MAHINDER
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
<b>TOTAL</b>	<b>2,44,713</b>	<b>24,04,827</b>	<b>10,71,014</b>	<b>93,893</b>	<b>1,98,912</b>
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal			34,203		
- Other					
<b>TOTAL</b>			<b>34,203</b>		
ii. Current Asset					
- Bills Receivable					
<b>TOTAL</b>					
iii. Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trmf.To Dev.Fund/Int.Receipt					
<b>TOTAL</b>	<b>4,408</b>		<b>4,59,469</b>	<b>6,842</b>	<b>2,785</b>
d) Unsp. Amv/Trf. Othr Fund					
<b>TOTAL (c)</b>	<b>4,408</b>		<b>4,93,672</b>	<b>6,842</b>	<b>2,785</b>
e) Assets Trmf. to Corpus Fund					
<b>NET BALANCE AS AT THE YEAR END (a-b-c-e)</b>	<b>2,40,305</b>	<b>24,04,827</b>	<b>5,77,342</b>	<b>87,051</b>	<b>1,96,127</b>

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	INTT SYMPOSIUM RECENT TRENDS PROJECT 265A ISSCS-07-GSU	ROTA VIRUS DETECTION PROJECT 266A DBT	STAT METHODS FOR MAPN MULTIV NIIUS A	FICO RISHI & DEV ELOPMNT -B KROY PROJECT 268 FICO	DEV OF ROBUST DOCUMENT II PHS PROJECT 268A DII,GOI
FUNDING AGENCY	12,500	12,53,828	49,07,666	62,925	10,19,241
a) Opening Balance of The Funds					
b) Additions To The Funds					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	12,500	12,53,828	49,07,666	62,925	10,19,241
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev.Fund/Int Receipt					
TOTAL					
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	12,53,828	12,53,828	49,07,666	62,925	10,19,241
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	12,500		49,07,666	62,925	-300

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED/ ENDOWMENT FUNDS	EVALUATION STUDY BORDER CLUB PROJECT 269	MAHATMA GANDHI NAITO RURAL EMP PROJECT 269A	ITC LTD. BHDRCM HYDERABAD PROJECT 269H	TRAINING PROG MICRO & MACRO PROJECT 272	RANDOM GEOMET GRAPHS (R ROY) PROJECT 274
FUNDING AGENCY	PLANNING COMMIS	PLANNING COMM	ITC LTD	ECO TH. N DELHI	D S T N DELHI
a) Opening Balance of The Funds	3,04,532	3,82,401	-4,172		9,258
b) Additions To The Funds :				4,08,193	
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SOCOR Receipt			4,172		
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,04,532	3,82,401	4,172	4,08,193	9,258
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	93,989	10,000		1,12,987	
- Admn. expenses/Prof/Bevny.	25,593				
- Tax Deducted at Source					
- Service Tax Paid/Payable		35,302		54,795	
- Contingencies				75,036	
- Share Of Overhead				1,65,375	
- Trnf To Dev. Fund/Int Receipt					
TOTAL	1,19,582	45,302		4,08,193	
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	1,19,582	45,302		4,08,193	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	1,84,950	3,37,099			9,258

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - EARMARKED ENDOWMENT FUNDS	AIRPORT AUTHORITY OF INDIA DR. A. B. AIRPORT (274D)	WORKSHOP ON AIRSPACE SAFETY PROJECT 274E AIRPORT AUTHO	INT GROWTHCENT LONDON SCHOOL PROJECT 275 ECONOMIC, LONDO	EXPLORATORY RESEARCH IMPACT PROJECT 275A FOREST RIGHT, DI	CMMC ITALLY DR. F. SOMANTHAN PROJECT 275D CMMC
FUNDING AGENCY	14,645	2,915	1,09,52,719	28,421	3,14,208
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation Grants Othr. Fund			2,37,751		
2. Income From Investment made on account of Funds			70,15,784		
3. Serv. Chrg: SOCOR Receipt					
4. OHAdj: Other Income					
5. Service Tax Recd/Receivable			72,53,535		
TOTAL	14,645	2,915	1,82,06,254	28,421	3,14,208
TOTAL (a+b)					
c) Utilisation - Expenditure					
i. Capital Expenditure					
- Fixed Assets			6,919		
- Books & Journal					
- Other					
TOTAL			6,919		
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances			6,33,768		
- Travelling & Conveyance			2,88,508		
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source			10,34,948		
- Service Tax Paid/Payable			19,40,343		
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL			38,97,567		
d) Unsp. Amt./Trf. Othr Fund					
TOTAL (c)			39,04,486		
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT	14,645	2,915	1,43,01,768	28,421	3,14,208
THE YEAR END (a+b-c-e)					

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - earmarked Endowment Funds	INSPIRE FACULTY AWARD - DR A CH PROJECT 275E	WOMEN EXCELLEN DR T JAIN PROJECT 276 SERB	CENTRAL SECTOR SCHOLARSHIP - PROJECT 277 SC STUDENT DEL.	NBHM BOOK GRANT LIBRARY (DEL) PROJECT 278 DEPT ATOMIC EGY	LANGUAGE & BRAN ORG. NARRATIVE PROJECT 280 PH.D ST. GO
FUNDING AGENCY					
a) Opening Balance of The Funds	53,196	3,64,148	7,725	25,00,000	5,41,576
b) Additions To The Funds :					
1. Donation Grants/Othr Fund made on account of Funds		2,50,000			
2. Income From Investment					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	53,196	3,64,148	7,725	25,00,000	5,41,576
TOTAL (a+b)	53,196	6,14,148	7,725	25,00,000	5,41,576
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal		2,19,510		6,28,913	
- Other		22,239			
TOTAL		2,41,749		6,28,913	
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv		53,958			
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL		1,84,670			
d) Unsp. Amt./Trnf. Othr Fund					
TOTAL (c)		4,26,419		6,28,913	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (b' - b - c - e)	53,196	1,87,729	7,725	18,71,087	5,41,576

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: FARMARKED ENDOWMENT FUNDS	INSPIRE FACULTY AWARDS N GUPTA PROJECT 280A		INSPIRE FACULTY AWARDS S SEN PROJECT 281		PETROZAVODSK IMIL CONF PROJECT 281C RUSSIS A S KAJ		IBM UNIVERSITY RELAT DR BANJ PROJECT 282A IBM		DEVELOPMENT VALIDATION COGN PROJECT 283 DST	
	DST.GOI	14,40,028	DST.GOI	5,89,456		20,011		43,216		-1,12,910
a) Opening Balance of The Funds										
b) Additions To The Funds										
1. Donation/Grants/Othr. Fund made on account of Funds										
2. Income From Investment										
3. Serv. Charg/SQCOR Receipt										
4. OHAdj/Other Income										
5. Service Tax Recd/Receivable										
TOTAL										
TOTAL (a+b)		14,40,028		11,53,672		20,011		43,216		4,00,000
c) Utilisation : Expenditure										
i. Capital Expenditure										
- Fixed Assets	26,715		1,35,000							
- Books & Journal	10,612		39,921							
- Other										
TOTAL		37,327		1,74,921						
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep & allied work										
- Remuneration & Allowances			4,40,905						1,77,833	
- Travelling & Conveyance									54,685	
- Admn. expenses, Prof Bem			80,461					41,355	11,638	
- Tax Deducted at Source										
- Service Tax Paid Payable										
- Contingencies										
- Share Of Overhead			35,000							
- Trmf To Dev. Fund Int Receipt										
TOTAL		34,538		5,56,366				42,345		2,44,156
d) Unsp. Amt Trf. Othr Fund										
TOTAL (c)		71,865		17,43,128				42,345		2,44,156
e) Assets Trmf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a - b + c)		13,68,163				20,011		871		42,934



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	INSPIRE FACULTY AWARD G CHATTER PROJECT 283A DST GOI	MICROSOFT RESEARCH LAB PROJECT 284 MICROSOFT R LAB	NASI SR. SCIENTS P. JUBILEE PROJECT 285 NASI, ALLAHABAD	INSPIRE FACULTY AWARD TO R HAZR PROJECT 285A DST	DEV OF SUCROSE SENSOR PHENOTY PROJECT 286A NIBSEARA
FUNDING AGENCY	3,15,755	3,00,982	-60,295	5,01,680	9,45,448
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chang./SOCOR Receipt			60,295		
4. OHADJ/Other Income					
5. Service Tax Recd./Receivable			60,295		
TOTAL	3,15,755	3,00,982	-60,295	5,01,680	9,45,448
TOTAL (a+b)	3,15,755	3,00,982		5,01,680	9,45,448
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets	1,67,500				
- Books & Journal		29,969			
- Other					
TOTAL	1,67,500	29,969			
ii. Current Asset					
- Bills Receivable	1,67,500				
TOTAL	1,67,500				
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	30,000				
- Travelling & Conveyance	94,394				
- Admn. expenses/Prof/Benv	39,148				
- Tax Deducted at Source		2,31,807			
- Service Tax Paid/Payable		216			
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	1,63,542	2,32,023			
d) Unsp. Amr/Trf. Othr Fund					
TOTAL (c)	3,31,042	2,61,992			
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	-15,287	38,990		5,01,680	9,45,448

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED ENDOWMENT FUNDS	METHOD STUDY COMPILATION PROJECT 287A MIN. COMMIRC. IND	LANGUAGE & BRAIN ORG. INFORMATIVE PROJECT 288 DST. GOENIMHAS		UNDERSTANDING ROLE OF SYM. IN PROJECT 289 D S T. G O I	FELLOWSHIP GRANT INDO-US PROJECT 290 INDO-US. SC. TECH	CROSS LINGUAL. INF. ACCESS CLIA PROJECT 291 DIT, CLIA	
		6,61,744	2,47,200				1,53,260
a) Opening Balance of The Funds		6,61,744	2,47,200	1,53,260	-1,966	11,29,382	-1,01,018
b) Additions To The Funds :							
1. Donation/Grants/Othr Fund made on account of Funds	8,50,457						
3. Serv. Charg/SOCOR Receipt					1,966		
4. OHADJ/Other Income	1,99,464				1,966		
5. Service Tax Recd/Receivable							
TOTAL	10,49,921		2,47,200	1,53,260	1,966		11,29,382
TOTAL (a+b)	17,11,665		2,47,200	1,53,260			10,28,364
c) Utilisation / Expenditure							
i. Capital Expenditure							
- Fixed Assets							
- Books & Journal							
- Other							
TOTAL							
ii. Current Asset							
- Bills Receivable							
TOTAL							
iii. Revenue Expenditure							
- Site Prep. & allied work	0						
- Remuneration & Allowances	3,07,567					3,04,839	
- Travelling & Conveyance	2,52,687					43,411	
- Admn. expenses/Prof/Benv	22,860					32,048	
- Tax Deducted at Source	2,01,235					60,145	
- Service Tax Paid/Payable	10,931					6,15,897	
- Contingencies	2,98,776						
- Share Of Overhead							
- Trnf. To Dev Fund. Int Receipt							
TOTAL	10,94,056						10,56,340
d) Unsp Amt Trf. Othr Fund							
TOTAL (c)	10,94,056						10,56,340
e) Assets Trnf. to Corpus Fund							
NET BALANCE AS AT			2,47,200	1,53,260			
THE YEAR END (a-b-c-c)	6,17,609		2,47,200	1,53,260			-27,976

INDIAN STATISTICAL INSTITUTE.  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	SPM FELLOWSHIP MR MUTHUKUMAR PROJECT 292C ISI CHENNAI	INSPIRE FACULTY DR G.P. BALAKUMA PROJECT 293C R ISI CHENNAI	ECO EPIDEMIOLOGICAL MODELING PROJECT 294 NBHM- DAE	DETERMINATION FUNCTION RESPON PROJECT 294A DST	INSPIRE FACULTY MATHIEW C.FRANCI PROJECT 294C DST,GOI
FUNDING AGENCY					
a) Opening Balance of The Funds		1,13,576	-918		12,40,148
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	8,01,000	12,92,132		38	
2. Income From Investment made on account of Funds			918		
3. Ser. Charge/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	8,01,000	12,92,132	918		12,40,148
TOTAL (a+b)	2,78,972	14,05,708		38	
c) Utilisation : Expenditure					
i. Capital Expenditure					
- Fixed Assets		49,350			
- Books & Journal	13,531	31,373			
- Other					
TOTAL	13,531	80,723			
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	4,56,000	9,91,680			85,000
- Travelling & Conveyance	10,849	24,262			21,046
- Admn. expenses/Prof/Benv	10,620	10,790			4,000
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					1,600
- Share Of Overhead					
- Trnf To Dev Fund/Int.Receipt				38	
TOTAL	4,77,469	10,26,732			1,11,646
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	4,91,000	11,07,455		38	1,11,646
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT					
11B YEAR END (a-b+c-e)	-2,12,028	2,98,253			11,28,402

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	DIGITAL IMAGE PROJECT 295	SPL HONORARIUM SSB-AWARDS PROJECT 297	PARTICLE FLUID INTERACTION TUR PROJECT 298	RFDR PROJECT HARMONIC QUASI PROJECT 298C	CONSTRUC. ANALY REGIONAL VARIAT PROJECT 299
	D S T GOI	CSIR, GOI	C S I R, GOI	DSI	MIN. OF STATISTIC
FUNDING AGENCY					
a) Opening Balance of The Funds	8,86,192		1,81,607	6,90,800	-1,13,210
b) Additions To The Funds		16,65,000			1,13,210
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	8,86,192	16,65,000	1,81,607	6,90,800	1,13,210
TOTAL (a+b)	8,86,192	16,65,000	1,81,607	6,90,800	
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure		16,65,000			
- Site Prep. & allied work	0				
- Remuneration & Allowances	3,38,176			5,64,643	
- Travelling & Conveyance	46,923			14,000	
- Admn. expenses/Prof/Benv.	1,19,932				
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies	43,970				
- Share Of Overhead					
- Trmf. To Dev. Fund/Int. Receipt					
TOTAL	5,49,001	16,65,000	1,81,607	5,78,643	
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	5,49,001	16,65,000	1,81,607	5,78,643	
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	3,37,191			1,12,157	

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED/ ENDOWMENT FUNDS	FISCAL BUSY EXN EXPRESSION QUA PROJECT 299A QUALCOM USA	J. C. BOSE FELLOW DR S. K. PAL PROJECT 340 DST - GOI	MULTILINGUAL PROMOTION IFCPR PROJECT 342 IFCPR	ROUGH FUZY INSA YOUNG SCIE PROJECT 342A INSA	PREDICT THE METEOROLOGICAL PROJECT 343 DEPT. OF SPACE
FUNDING AGENCY					
a) Opening Balance of The Funds	25,542	6,84,837	-46,848	10,371	92,867
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	6,00,000				
3. Serv. Charg/SOCOR Receipt	1,648	6,01,648			
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	25,542	12,86,485	-46,848	10,371	92,867
TOTAL (a+b)	25,542	12,86,485	-46,848	10,371	92,867
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets		1,13,990			
- Books & Journal					
- Other					
TOTAL		1,13,990			
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	6,000	6,08,516			
- Travelling & Conveyance	24,635	1,35,503			
- Admn. expenses/Prof/Benv.	155	75,139		10,320	54,567
- Tax Deducted at Source					
- Service Tax Paid/Payable		60,000			
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt	30,790	8,79,158		10,320	54,567
TOTAL	30,790	8,79,158		10,320	54,567
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)	30,790	9,93,148		10,320	54,567
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a + b - c - e)	-5,248	2,93,337	-46,848	251	38,300

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEDULE 3: earmarked FUNDAMENTAL FUNDS	ANALYSIS REGION & SYNTHESIS OF PROJECT 343A	INTELLECTUAL VENTURE INVESTMENT PROJECT 344	ICS RESEARCH PROJECT JAMONDI PROJECT 344A		EVALUATION OF DIFFERENT RCTI PROJECT 345	ISERBI RESEARCH COLLABORATION PROJECT 346A
			PROJECT 344A	PROJECT 344A		
a) Opening Balance of The Funds b) Additions To The Funds 1. Donations/Grants (Other Fund) 2. Income From Investment made on account of Funds 3. Serv. Charge SJK (OR) Receipts 4. (WIA) & Other Income 5. Service Tax Recd/Receivable TOTAL	PROJECT 343A BSN (GD) 1,42,671	PROJECT 344 GATEWAY, SINGAP 30,75,328	ICS 3,84,000	ICS 3,84,000	RYEL, JHARKHAND 17,064	RBUMUMBAI 3,92,974
TOTAL (a+b)	1,42,671	30,75,328	3,84,000	3,84,000	17,064	3,92,974
c) Institutions Expenditure i) Capital Expenditure - Fixed Assets - Books & Journal - Other TOTAL ii) Current Asset - Bills Receivable TOTAL iii) Revenue Expenditure - Site Prep & allied work - Remuneration & Allowances - Travelling & Conveyance - Admin. expenses/Prof/Bem - Tax Deducted at Source - Service Tax Paid/Payable - Contingencies - Share Of Overhead - Trmf. To Dev. Fund/Int. Receipt TOTAL d) Unsp. Amu/Trf. Other Fund TOTAL (c)			ICS 71,800	ICS 3,66,000 6,450	17,000	1,67,400 44,202 39,000 1,637 8,117
TOTAL (c)	1,42,671	30,75,328	71,800	3,72,450	17,000	2,60,356
e) Assets Trmf. to Corpus Fund NET BALANCE AS AT THE YEAR END (a+b-c-e)						
	11,487	29,75,328	85,400		64	1,32,618

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED ENDOWMENT FUNDS	STUDY IN THE PD QUANTUM INFOR PROJECT 347 DST.GOI	SETTING WORKSTA FOR RESEARCH ON PROJECT 347A RB1	CENTRE FOR COMA. ADVANTAGE PROJECT 348 WARWICK,CAGE	SURVEY ON HAND LOOM WORK PROJECT 348A DIRE. OF TEXTIL.	PILOF STUDY OF GRAM PANCHYAT PROJECT 349 STATE FINANCE
FUNDING AGENCY	34,834	20,569	3,69,806	1,27,207	2,525
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	34,834	20,569	3,69,806	1,27,207	2,525
TOTAL (a+b)	34,834	20,569	3,69,806	1,27,207	2,525
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances			70,620		
- Travelling & Conveyance			53,726		
- Admn. expenses/Prof/Benv			19,187		
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev.Fund/Int.Receipt		20,569			
TOTAL		20,569	1,43,533	75	2,525
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)		20,569	1,43,533	75	2,525
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	34,834		2,26,273	1,27,132	

INDIAN STATISTICAL INSTITUTE:  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - FARMARKED ENDOWMENT FUNDS	PERFORMANCE EVALUATION OF URBAN PROJECT 349A	CSIR FELLOWSHIP SRF-JRF PROJECT 5301 CSIR		POST DOCTORAL FELLO-R.P.SINGH PROJECT 5302 CSIR		NBHM FELLOWSHIP S CHATTERJEE PROJECT 5304 NBHM		NBHM SCHOLARSHIP ANIMESH LAHARI PROJECT 5305 NBHM
		31,724	71,99,140	10,62,899	30,222	40,152	20,000	
FUNDING AGENCY								
a) Opening Balance of The Funds	31,724			10,62,899	30,222		40,152	20,000
b) Additions To The Funds :								
1. Donations/Grants/Othr. Fund								
2. Income From Investment made on account of Funds		71,99,140						
3. Serv. Charg/SQCOR Receipt								
4. OHADJ/Other Income								
5. Service Tax Recd/Receivable								
TOTAL		71,99,140		10,62,899	30,222		40,152	20,000
TOTAL (a+b)	31,724	71,99,140		10,62,899	30,222		40,152	20,000
c) Utilisation / Expenditure								
i. Capital Expenditure								
- Fixed Assets								
- Books & Journal								
- Other								
TOTAL								
ii. Current Asset								
- Bills Receivable								
TOTAL								
iii Revenue Expenditure								
- Site Prep. & allied work								
- Remuneration & Allowances		51,85,862						
- Travelling & Conveyance								
- Admn. expenses/Prof/Benv.								
- Tax Deducted at Source								
- Service Tax Paid/Payable								
- Contingencies								
- Share Of Overhead		1,96,672						
- Trnf. To Dev.Fund/Int. Receipt								
TOTAL		53,82,534						
d) Unsp. Am/Trf. Othr Fund	31,724							
TOTAL (c)	31,724	53,82,534						
e) Assets Trnf. to Corpus Fund								
NET BALANCE AS AT THE YEAR END (a+b-c-e)		28,79,505		30,222			40,152	20,000



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	NBHM FELLOWSHIP MAHABIR P.D.JHAN PROJECT 5307 NBHM	ICMR FELLOWSHIP -SUJATA KAR PROJECT 5308 ICMR	U G C GRANT ANKITA CHAKRABY PROJECT 5309 U G C	NBHM GRANT MS R. GAYEN CHU PROJECT 5311 NBHM	NBHM FELLOWSHIP DR.BICKRAM BANR PROJECT 5312 NBHM
FUNDING AGENCY					
a) Opening Balance of The Funds	7,966	25,625	1,89,507	50,661	1,61,942
b) Additions To The Funds :					
1. Donation/Grants/Othr Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg./SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd./Receivable					
TOTAL	7,966	25,625	1,89,507	50,661	1,61,942
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev.Fund/Int.Receipt					
TOTAL	7,966				
d) Unsp. Amt/Trf. Othr Fund	7,966				
TOTAL (c)	7,966				
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT		25,625	1,89,507	50,661	
THE YEAR ENDING ON 31					

INDIAN STATISTICAL INSTITUTE  
MONTHLY FINANCIAL BALANCE SHEET AS AT 31 MAR. 6, 2017 (Amount in Rupees)

ACCOUNTS	NIBM FELLOWSHIP PROJECTS	NIBM FELLOWSHIP PROJECTS	NATIONAL TALENT SEARCH AWARD PROJECT 5317 NIBM	NIBM POST DOX FELLOW-SHARAK PROJECT 5318 NIBM	NIBM MA MA SCHOLARSHIP PROJECT 5320 NIBM DAI	MIR ROHINI TRAVI GRANT AWARD PROJECT 5321 MIR LABINDRA I.
FINANCIALS	19,000	19,000	3,22,760	-1,49,500	1,32,660	10,17,185
a) Opening Balance of The Fund						
b) Additions To The Fund						
1 Donations/Gifts/Grants						
2 Income From Investment made on account of Funds						
3 Serv. Charge/Other Receipts						
4 Other Income						
5 Service Tax Recd/Receivable						
TOTAL		39,000	3,22,760	-1,49,500	1,32,660	10,17,185
TOTAL (a+b)		39,000	3,22,760	-1,49,500	1,32,660	10,17,185
c) Substantiated Expenditure						
1 Capital Expenditure						
2 Fixed Assets						
3 Books & Journal						
4 Other						
TOTAL						
10 Current Asset						
11 Bills Receivable						
TOTAL						
100 Revenue Expenditure						
- Site Prep & allied work						
- Remuneration & Allowances						
- Travelling & Conveyance						
- Admin. expenses/Prof/Benv						
- Tax Deducted at Source						
- Service Tax Paid/Payable						
- Contingencies						
- Share Of Overhead						
- Trnf To Dev. Fund/Int. Receipt						
TOTAL						
d) Unsp. Amu/Trif. Othr Fund						
TOTAL (c)						
e) Assets Trnf. to Corpus Fund						
NET BALANCE AS AT		39,000	3,22,760	-1,49,500	1,32,660	10,17,185
THE YEAR END (a+b-c-e)		39,000	3,22,760	-1,49,500	1,32,660	10,17,185

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	NBHM POST DOCT FELO RABEY BASU PROJECT 5322 NBHM	NBHM SCHLARSHIP SAIBAL GANGULY PROJECT 5323 NBHM	NBHM POST DOC. ANUPAMA PANIGRA PROJECT 5324 HI, NBHM	NBHM POST DOC. S.S. RAY PROJECT 5325 NBHM	MSR INDIA RX LA MICROSOFT RES PROJECT 5326 M R LAB P.LTD
FUNDING AGENCY	1,06,110	29,384	15,000	-67,332	1,00,000
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment					
made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHArd/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	1,06,110	29,384	15,000	-67,332	1,00,000
TOTAL (a+b)	1,06,110	29,384	15,000	-67,332	1,00,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf.To Dev. Fund/Int. Receipt					1,00,000
TOTAL	1,06,110	29,384			1,00,000
d) Unsp. Am/Trf. Othr Fund	1,06,110	29,384			
TOTAL (c)	1,06,110	29,384			
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT			15,000		
THE YEAR END (a + b - c)			15,000	-67,332	

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEDULE 3 FARMER-LED ENTERPRISE FUNDS	NBHM SCHOLAR S. JOARDIR PROJECT 5328 NBHM	ICMR FELLOWSHIP GRANT B M DAS PROJECT 5329 ICMR	3RD INDO-BRAZIL MATHA DASGUPTA PROJECT 5330 NBHM	NBHM TRAVEL ARUP CHATTO PROJECT 5333 DAE, NBHM	NBHM TRAVEL C JAYANARAYANAN PROJECT 5335 NBHM DAE
ii) Opening Balance of The Funds					
bi) Additions To The Funds	57,400	-26,000	3,202		16,073
1. Donation (Grants) Other Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charge, SOX OR Receipt					
4. (BHAJ) Other Income					
5. Service Tax Recd Receivable					
TOTAL	57,400	-26,000	3,202		16,073
TOTAL (a-b)	57,400	-26,000	3,202		
iii) Utilisation / Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances					
- Travelling & Convoiance					
- Admin. expenses Prof/Bem.					
- Tax Deducted at Source					
- Service Tax Paid Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev Fund/Int Receipt					
TOTAL					
d) Unsp Amt. Trf. Othr Fund	57,400		3,202		
TOTAL (c)	57,400		3,202		
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b-c-e)		-26,000			16,073

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INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED: ENDOWMENT FUNDS	POST DOC FELLOW SHARAN GOPAL PROJECT 537 NBHM,DAE	INSPIRE FELLOW SUSHIL GARAI PROJECT 530 DST, BLORE	WORKSHOP ON MORPHO GEOSC PROJECT 541 SERB, DST	NBHM GRANT AMIT TRIPATHI PROJECT 532 NBHM BLORE	TRAVEL GRANT LINGARAJ SAHU PROJECT 5343 NBHM BLORE
FUNDING AGENCY					
a) Opening Balance of The Funds	3,000	52,252	-2,206	1,90,352	12,000
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SOCOR Receipt					
4. OH/Adj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,000	52,252	-2,206	1,90,352	12,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL					
d) Unsp. Amt./Trf. Othr Fund					
TOTAL (c)				1,90,352	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	3,000	52,252	-2,206	1,90,352	12,000

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED ENDOWMENT FUNDS	POST DOC FELLOW MADHUSHREE PROJECT 5344 NBHM	NBHM FELLOWSHIP NIRUPAMA MALLIK PROJECT 5347 NBHM, BLORE	CSIR RESEARCH FELLOW SH D C M PROJECT 5352 CSIR N DEL	KARNATAKA RECHH. MATH OLYMPIAD PROJECT 5353 KRMO, BLORE	CSIR RESH FELLOW MS TANVIJAIN PROJECT 5357 CSIR, DEL.
FUNDING AGENCY	11,754	33	1,20,483	1,93,641	1,20,289
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donations/Grants/Othr. Fund				50,000	
2. Income From Investment made on account of Funds				5,09,700	
3. Serv. Chrg./SOCOR Receipt					
4. OHADJ/Other Income					
5. Service Tax Recd/Receivable				5,59,700	
TOTAL	11,754	33	1,20,483	7,53,341	1,20,289
TOTAL (a+b)	11,754	33	1,20,483		
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets				39,824	
- Books & Journal					
- Other					
TOTAL				39,824	
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances				92,200	
- Travelling & Conveyance				16,331	
- Admn. expenses/Prof/Ben.					
- Tax Deducted at Source					
- Service Tax Paid/Payable				2,16,963	
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	11,754	33		3,25,494	
d) Unsp. Amt./Trf. Othr Fund	11,754	33			
TOTAL (c)	11,754	33		3,65,318	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b+c-e)			1,20,483	3,88,023	1,20,289

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- FARMARKED ENDOWMENT FUNDS	MSR INDIA CATAL YST. DR.B ROY PROJECT 5361 MSR INDIA LTD	59TH BOARD MEETING NBHM PROJECT 5363 NBHM	WORKSHOP ON AIS ALGEBERIC PROF. PROJECT 5374 NBHM,DAE	POST DOC FELLO JITENDER SINGH PROJECT 5376 NBHM, DAE	POST DOCTORAL FELLOW S PARUI PROJECT 5378 NBHM,DAE	FUNDING AGENCY
a) Opening Balance of The Funds						
b) Additions To The Funds						
1. Donation/Grants/Othr Fund						
2. Income From Investment made on account of Funds						
3. Serv Chrg/SQCOR Receipt						
4. OHAdj/Other Income						
5. Service Tax Recd/Receivable						
TOTAL	5,00,000	2,33,625	1,41,782	95,000	1,60,919	
TOTAL (a+b)	5,00,000	2,33,625	1,41,782	95,000	1,60,919	
c) Utilisation / Expenditure						
i. Capital Expenditure						
- Fixed Assets						
- Books & Journal						
- Other						
TOTAL						
ii. Current Asset						
- Bills Receivable						
TOTAL						
iii. Revenue Expenditure						
- Site Prep. & allied work						
- Remuneration & Allowances						
- Travelling & Conveyance						
- Admn. expenses/Prof/Benv.						
- Tax Deducted at Source						
- Service Tax Paid/Payable						
- Contingencies						
- Share Of Overhead						
- Trmf. To Dev. Fund/Int. Receipt						
TOTAL		2,33,625				
d) Unsp. Amt/Trf. Othr Fund						
TOTAL (c)		2,33,625				
e) Assets Trmf. to Corpus Fund						
NET BALANCE AS AT	5,00,000		1,41,782	95,000	1,60,919	
THE YEAR END (a+b-c)						

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED ENDOWMENT FUNDS	NBHM FELLOW G. SANKAR RAJU PROJECT 5379 NBHM,DAE	NBHM TRAVEL GRANT S.K. PRAJA PROJECT 5380 NBHM	INSPIRE FACULTY AWARD P. CHATTOP PROJECT 5381 DST	NBHM TRAVEL GNT QUAISER JAHAN PROJECT 5382 NBHM, DAE	ICSSR FELLOWSHIP PROF. V. K. RAMC PROJECT 5384 ICSSR
FUNDING AGENCY	2,012	2,55,748	4,50,627	73	-4,17,295
a) Opening Balance of The Funds					
b) Additions To The Funds:					
1. Donation/Grants/Othr. Fund			12,69,998		4,51,484
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL			12,69,998		4,51,484
TOTAL (a+b)	2,012	2,55,748	17,20,625	73	34,189
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances			8,59,124		
- Travelling & Conveyance					
- Admn. expenses Prof/Bem					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev Fund Int Receipt			4,47,556		
TOTAL			35,000		
d) Unsp. Amt.Trf. Othr Fund					
TOTAL (c)			13,41,680	73	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	2,012	2,55,748	3,78,945		34,189



INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED- ENDOWMENT FUNDS	NBHM SCHOLAR SRI VIJAY KUMAR PROJECT 5385 NBHM	NBHM POST DOCTORAL FELLOW PROJECT 5386 A. CHATTOPADHYA	INSPIRE FACULTY AWARD DR AJAY PROJECT 5387 SINGH THAKUR	NBHM POST DOC SANJAY PARUI PROJECT 5389 NBHM, DAE	L&T IGP MUMBAI PROJECT 7804
FUNDING AGENCY					
a) Opening Balance of The Funds	1,25,682	55,199	4,58,411	8,000	21,757
b) Additions To The Funds :					
1. Donation/Grants Othr. Fund					
2. Income From Investment made on account of Funds	3,67,946		11,03,098		
3. Serv. Chrg/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,67,946		11,03,098		
TOTAL (a+b)	4,93,628	55,199	15,61,509	8,000	21,757
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	3,36,000		8,61,509		
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead	13,628		34,944		
- Trnf.To Dev.Fund/Int.Receipt			35,000		
TOTAL	3,49,628	55,199	9,31,453	8,000	
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	3,49,628	55,199	9,31,453	8,000	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT	1,44,000		6,30,056		21,757

Sl. No.	Particulars	Madhya Pradesh	Madhya Pradesh & Chhattisgarh	Madhya Pradesh & Chhattisgarh & Jharkhand	Madhya Pradesh & Chhattisgarh & Jharkhand & Karnataka
1	Opening Balance of The Funds				
2	Subsidies To The Funds				
3	Donation Grants (Other Fund)				
4	Income From Investment made on account of Funds				
5	Net Charge Surplus Receipt				
6	Grants/Other Income				
7	Service Tax Refd Receivable				
	TOTAL	3,365	2,504	10,902	2,14,069
8	Capital Expenditure				
9	Fixed Assets				
10	Books & Journal				
11	Other				
12	TOTAL				
13	Current Asset				
14	Bills Receivable				
15	TOTAL				
16	Revenue Expenditure				
17	Site Prep & allied work				
18	Remuneration & Allowances				
19	Travelling & Conveyance				
20	Admin expenses Prof Items				
21	Tax Deducted at Source				
22	Service Tax Paid Payable				
23	Contingencies				
24	Share Of Overhead				
25	Trf To Dev Fund Int Receipt				
26	TOTAL				
27	d) Unsp Amt/Trf Othr Fund				
28	TOTAL (c)				
29	e) Assets Trnf to Corpus Fund				
30	NET BALANCE AS AT		2,504	10,902	2,14,069
31	THE YEAR END (a+b-c)				

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	TATA STEEL LTD I PHASE PROJECT 7979	FLOOD ADVANCE PROJECT 802	CONVEYANCE ADVANCE PROJECT 804	FCI PROJECT-IND -SOFTWARE PH.II PROJECT 9443 DELHI	IMAGE PROCESS TECH. PARTICEL PROJECT C266 DIT
FUNDING AGENCY	TATA STEEL IGP				
a) Opening Balance of The Funds	1,46,442	7,20,000	47,50,000	24,698	-19,434
b) Additions To The Funds :					
1. Donation/Grants/Othr Fund made on account of Funds					
2. Income From Investment					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					19,434
5. Service Tax Recd/Receivable					
TOTAL	1,46,442	7,20,000	47,50,000	24,698	19,434
TOTAL (a+b)	1,46,442	7,20,000	47,50,000	24,698	19,434
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	46,546				
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev.Fund/Int. Receipt					
TOTAL	46,546				
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	46,546				
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT	99,896	7,20,000	47,50,000		
INDIAN STATISTICAL INSTITUTE					

INDIAN STATISTICAL INSTITUTE II  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEDULE 3. PARAVARIED FUNDAMENTAL FUNDS	ESTIMATE OF QUANT INVESTAGE NCI PROJECT 1-001 (IC/N/INIA)	STAT MODUL PREDICT ANOMALY PROJECT 1-002 AIRCRAFT/GC/INDI	RECOGNITION OF ANTI/UCLEAR PROJECT 1-003 DST		NBHM 64TH BOARD MEETING PROJECT 1-004 NBHM	MICROSTRUCTURE NANOPARTICLES PROJECT 1-005 SIMLA C R P	
			5,89,248	2,23,176		1,87,320	1,58,399
a) Opening Balance of The Funds							
b) Additions To The Funds							
1. Donation Grants/Other Fund			6,00,000				
2. Income From Investment made on account of Funds			4,844				
3. Serv. Charge/SQ/OR Receipt							
4. OHAD/Other Income							
5. Service Tax Recd Receivable							
TOTAL:	5,89,248	2,23,176			1,87,320	1,58,399	5,14,483
TOTAL (a-b)	5,89,248	2,23,176			1,87,320	1,58,399	8,61,143
c) Utilisation Expenditure							
i) Capital Expenditure							
- Fixed Assets							
- Books & Journal							
- Other							
TOTAL							
ii) Current Asset							
- Bills Receivable							
TOTAL							
iii) Revenue Expenditure							
- Site Prep & allied work							
- Remuneration & Allowances		46,626	3,67,839				3,700
- Travelling & Conveyance	26,022	32,260	4,811				19,334
- Admin expenses/Prof/Benv	19,905		1,11,507				7,55,845
- Tax Deducted at Source							
- Service Tax Paid/Payable							
- Contingencies							
- Share Of Overhead							
- Trnf To Dev Fund/Int Receipt	1,32,540						77,172
TOTAL	1,78,467	78,886			5,84,557	1,58,399	8,56,051
d) Unsp Amt/Trf Othr Fund							
TOTAL (c)	1,78,467	78,886			5,84,557	1,58,399	8,56,051
e) Assets Trnf to Corpus Fund							
NET BALANCE AS AT							
THE YEAR END (a+b-c-e)	4,10,781	1,44,290			2,07,607		5,092

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	NON INVASIVE IDENTIFICATION PROJECT E006	SURFACE FUNCTIONAL PROJECT E007	INAE CHAIR PROFESSOR PROJECT E008	AUTOMATED X-RAY IMAGE PROJECT E010	FUNCTIONAL ANNOTATION OF PROJECT E011
FUNDING AGENCY	C S IR	DBT	N.R.PAL	PROJECT	DST
a) Opening Balance of The Funds					9,24,329
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	6,08,978		1,80,000		
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	6,08,978	1,73,408	1,80,000		1,77,551
TOTAL (a+b)	5,85,853	1,73,408	1,80,000		1,77,551
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances		41,600	1,80,000	1,60,000	
- Travelling & Conveyance	91,556	2,458			
- Admn. expenses/Prof/Benv.	4,57,275	1,26,830			
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies				17,551	
- Share Of Overhead					
- Trnf.To Dev.Fund/Int.Receipt					
TOTAL	5,48,831	1,70,888	1,80,000		1,77,551
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	5,48,831	1,70,888	1,80,000		1,77,551
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b-c-e)	37,022	2,520			9,24,329

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEDULE 3 - FARMARALID FINOWMAN T FUND	STUDY OF PRAGM DEFICITS IN PAT PROJECT E012 D S T, GOI	BIG DATA PERSPECTIVE PROJECT E013 CEIPRA	PLANOGRAM IMAGE MATCHING PROJECT E014 T C S	ESTIMATION OF DEMAND FOR BANK PROJECT E015		TALENT ENABLME & CONSULTING PROJECT E016 INFOSYS LTD
				R B I, GOI		
FUNDING AGENCY	3,38,120	2,33,700	9,04,600	6,40,000	-1,24,477	5,82,780
a) Opening Balance of The Funds						
b) Additions To The Funds						
1. Donation Grants Other Fund				6,40,000		
2. Income From Investment made on account of Funds						
3. Serv. Chrg. SQ. (OR) Receipt						
4. OHAJy Other Income						
5. Service Tax Recd. Receivable					6,40,000	
TOTAL	3,38,120	2,33,700	9,04,600		5,15,523	5,82,780
TOTAL (a+b)	3,38,120	2,33,700	9,04,600			5,82,780
c) Utilisation Expenditure						
i) Capital Expenditure			14,999			11,400
- Fixed Assets						29,570
- Books & Journal						
- Other						
TOTAL			14,999			40,970
ii) Current Asset						
- Bills Receivable						
TOTAL						
iii) Revenue Expenditure						
- Site Prep & allied work	0					5,600
- Remuneration & Allowances	1,79,571		1,44,355			25,284
- Travelling & Conveyance	14,965	1,70,699	98,227			73,339
- Admn. expenses/Prof/Bem	2,619	1,153				
- Tax Deducted at Source						
- Service Tax Paid Payable						
- Contingencies		20,000	11,600			3,120
- Share Of Overhead			1,80,000			
- Trnf To Dev Fund/Int. Receipt						
TOTAL	1,97,155	1,91,852	4,34,182		2,26,455	1,07,343
d) Unsp. Amt./Trf. Othr Fund	1,40,965					
TOTAL (c)	3,38,120	1,91,852	4,49,181		2,26,455	1,48,313
e) Assets Trnf. to Corpus Fund						
NET BALANCE AS AT THE YEAR END (a+b-c-e)		41,848	4,55,419		2,89,068	4,34,467

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	NEW STAT TECH TO IDENTIFY MOD PROJECT E017 SERB,GOI	INSPIRE FACULTY AWARD S DAS PROJECT E018 DST,GOI	AWARDED TO POLYMORPHISMS PROJECT E019 IN MHC CLS I GN	INSPIRE FACULTY AWARD J CHAKRABRO PROJECT E020 DST, GOI	INSPIRE FELLOWP. TO SANDIP PAUL PROJECT E021 DST,GOI
FUNDING AGENCY					
a) Opening Balance of The Funds	3,92,420	5,87,553	271		3,800
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	8,00,000	11,11,197	7,26,998	4,10,000	4,06,200
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	8,00,000	11,11,197	7,26,998	4,10,000	4,06,200
TOTAL (a+b)	11,92,420	16,98,750	7,27,269	4,10,000	4,10,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets	1,35,050	2,67,650			
- Books & Journal					
- Other					
TOTAL	1,35,050	2,67,650			
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	6,20,259	11,63,292	6,03,286	3,90,000	3,90,000
- Travelling & Conveyance		68,462			
- Admn. expenses/Prof/Benv	9,248	69,358	4,998		
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead	1,00,000	69,660		20,000	20,000
- Trnf. To Dev.Fund/Int. Receipt		35,000			
TOTAL	7,29,507	14,05,772	6,08,284	4,10,000	4,10,000
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	8,64,557	16,73,422	6,08,284	4,10,000	4,10,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	3,27,863	25,328	1,18,985		

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	INSPIRE: FELLOWSHIP 2015 PROJECT E022 P. DAS	GENDER VIOLENC INDIA ITS ROOTS PROJECT E023 ICSSR,GOI	INAE DISTINGUIS HED PROF. BBC PROJECT E024 INAE	INSPIRE FACULTY AWARD PROJECT E025 A. CHATTERJEE	INSPIRE FELLOWS P PANDEY PROJECT E026 DST, GOI
FUNDING AGENCY	1,10,000	6,64,134	3,60,000	14,90,223	66,129
a) Opening Balance of The Funds					
b) Additions To The Funds :			3,60,000		4,10,000
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable			3,60,000		4,10,000
TOTAL	1,10,000	6,64,134	3,60,000	14,90,223	4,76,129
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets				1,77,805	
- Books & Journal				24,457	
- Other					
TOTAL				2,02,262	
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances		3,29,625	3,60,000	10,98,118	3,30,645
- Travelling & Conveyance		2,76,459		28,994	
- Admn. expenses/Prof/Benv.		48,639		18,273	
- Tax Deducted at Source					
- Service Tax Paid/Payable		26,605		4,604	15,000
- Contingencies				35,000	
- Share Of Overhead					
- Trnf To Dev.Fund/Int.Receipt					
TOTAL		6,81,328	3,60,000	11,84,989	3,45,645
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)		6,81,328	3,60,000	13,87,251	3,45,645
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	1,10,000	-17,194		1,02,972	1,30,484



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS FUNDING AGENCY	CRYPTOGRAPHY & CRYPT PROJECT E027 ANALYSIS		VISVESVARAYA PHD SCHEME PROJECT E028 MEDIA LAB ASIA		SWARNAJAYANTI FELLOWSHIP PROJECT E029 TO DR. N. GUPTA		RAMANUJAM FELLOWSHIP AWD PROJECT E030 SERB,GOI		INSPIRE FELLOWSHIP PROJECT E031 S. ROY	
		12,49,300	5,45,250	3,75,000	2,00,000	16,18,099	4,10,000	1,09,917		
a) Opening Balance of The Funds										
b) Additions To The Funds										
1. Donation/Grants/Othr. Fund										
2. Income From Investment made on account of Funds										
3. Serv. Chrg/SQCOR Receipt										
4. OHAJ/Other Income										
5. Service Tax Recd/Receivable										
TOTAL		12,49,300	21,47,167	3,75,000	2,00,000	16,18,099	4,10,000	1,09,917		
TOTAL (a+b)		12,49,300	21,47,167	3,75,000	2,00,000	16,18,099	4,10,000	1,09,917		
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL			23,599							
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work	0									
- Remuneration & Allowances	3,33,418									
- Travelling & Conveyance	1,21,490									
- Admn. expenses/Prof/Benv.	11,655									
- Tax Deducted at Source										
- Service Tax Paid/Payable	1,190									
- Contingencies	45,300									
- Share Of Overhead										
- Trnf. To Dev.Fund/Int.Receipt										
TOTAL		5,13,053	26,30,513	3,00,000	10,20,000	12,84,959	3,90,000	20,000		
d) Unsp. Am/Trf. Othr Fund										
TOTAL (c)		5,13,053	26,54,112	3,00,000	10,20,000	12,84,959	3,90,000	20,000		
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT THE YEAR END (a+b-c-e)		7,36,247	38,205	75,000		61,570				4,10,000

INDIAN STATISTICAL INSTITUTE:  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	INSPIRE FELLOWSHIP PROJECT E032 - A. BHATTACHARYY	INCG POWER THRU GENETIC PROJECT E033 DST,GOI	EQUIV. CHECKING FRAMEWORK FOR PROJECT E034 VUL. ASSES.	INAE CHARI PROF .B B BHATTACHAR PROJECT E035 INAE	VIVESVARYA YOUN FACULTY RESH PROJECT E036 MIDIA LAB ASIA
a) Opening Balance of The Funds	2,12,833				
b) Additions To The Funds :			5,68,889	1,50,000	7,40,000
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt			81,111	1,50,000	7,40,000
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	2,12,833	4,95,000	6,50,000	1,50,000	7,40,000
TOTAL (a+b)	2,12,833	4,95,000	7,91,000	1,50,000	7,40,000
c) Utilisation / Expenditure					
i. Capital Expenditure		43,260	4,800		2,05,831
- Fixed Assets					
- Books & Journal					
- Other		43,260	4,800		2,05,831
TOTAL		43,260	4,800		2,05,831
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	1,82,500	3,60,000	4,00,000	1,50,000	2,20,000
- Travelling & Conveyance		17,964	68,787		3,221
- Admn. expenses/Prof/Benv.		4,988	24,049		4,750
- Tax Deducted at Source					
- Service Tax Paid/Payable		18,069	81,111		440
- Contingencies		40,000	2,835		
- Share Of Overhead			66,507		
- Trnf To Dev. Fund/Int Receipt					
TOTAL	1,82,500	4,41,021	6,43,289	1,50,000	2,28,411
d) Unsp. Amr/Trf. Othr Fund					
TOTAL (c)	1,82,500	4,84,281	6,48,089	1,50,000	4,34,242
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	30,333	10,719	1,42,911		3,05,758

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	NATIONAL POST DOC FELLOWSHIP PROJECT E037 SERB/DST		NATIONAL POST DOC TO DEERMALA PROJECT E038 SERB/DST		BINARY ANALYSIS SOFTWARE SECU PROJECT E039 DRDO		R C BOSE CENTRE CRYPTOLOGY PROJECT E040 MICROSOFT RESH		INSPIRE FACULTY AWARD S BAGCHI PROJECT E041 SERB/DST	
FUNDING AGENCY										
a) Opening Balance of The Funds										
b) Additions To The Funds :		9,60,000	9,30,770	9,30,770	6,95,651	8,00,000	3,36,962	19,00,000		19,00,000
1. Donation/Grants/Othr. Fund made on account of Funds										
2. Income From Investment										
3. Serv. Charg/SQCOR Receipt					1,04,349					
4. OHA/dj/Other Income										
5. Service Tax Recd/Receivable										
TOTAL		9,60,000	9,30,770	9,30,770	8,00,000	8,00,000	3,36,962	19,00,000		19,00,000
TOTAL (a+b)		9,60,000	9,30,770	9,30,770	8,00,000	8,00,000	3,36,962	19,00,000		19,00,000
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal					598	598				
- Other										
TOTAL					598	598				
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work	0									
- Remuneration & Allowances	6,85,000				3,53,548			4,74,838		
- Travelling & Conveyance	3,652		3,64,833		71,098		3,12,643	14,653		
- Admn. expenses/Prof/Benv.	1,70,104		4,892		51,583					
- Tax Deducted at Source			5,795		1,06,446					
- Service Tax Paid/Payable	1,244				1,500					
- Contingencies	1,00,000				68,053					
- Share Of Overhead										
- Trnf To Dev.Fund/Int Receipt										
TOTAL		9,60,000	1,00,000	4,75,520	6,52,228	6,52,228	3,12,643	35,000		5,24,491
d) Unsp. Amt/Trf. Othr Fund				4,55,250						
TOTAL (c)		9,60,000	9,30,770	9,30,770	6,52,826	6,52,826	3,12,643			5,24,491
e) Assets Trnf to Corpus Fund										
NET BALANCE AS AT					1,47,174	1,47,174	24,319			13,75,509
THE YEAR END (a+b-c-e)										

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 UNREMARKED FUNDAMENTAL FUNDS	UNRAVELLING ARCHITECTURE PROJECT E042 DST, GOI	J.C. BOSE FELLOWSHIP PROJECT E043 SERB DST	IDENTIFICATION GENETIC AND EPG PROJECT E044 SERB DST	STUDY ON SOCIO ECONOMIC IMPACT NH PROJECT E045 N.H.A. OF INDIA		WOMEN SCIENTIST SCHEME WOS-A PROJECT E046 DST, GOI
				8,69,565	10,00,000	
a) Opening Balance of The Funds						
b) Additions To The Funds	2,50,000	13,60,000	22,37,999	8,69,565	8,70,000	8,70,000
1 Donation Grants (Othr Fund made on account of Funds						
2 Income From Investment			9,123	1,30,435		
3 Serv. Charg. SIX OR Receipt						
4 OHAD) Other Income						
5 Service Tax Recd Receivable	2,50,000	13,60,000	22,47,122	10,00,000	8,70,000	8,70,000
TOTAL	2,50,000	13,60,000	22,47,122	10,00,000	8,70,000	8,70,000
TOTAL (a+b)	2,50,000	13,60,000	22,47,122	10,00,000	8,70,000	8,70,000
c) Utilization Expenditure						
i) Capital Expenditure						
- Fixed Assets					75,000	75,000
- Books & Journal						
- Other						
TOTAL					75,000	75,000
ii) Current Asset						
Bills Receivable						
TOTAL						
iii) Revenue Expenditure						
- Site Prep & allied work						
- Remuneration & Allowances		2,09,500	65,754	1,80,527	3,57,500	3,57,500
- Travelling & Conveyance		3,57,777		3,060	13,124	13,124
- Admn. expenses, Prof Bens		35,756	17,01,885	14,890	15,050	15,050
- Tax Deducted at Source						
- Service Tax Paid Payable		12,000		1,30,435	3,953	3,953
- Contingencies		60,000	2,00,000	1,30,435	80,000	80,000
- Share Of Overhead						
- Trmf To Dev Fund Int Receipt	40,000					
TOTAL	40,000	6,75,033	19,67,639	4,59,347	4,69,627	4,69,627
d) Unsp. Am't/Trf. Othr Fund	40,000	6,75,033	19,67,639	4,59,347	5,44,627	5,44,627
TOTAL (c)	40,000	6,75,033	19,67,639	4,59,347	5,44,627	5,44,627
e) Assets Trmf to Corpus Fund						
NET BALANCE AS AT	2,10,000	6,84,967	2,79,483	5,40,653		3,25,373
THE YEAR END (a-b+c-e)	2,10,000	6,84,967	2,79,483	5,40,653		3,25,373

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	INSPIRE FACULTY AWARD D SENCUPT PROJECT E047 DST,GOI	IDENTIFICATION CONTRIB HLA PROJECT E048 DBT, GOI	SURVEY FOR STUD EFFICACY NATS PROJECT E049 BOPT MIN OF HRD	DESIGN CONCUREN EVALUTION PROJECT E050 MIN. OF COMM & SERB	RAMANUJAN FELLOW DR. S DATTA PROJECT E051 SERB
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	19,00,000	12,27,500	74,412	3,50,000	17,80,000
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OthAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	19,00,000	12,27,500	74,412	3,50,000	17,80,000
TOTAL (a+b)	19,00,000	12,27,500	74,412	3,50,000	17,80,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets	89,900				
- Books & Journal					
- Other					
TOTAL	89,900				
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	4,41,290				
- Travelling & Conveyance		11,279	20,000	24,000	3,65,500
- Admn. expenses/Prof/Benv.	1,550	10,02,029	10,000	735	86,949
- Tax Deducted at Source				540	
- Service Tax Paid/Payable				45,879	
- Contingencies					
- Share Of Overhead	35,000	1,02,500	11,162	52,500	60,000
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	4,77,840	11,15,808	41,162	1,23,654	5,12,449
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	5,67,740	11,15,808	41,162	1,23,654	5,12,449
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	13,32,260	1,11,692	33,250	2,26,346	12,67,551

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31 March 2017 (Amount in Rupees)

SCHEDULE 1: FARMER-LED FUNDING AGENCIES	CREDITATION	CRYPTANALYSIS		INSPIRE FACILITY		INSPIRE FACILITY		KVPY INTERVIEW
		SYMMETRIC PROJECT F055 NHEM, DAI	ABHIK GHOSH PROJECT F054 DST, GOI	AWARD TO ANISUR PROJECT F055 DST, GOI	24-25 JAN 2017 PROJECT F056 I.I.S. BLORE			
a) Opening Balance of The Funds								
b) Additions To The Funds								
1. Donation Grants/Other Fund made on account of Funds	9,50,000	12,35,825	19,00,000	19,00,000	19,00,000	80,000		
2. Income From Investment								
3. Very. Chang. SXCOR Receipt								
4. OHAdj/Other Income								
5. Service Tax Recd/Receivable								
TOTAL	9,50,000	12,35,825	19,00,000	19,00,000	19,00,000	80,000		80,000
TOTAL (a-b)	9,50,000	12,35,825	19,00,000	19,00,000	19,00,000	80,000		80,000
c) Deduction / Expenditure								
i) Capital Expenditure								
- Fixed Assets								
- Books & Journal								
- Other								
TOTAL								
ii) Current Asset								
- Bills Receivable								
TOTAL								
iii) Revenue Expenditure								
- Site Prep & allied work	0	36,677	4,00,000	4,00,000	3,20,000	1,200		
- Remuneration & Allowances	19,314	1,150	22,115	22,115	16,635	14,480		
- Travelling & Conveyance		4,185			1,075			
- Admn. expenses/Prof/Bem	39,434							
- Tax Deducted at Source								
- Service Tax Paid/Payable								
- Contingencies								
- Share OI Overhead	95,000	84,825	35,000	35,000	20,000			
- Trnf To Dev Fund/Int Receipt								
TOTAL	1,53,748	1,26,837	4,57,115	4,57,115	3,92,710	15,680		15,680
d) Unsp. Am/Trf. Othr Fund								
TOTAL (c)	1,53,748	1,26,837	4,57,115	4,57,115	3,92,710	15,680		15,680
e) Assets Trnf. to Corpus Fund								
NET BALANCE AS AT								
THE YEAR END (a+b-c-e)	7,96,252	11,08,988	14,42,885	14,42,885	15,07,290	64,320		64,320

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED- ENDOWMENT FUNDS	J C BOSE FELLOW PROF S BANDYOP PROJECT E057 SERB/DST	RETRIEVAL OF ATMOSPHERIC PROJECT E058 SAC	INSPIRE FELLOW GOURAB SAHA PROJECT E059 DST, GOI	NATIONAL POST FELLOW S GHOSH PROJECT E061 SERB	MACROSCOPIC DYNAMICS IN ENS PROJECT E062 SERB, GOI
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	5,00,000	14,00,000	4,10,000	2,50,000	6,00,000
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable	5,00,000	14,00,000	4,10,000	2,50,000	6,00,000
TOTAL	5,00,000	14,00,000	4,10,000	2,50,000	6,00,000
TOTAL (a+b)	5,00,000	14,00,000	4,10,000	2,50,000	6,00,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	50,000			79,032	
- Travelling & Conveyance		3,378		18,159	
- Admn. expenses/Prof/Benv.	3,875				
- Tax Deducted at Source					
- Service Tax Paid/Payable		256			
- Contingencies		3,00,000			
- Share Of Overhead	1,00,000			1,00,000	
- Trnf To Dev.Fund/Int.Receipt					
TOTAL	1,53,875	3,03,634	4,10,000	1,97,191	
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	1,53,875	3,03,634	4,10,000	1,97,191	
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	3,46,125	10,96,366		52,809	6,00,000





INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	DST PROJECT OF PROF. B.S. DAYA PROJECT E:503 SAGAR	KARNATAKA AGRICULTURE COMMISSION PROJECT E:504 ON BANGALORE	CHANDRAYAN PROJECT E:505 B.S. DAYASAGAR	QUALITY OF INVEST PROJECT E:701 INTERNET	DRDO SCIENTIFIC S LAISHRAM PROJECT E:702 DRDO
a) Opening Balance of The Funds		4,99,300			
b) Additions To The Funds :	10,00,000		10,47,000	27,552	23,58,680
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg./QCOR Receipt	11,031	36,400			
4. OHA(d)/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	11,031	36,400	10,47,000		23,58,680
TOTAL (a+b)	10,11,031	5,35,700	10,47,000	27,552	23,58,680
c) Utilisation / Expenditure					
i. Capital Expenditure	2,27,843				
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL	2,27,843				
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure	0				
- Site Prep. & allied work					
- Remuneration & Allowances	2,56,886	2,86,816	93,258		13,47,146
- Travelling & Conveyance		95,802	23,976		3,39,961
- Admn. expenses/Prof/Benv.					6,919
- Tax Deducted at Source					
- Service Tax Paid/Payable	7,582	53,487	50,794		3,53,802
- Contingencies	73,333	75,000			2,14,343
- Share Of Overhead					96,509
- Trnf. To Dev. Fund/Int Receipt					
TOTAL	3,37,801	5,11,105	1,68,028		23,58,680
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	5,65,644	5,11,105	1,68,028		23,58,680
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	4,45,387	24,595	8,78,972	27,552	

INDIAN STATISTICAL INSTITUTE:  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	FUNDING AGENCY	DRUG SURVEY STAT DESIGN PROJECT E901		ITC LTD PSPD PROJECT E902 BHADRACHALAM		STUDY SECURITY AND PRIVACY ISU PROJECT F002 INTERNET		EFFICIENT AUDITING PROJECT F003 SILICA VALLY		GRANT ASSOCIAT SILICON VALLY PROJECT F004 CISCO UNIVERSI	
		ANALYSIS, HYD	1,76,252	40,000	14,935	19,84,050	13,39,134	49,74,703	13,39,134	49,74,703	
a) Opening Balance of The Funds											
b) Additions To The Funds :											
1. Donation/Grants/Othr. Fund											
2. Income From Investment made on account of Funds											
3. Serv. Charg/SQCOR Receipt											
4. OHAdj/Other Income											
5. Service Tax Recd/Receivable											
TOTAL											
TOTAL (a+b)											
c) Utilisation / Expenditure											
i. Capital Expenditure											
- Fixed Assets											
- Books & Journal											
- Other											
TOTAL											
ii. Current Asset											
- Bills Receivable											
TOTAL											
iii. Revenue Expenditure											
- Site Prep. & allied work											
- Remuneration & Allowances											
- Travelling & Conveyance											
- Admn. expenses/Prof/Benv.											
- Tax Deducted at Source											
- Service Tax Paid/Payable											
- Contingencies											
- Share Of Overhead											
- Trnf. To Dev. Fund/Int. Receipt											
TOTAL											
d) Unsp. Amr.Trf. Othr Fund											
TOTAL (c)											
e) Assets Trnf. to Corpus Fund											
NET BALANCE AS AT											
THE YEAR END (a+b-c-e)											

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	CHILDREN WORLD INTERNATIONAL PROJECT F005 GOETHE UNIVSITY		CONTRACTUAL EFF & PREF PROJECT F701 GROUNDWATER		WOMEN & WORK IN RURAL INDIA PROJECT F702		TERMS OF TRADE SHOCKS & MONETR PROJECT F703 POLICY		DST RFBR INDO RUSSIAN PROJECT PROJECT F801 CHENNAI	
FUNDING AGENCY										
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund	1,21,961									
2. Income From Investment made on account of Funds										
3. Serv. Charg/SQCOR Receipt										
4. OHADJ/Other Income										
5. Service Tax Recd/Receivable										
TOTAL	1,21,961									
TOTAL (a+b)	1,21,961									
c) Utilisation : Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance										
- Admn. expenss/Prof/Benv.										
- Tax Deducted at Source										
- Service Tax Paid/Payable										
- Contingencies										
- Share Of Overhead										
- Trnf To Dev. Fund/Int. Receipt										
TOTAL										
d) Unsp. Amt/Trf. Othr Fund										
TOTAL (c)										
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a-b-c-e)	1,21,961									

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	IDENTIFICATION MARTENSITIC PROJECT 1001 AND BAINITIC II	NORMALIZATION BOARD MARKS PROJECT 1002 MAHARASHTRA	COMMISSIONERATE OF TECH EDUCN PROJECT 1003 GUJRAT STATE	SMSRC - PRESC- QTFN ESTIMATION PROJECT 1004 & PROJECT	SIX SIGMA CONCEPT & PROJECT 1005 METHD. ITC
FUNDING AGENCY	7,47,760	3,42,976	2,90,894	35,500	19,40,762
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					23,00,000
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					3,45,000
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	7,47,760	3,42,976	2,90,894	35,500	26,45,000
TOTAL (a+b)	7,47,760	3,42,976	2,90,894	35,500	45,85,762
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	22,664				2,400
- Admn. expenses/Prof/Benv.	16,705				8,654
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies	700				3,45,000
- Share Of Overhead	80,000				105
- Trnf To Dev. Fund/Int Receipt	3,13,846		2,90,894		3,45,000
TOTAL	4,33,915	3,42,976	2,90,894	35,500	3,00,000
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	4,33,915	3,42,976	2,90,894	35,500	10,01,159
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	3,13,845				35,84,603

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	CONDUCT A COURSE ON BUSINESS PROJECT 1006 IGP	CONSULTANCY TCS R. C. BOSE PROJECT 1007 FOR CRYPTOLOGY	RESEARCH ADVICE TCS IGP PROJECT 1008 A. BANERJEE	RESEARCH ADVICE TCS PROJECT 1009 U. GARAIN	TCS RESEARCH ADVISOR IGP PROJECT 1010 C. A. MURTHY
FUNDING AGENCY	75,000	-930	1,09,170	13,95,059	7,83,748
a) Opening Balance of The Funds					
b) Additions To The Funds					
1. Donation/Grants/Othr. Fund		60,00,000			
2. Income From Investment made on account of Funds				2,08,168	
3. Serv. Chrg/SQCOR Receipt		8,95,000	15,830		
4. OHAAdj/Other Income					
5. Service Tax Recd/Receivable		68,95,000			1,16,252
TOTAL	75,000	68,94,070		16,03,227	9,00,000
TOTAL (a+b)	75,000	68,94,070		16,03,227	9,00,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances		30,00,000	46,397	5,89,476	3,33,094
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source		8,95,000	15,830	2,15,016	1,16,252
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt	75,000	29,99,070	16,376	2,09,259	1,17,560
TOTAL	75,000	68,94,070	46,397	5,89,476	3,33,094
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)	75,000	68,94,070		16,03,227	9,00,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)					

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	FORMAL VERIFICATION REAL TIME SAFETY LOGICS	TALENT DEV. FOR I. & T INFOT PROJECT I012 EACH OF IGP		NORMALIZATION BOARD MARKS PROJECT I013 STATE OF GUJRAT	TRAFFIC SURVEY FARE STRUCTURE PROJECT I014 METRO RAIL		TRAINING PROGM OF AJ COMPREHN PROJECT I015 ORDNANCE FACTOR
		6,68,694	4,59,909		30,50,000	2,55,000	
a) Opening Balance of The Funds							
b) Additions To The Funds :							
1. Donation/Grants/Other Fund	6,68,694	4,59,909	30,50,000	2,55,000	16,10,000	3,17,991	10,00,000
2. Income From Investment made on account of Funds							
3. Serv. Charg/SQCOR Receipt							
4. OHAdj/Other Income	1,00,306		4,57,500	35,07,500	2,41,500	50,609	1,50,000
5. Service Tax Recd/Receivable	7,69,000						
TOTAL	12,28,909	12,28,909	37,62,500	37,62,500	18,51,500	3,68,600	11,50,000
c) Utilisation / Expenditure							
i. Capital Expenditure							
- Fixed Assets	1,91,420						
- Books & Journal	8,568						
- Other							
TOTAL	1,99,988	1,99,988					
ii. Current Asset							
- Bills Receivable							
TOTAL							
iii. Revenue Expenditure							
- Site Prep & allied work	0						
- Remuneration & Allowances	4,44,516				16,696		23,748
- Travelling & Conveyance	1,23,111				29,845		3,692
- Admn. expenses/Prof/Benv	81,677						
- Tax Deducted at Source							
- Service Tax Paid/Payable	1,03,592		4,57,500		2,41,500	51,208	1,51,073
- Contingencies							
- Share Of Overhead	75,713		4,57,500		2,10,000	50,609	1,50,000
- Trnri To Dev. Fund Int Receipt	2,00,000		14,23,750		6,77,410		
TOTAL	10,28,609	10,28,609	14,23,750	23,38,750	11,75,451	1,01,817	3,28,513
d) Unsp. Amt.Trnf. Othr Fund							
TOTAL (c)	12,28,597	12,28,597	23,38,750	23,38,750	11,75,451	1,01,817	3,28,513
e) Assets Trnf. to Corpus Fund							
NET BALANCE AS AT THE YEAR END (a-b-c-e)		312	14,23,750	14,23,750	6,76,049	2,66,783	8,21,487

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	CONSULTENCY WORK PRICE EDU PROJECT 1016 COAL INDIA	TRAINING PROGM GUIDENCE SIX SI PROJECT 1017 KJ PAPER ODISA	CONSULTENCY FOR NAFIS PROJECT 1018 NAFIS	EVALUATING FRAME VARIOUS TEST PROJECT 1019 TCS	GE INDIA TECHNOLOGY CENT PROJECT 1020 GE INDIA
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	3,55,000	1,47,499	2,27,500	5,00,000	4,00,000
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income	53,250	22,126	34,100	75,000	60,000
5. Service Tax Recd/Receivable	4,08,250		2,61,600		
TOTAL	4,08,250	1,69,625	2,61,600	5,75,000	4,60,000
TOTAL (a+b)	4,08,250	1,69,625	2,61,600	5,75,000	4,60,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances			1,13,750	2,45,000	
- Travelling & Conveyance	2,008			8,052	
- Adimn. expenses/Prof/Benv.	690			21,660	
- Tax Deducted at Source	53,591			75,000	60,948
- Service Tax Paid/Payable	680	22,443	34,101		
- Contingencies	53,250	22,125	34,125	75,000	
- Share Of Overhead	1,49,015	62,528		75,144	
- Trnf. To Dev. Fund/Int. Receipt					2,00,000
TOTAL	2,59,234	1,07,096	1,81,976	4,99,856	2,60,948
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	2,59,234	1,07,096	1,81,976	4,99,856	2,60,948
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	1,49,016	62,529	79,624	75,144	1,99,052

INDIAN STATISTICAL INSTITUTE:  
 SCHEDULE 3: FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	TRAINING PROGM PROJECT 1021	TWO DAY IN HOUS E TRAINING DATE PROJECT 1024 GE INDIA	ONE-DAY IN HOUS E TRAINING PROG PROJECT 1025 GE INDIA	MINDTREE LTD BANGALORE PROJECT 1153 MINDTREE LTD	SIX SIGMA TRG GUIDENCE PROJECT 1158 TVS MOTORS
FUNDING AGENCY	TCS PROJECT 1021				
a) Opening Balance of The Funds					23,873
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	8,90,323	3,47,826	1,73,912		
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income	1,33,549	52,174	26,088		
5. Service Tax Recd/Receivable				2,00,000	
TOTAL	10,23,872	4,00,000	2,00,000	38,909	23,873
TOTAL (a+b)	10,23,872	4,00,000	2,00,000	38,909	23,873
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	3,76,676				
- Travelling & Conveyance					
- Admn. expenses/Prof/Ben.					
- Tax Deducted at Source	1,35,261	52,432	26,526		
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead	1,33,548	52,174	26,021		
- Trmf To Dev. Fund/Int. Receipt	3,78,387		54,624		
TOTAL	10,23,872	1,04,606	2,00,000		
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	10,23,872	1,04,606			
e) Assets Trmf to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)		2,95,394		38,909	23,873



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	DELLOTTE LTD BANGALORE PROJECT 1160 DELLOTTE LTD	HUAWEI BANGALORE PROJECT 1163 TVS MOTOR	TVS MOTOR CO HOSUR, BNGLORE PROJECT 1165 TVS	NEW MILL GTS INDIA COATS PROJECT 1166 MADURAI	TVS SRI CHAKRA LTD, BANGALORE PROJECT 1168 TVS SRI CHAKRA
FUNDING AGENCY	3	1	5,43,326	1,48,244	55,250
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3	1	5,43,326	1,48,244	55,250
TOTAL (a+b)					
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev.Fund/Int. Receipt					
TOTAL			5,43,326	1,48,244	55,250
d) Unsp. Amr/Trf. Othr Fund	3	1			
TOTAL (c)	3	1	5,43,326	1,48,244	55,250
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a,b-c-g)					

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	MOTHER DAIRY FRUIT & VEG PVT PROJECT 1170 F & V LTD	ADITYA BIRLA FASHION & RETAIL PROJECT 1171 ADITYA BIRLA	BIOCON LTD BANGALORE PROJECT 1172 BIOCON LTD	CERTIFICATION PROGRAM FOR PROJECT 1174 SIX SIGMA BLORE	MASTER BLACK BELT BLORE PROJECT 1175 SIX SIGMA BB
FUNDING AGENCY	3,45,668	1,49,103	1,36,000	1,62,756	5,62,654
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donations/Grants/Othr. Fund made on account of Funds					
2. Income From Investment					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,45,668	1,49,103	1,36,000	1,62,756	5,62,654
c) Utilisation / Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	3,45,668				
- Travelling & Conveyance					
- Admn expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev Fund/Int. Receipt					
TOTAL	3,45,668	1,49,103	1,36,000	1,62,756	5,62,822
d) Unsp. Amt. Trf. Othr Fund					
TOTAL (c)	3,45,668	1,49,103	1,36,000	1,62,756	5,62,822
e) Assets Trnf to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b-c-e)					-168

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	SIX SIGMA BLACK BELT BLORE PROJECT 1176 SIX SIGMA BB	SIX SIGMA GREEN BELT BLORE PROJECT 1177 SIX SIGMA GREEN	STAT. TECHNIQUE FOR BUS. ANALYT PROJECT 1178 ICS BLORE	AISTOM INDIA LTD. BLORE PROJECT 1179 AISTOM INDIA LT	HITACHI INDIA PVT LTD BLORE PROJECT 1180 HITACHI PVT LTD
FUNDING AGENCY	4,51,915	2,39,678	2,22,202	95,161	12,90,603
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	4,51,915	2,39,678	2,22,202	95,161	12,90,603
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	4,25,332		2,22,202	95,161	5,58,748
- Travelling & Conveyance		2,39,678			
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	4,25,332	2,39,678	2,22,202	95,161	12,91,303
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (g)	4,25,332	2,39,678	2,22,202	95,161	12,91,303
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	26,583				-700

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	GREEN BELT 35 BANGALORE PROJECT 1181 GREEN BELT	HINDUJA GLOBAL SOLUTIONS LTD PROJECT 1182 BLORE	SIX SIGMA GREEN BELT PROJECT 1183 BANGALORE	DELLOITTE LTD IGP PROJECT 1184 BANGALORE	MODULE WISE TRAINING PROG PROJECT 1185 BIOCON LTD
FUNDING AGENCY	53,125		7,54,000	5,71,355	9,20,000
a) Opening Balance of The Funds		4,02,860			
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds			7,54,000	5,71,355	9,20,000
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable			7,54,000	5,71,355	9,20,000
TOTAL	53,125	4,02,860	7,54,000	5,71,355	9,20,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	53,125	1,69,785	2,19,352	2,23,403	3,90,312
- Travelling & Conveyance				38,845	
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev Fund/Int. Receipt					
TOTAL	53,125	1,69,785	2,19,352	2,23,403	3,90,312
d) Unsp. Amv/Trf. Othr Fund					
TOTAL (c)	53,125	1,69,785	7,54,000	5,71,355	9,20,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)		2,33,075			

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	SIX SIGMA BLACK BELT PROJECT I186	TVS MOTOR CO HOSUR PROJECT I187	SIX SIGMA FOR HALL 2016 PROJECT I188 HINDUSTAN A LT	SIX SIGMA GREEN BELT CERTIFICAT PROJECT I189 HINDUJA GLOBAL	SIX SIGMA GREEN BELT GB-36 PROJECT I190 EXTERNAL PARTI
FUNDING AGENCY	M/S C.SOLUTIONS				
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt		9,55,000	9,00,000	2,01,375	7,75,000
4. OHAJ/Other Income	4,80,000				
5. Service Tax Recd/Receivable	4,80,000				
TOTAL	4,80,000	9,55,000	9,00,000	2,01,375	7,75,000
TOTAL (a+b)	4,80,000	9,55,000	9,00,000	2,01,375	7,75,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	2,04,000		3,78,786	84,897	2,28,782
- Travelling & Conveyance		18,501			
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead	72,000	1,43,250	7,427	1,375	2,15,186
- Trmf To Dev.Fund/Int.Receipt	2,04,000	3,96,625	1,35,000	30,206	1,16,250
TOTAL	4,80,000	5,58,376	3,78,787	84,897	2,14,782
d) Unsp. Amt/Trf. Othr Fund			9,00,000		7,75,000
TOTAL (c)	4,80,000	5,58,376	9,00,000	2,01,375	7,75,000
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)		3,96,624			

INDIAN STATISTICAL INSTITUTE.  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED FUNDING AGENCY	SIX SIGMA TRAINING GUIDN PROJECT 1191 (HOLLINGSWORTH)	CONSULTANCY & TRNG ON PROCESS PROJECT 1192 (PERFORMANCE)	SIX SIGMA TRNG & PROJECT GUIDA PROJECT 1193 (NICE FOR M.DAIRY)	SIX SIGMA TRAINING & PROJECT PROJECT 1194 (FIAT AUTOMOBILE)	SIX SIGMA BLACK BELT PROGRAM PROJECT 1195
a) Opening Balance of The Funds					
b) Additions To The Funds					
1. Donation/Grants/Other Fund made on account of Funds					
2. Income From Investment					
3. Serv. Charg./SQCOR Receipt	2,41,042	3,21,375	7,30,000	2,14,535	15,00,000
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	2,41,042	3,21,375	7,30,000	2,14,535	15,00,000
TOTAL (a+b)	2,41,042	3,21,375	7,30,000	2,14,535	15,00,000
c) Utilisation / Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	1,01,922			83,002	5,01,412
- Travelling & Conveyance				10,180	3,996
- Admin. expenses/Profits					
- Tax Deducted at Source					
- Service Tax Paid/Payable	1,042				
- Contingencies					
- Share Of Overhead	36,156	48,206	32,701	6,170	2,89,179
- Prof To Dev Fund/Int Receipt	1,01,922	1,36,585	1,09,500	32,180	2,25,000
TOTAL	2,41,042	1,84,791	2,93,900	83,003	4,70,413
d) Unsp. Amt./Trl. Othr. Fund			4,36,101		14,90,000
TOTAL (c)	2,41,042	1,84,791	4,36,101	2,14,535	14,90,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT			2,93,899		10,000
THE YEAR END (a+b-c-e)		1,36,584	2,93,899		10,000

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - EARMARKED ENDOWMENT FUNDS	CENTUM ELECTRONICS LTD PROJECT 1196 IGP	SIX SIGMA MASTER BLACK PROJECT 1197 EXTN PARTICIPNT	SIXTH SIGMA GREEN BELT PROJECT 1198 BANGALORE	TRAINING PROG & CONSULTANCY ON PROJECT 1199 SIX SIGMA	BLACK BELT PROGRAMME PROJECT 1200 SIX SIGMA BB
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	1,55,000	9,60,000	8,50,000	6,60,000	5,40,000
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	1,55,000	9,60,000	8,50,000	6,60,000	5,40,000
TOTAL (a+b)	1,55,000	9,60,000	8,50,000	6,60,000	5,40,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work		3,48,002	14,000		40,000
- Remuneration & Allowances		2,450			
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.		1,63,144		6,331	2,58,358
- Tax Deducted at Source		1,44,000		99,000	81,000
- Service Tax Paid/Payable		3,02,404		2,77,335	80,321
- Contingencies					
- Share Of Overhead	23,250		1,92,650		
- Trnf To Dev. Fund/Int. Receipt	65,875		1,27,500		
TOTAL	89,125	9,60,000	2,57,925	3,82,666	4,59,679
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	89,125	9,60,000	5,92,075	3,82,666	4,59,679
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	65,875		2,57,925	2,77,334	80,321

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	SIXTH SIGMA GREEN BELT PROJECT I201 BANGALORE	SIX SIGMA BLACK BELT TRAINING PROJECT I202 HUAWEI TECH	STAT TECHNIQS FOR BUSINESS PROJECT I203 ANALYTICS	SIX SIGMA MASTER BLACK BE PROJECT I204 MASTER BB	SIX SIGMA GREEN BELT PROJECT I205 BHEL WRI TRICHY
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt	8,75,000	4,35,225	8,83,500	12,80,000	1,77,215
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable		4,35,225		12,80,000	
TOTAL	8,75,000	4,35,225	8,83,500	12,80,000	1,77,215
TOTAL (a+b)	8,75,000	4,35,225	8,83,500	12,80,000	1,77,215
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	14,000	1,67,358	22,000	43,100	74,409
- Travelling & Conveyance					
- Admn. expenses/Prof/Beny					
- Tax Deducted at Source					
- Service Tax Paid/Payable		35,225	2,16,992	2,43,203	1,815
- Contingencies	2,05,433	65,284	1,32,525	1,92,000	26,582
- Share Of Overhead	1,31,250		2,55,992	4,00,848	74,409
- Trmf To Dev Fund Int Receipt	2,62,159	-1,67,358			
TOTAL	6,12,842	4,35,225	6,27,509	8,79,151	1,77,215
d) Unsp. Amt. Trmf. Othr Fund					
TOTAL (c)	6,12,842	4,35,225	6,27,509	8,79,151	1,77,215
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b+c-e)	2,62,158		2,55,991	4,00,849	



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	HITACHI INDIA PVT. LTD PROJECT 1206 HITACHI LTD	ONTOLOGY & METABASE YOURIB PROJECT 1207 OT LTD	SIXTH SIGMA GREEN BELT PROJECT 1208 BANGALORE	BLACK BELT PROGRAMME PROJECT 1209 BANGALORE	STAT TECHNICS FOR BUSINESS PROJECT 1210 FORCASTING
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds					
1. Donation/Grants/Othr. Fund		1,90,482			
2. Income From Investment made on account of Funds		2,00,000	9,25,000	9,00,000	4,95,000
3. Serv. Charg/SQCOR Receipt	10,80,000				
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	10,80,000	3,90,482	9,25,000	9,00,000	4,95,000
TOTAL (a+b)	10,80,000	3,90,482	9,25,000	9,00,000	4,95,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	6,225		15,000	44,000	18,500
- Admn. expenses/Prof/Benv				9,812	
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead		30,000	1,82,701	2,01,525	1,11,185
- Trnf. To Dev. Fund/Int. Receipt		85,000	1,38,750	1,35,000	74,250
TOTAL	6,225	1,15,000	2,94,275	2,54,832	1,45,533
d) Unsp. Amv/Ttrf. Othr Fund					
- TOTAL (c)	6,225	1,15,000	6,30,726	6,45,169	3,49,468
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b-c+d)	10,73,775	2,75,482	2,94,274	2,54,831	1,45,532

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - EARMARKED ENDOWMENT FUNDS	SIX SIGMA GREEN BELT PROJECT 1211 BANGALORE	TRAINING PROGRAM ON SIX SIGMA PROJECT 1212 GREEN BELT	SIX SIGMA TRNG PROGRAM PROJECT 1213 BANGALORE	PROJECT AIR PORT AUTHORITY PROJECT 1402 AIRPORT AUTHORI	CARS PROJECT ON ECDLP PROJECT 1403 SANT DELHI
FUNDING AGENCY				3,18,750	14,32,741
a) Opening Balance of The Funds				7,87,500	5,00,000
b) Additions To The Funds :					
1. Donation/Grants/Othr Fund			1,98,000		
2. Income From Investment made on account of Funds	5,75,000	1,75,000	1,98,000	7,87,500	5,00,000
3. Serv. Charg/SOCOR Receipt					
4. OHA/dj/Other Income			1,75,000		
5. Service Tax Recd/Receivable	5,75,000	1,75,000	1,98,000	7,87,500	5,00,000
TOTAL	5,75,000	1,75,000	1,98,000	11,06,250	19,32,741
TOTAL (a+b)	5,75,000	1,75,000	1,98,000	11,06,250	19,32,741
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii Current Asset					
- Bills Receivable					
TOTAL					
iii Revenue Expenditure					
- Site Prep & allied work	0	71,760			6,75,399
- Remuneration & Allowances	14,000				1,51,015
- Travelling & Conveyance					
- Admnn expenses/Prof Fees					
- Tax Deducted at Source		5,229			
- Service Tax Paid Payable		26,250		4,52,812	3,90,234
- Contingencies	1,21,993				
- Share Of Overhead	86,250	71,761			
- Trmf To Dev Fund Int Receipt	1,76,379		1,75,000		
TOTAL	3,98,622	3,98,622	1,75,000	4,52,812	12,16,648
d) Unsp Amt Trf Othr Fund					
TOTAL (c)	3,98,622	3,98,622	1,75,000	4,52,812	12,16,648
e) Assets Trmf to Corpus Fund					
NET BALANCE AS AT	1,76,378		1,98,000	6,53,438	7,16,093
THE YEAR END (a-b-c-e)					

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	COGNIZANT TECHNOLOGY PROJECT I501 SOLUTIONS	ITC I.T.D. PSPO HYDERABAD PROJECT I651	NTT DATA GLOBAL SERVICES IGB PROJECT I654 HYDERABAD	PROF. FEES SAILIFE SC LTD PROJECT I655 IGP, HYDERABAD	ASSOCIATE BANKS OF SBI IGP PROJECT I656 HYDERABAD
a) Opening Balance of The Funds		21,62,267	2,15,000	4,41,176	4,00,000
b) Additions To The Funds :	10,00,000	5,00,000		5,00,000	4,00,000
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Chrgy/SQCOR Receipt		75,000		75,000	60,000
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable	1,50,000				
TOTAL	11,50,000	5,75,000		5,75,000	4,60,000
TOTAL (a+b)	11,50,000	27,37,267	2,15,000	10,16,176	8,60,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances		10,97,308	90,624		
- Travelling & Conveyance		10,632			
- Admn. expenses/Prof/Benv.		7,017			630
- Tax Deducted at Source		75,000		75,000	60,000
- Service Tax Paid/Payable	1,50,000				
- Contingencies					
- Share Of Overhead		4,50,000	33,750		
- Trnf. To Dev. Fund/Int. Receipt		10,97,310	90,626		
TOTAL	1,50,000	27,37,267	2,15,000	75,000	60,630
d) Unsp. Amt/Trf. Othr. Fund					
TOTAL (c)	1,50,000	27,37,267	2,15,000	75,000	60,630
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	10,00,000			9,41,176	7,99,370

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3-1 UNMARKED FUNDS	MBB TRAINING PROGRAMME PROJECT 1657 HYDERABAD		TTC LTD BHADRACHALAM PROJECT 1661		IGP SSGB PROGRAM PROJECT 1662 HYDERABAD		CARESOFT CLIENT S COIMBATORE PROJECT 1751		MYK SHIPPING SPINNING MILL PROJECT 1752 CLIENTS COIMBTR	
a) Opening Balance of The Funds										
b) Additions To The Funds										
1 Donation Grants/Other Fund	14,15,000		15,00,000		4,80,008					
2 Income From Investment made on account of Funds										
3 Serv. Charg SQCOR Receipt			2,25,000		72,000					
4 Other Income	2,05,175									
5 Service Tax Recd/Receivable		16,20,175		17,25,000						
TOTAL		16,20,175		17,25,000						55,104
c) Utilisation of Expenditure										
i) Capital Expenditure										
- Fixed Assets	19,473		12,830							
- Books & Journal										
- Other										
TOTAL	19,473		12,830							
ii) Current Asset										
- Bills Receivable										
TOTAL										
iii) Revenue Expenditure										
- Site Prep & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance	39,216		32,500		1,55,936					
- Admn. expenses Prof Bem	1,76,595		1,36,230		20,920					
- Tax Deducted at Source			62,298		1,05,412					
- Service Tax Paid/Payable	2,05,175		2,25,000		72,000					
- Contingencies										
- Share Of Overhead										
- Trmf To Dev Fund/Int Receipt										
TOTAL	4,20,986		4,56,028		1,25,736					
d) Unsp Amt/Trf Othr Fund										
TOTAL (c)	4,40,459		4,68,858							
e) Assets Trmf to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a+b-c-e)		11,79,716		12,56,142						55,104

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	TCTP CLIENTS COIMBATORE PROJECT 1753	M/S GCAS QUALITY CERTF PROJECT 1754 UAE COIMBATORE	LAXMI MACHINE WORKS COIMBATO PROJECT 1755	SHIVA TEXYARN SPINNING MILLS PROJECT 1756 COIMBATORE	BREAKS INDIA CLIENTS PROJECT 1757 COIMBATORE
FUNDING AGENCY	48,714	13,295	64,896	20,319	64,630
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	48,714	13,295	64,896	20,319	64,630
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Bev.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL					
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)	48,714	13,295	64,896	20,319	64,630
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)					

INDIAN STATISTICAL INSTITUTE.  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3-EARMARKED/ ENDOWMENT FUNDS	SRC CLIENTS COIMBATORE PROJECT 1758	FCRI CLIENTS COIMBATORE PROJECT 1759	SRI RAMCHANDRAN TEXTILES CONN. PROJECT 1760 SERV. COIMBATOR	MS BANNARI AMMAN SPG MILLS PROJECT 1761 CONS. SER. COMB	PROJECT FSS AT TECHNOVA IGP PROJECT 1801 TECHNOVA
FUNDING AGENCY					
a) Opening Balance of The Funds	45,380	94,260	80,000	54,764	1,78,007
b) Additions To The Funds					
1. Donation/Grants/Othr. Fund					1,50,000
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SOCOR Receipt					22,500
4. OHADJ/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	45,380	94,260	80,000	54,764	1,72,500
TOTAL (a+b)	45,380	94,260	80,000	54,764	3,50,507
c) Utilisation Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances					34,859
- Travelling & Conveyance					
- Admn. expenses Prof/Bem					22,500
- Tax Deducted at Source					
- Service Tax Paid/Payable					65,250
- Contingencies					
- Share Of Overhead					1,08,900
- Trnf To Dev Fund Int Receipt					
TOTAL					2,31,509
d) Unsp Amt./Trf. (Othr Fund)					
TOTAL (c)					2,31,509
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a + b - c - e)	45,380	94,260	80,000	54,764	1,18,998

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	SIX SIGMA PROJECT 1802	SIX SIGMA BALASORE ALLOYS PROJECT 1803	BUSINESS ANALYTIC COURSE PROJECT 1804	SSB TRAINING PROGRAM PROJECT 1805	SIXTH SIGMA CHAMPION TRAINI PROJECT 1806
FUNDING AGENCY	SIX SIGMA	SIX SIGMA	SIX SIGMA	SIX SIGMA	SIX SIGMA
a) Opening Balance of The Funds	68,789	2,82,301	2,35,547	1,83,245	
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund			15,00,000		4,03,478
2. Income From Investment made on account of Funds			2,25,000		60,522
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable			17,25,000		
TOTAL		2,82,301	19,60,547	1,83,245	4,64,000
TOTAL (a+b)	68,789	2,82,301	19,60,547	1,83,245	4,64,000
c) Utilisation / Expenditure					
i) Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii) Current Asset					
- Bills Receivable					
TOTAL					
iii) Revenue Expenditure					
- Site Prep. & allied work		1,10,074	6,62,853		
- Remuneration & Allowances		6,762	1,75,625		36,966
- Travelling & Conveyance			45,216		
- Admn. expenses/Prof/Benv.			2,25,000		
- Tax Deducted at Source			8,51,853		
- Service Tax Paid/Payable					60,522
- Contingencies					
- Share Of Overhead		44,925			
- Trnf. To Dev Fund/Int R&C/Inf		1,15,307			
TOTAL		2,77,068	19,60,547		97,488
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)		2,77,068	19,60,547		97,488
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	68,789	5,233		1,83,245	3,66,512

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	SSGB TRAINING PROGRAM I. & T PROJECT 1855	SSIG TRAINING PROGRAM PROJECT 1857	GREEN BELT TRAINING PROGRA PROJECT 1858	SSGB TRAINING PROGRAM PROJECT 1859	ADITYA BIRLA - GRASIM INDUST PROJECT 1860	FUNDING AGENCY
a) Opening Balance of The Funds	1,50,000	2,10,000	2,96,320	1,35,689	6,98,050	6,98,050
b) Additions To The Funds						
1. Donation/Grants/Othr Fund						
2. Income From Investment made on account of Funds						
3. Serv. Chrg/SQCOR Receipt						
4. OHAdj/Other Income						
5. Service Tax Recvd/Receivable						
TOTAL	1,50,000	2,10,000	2,96,320	1,35,689	6,98,050	6,98,050
TOTAL (a+b)	1,50,000	2,10,000	2,96,320	1,35,689	6,98,050	6,98,050
c) Utilisation / Expenditure						
i. Capital Expenditure						
- Fixed Assets						
- Books & Journal						
- Other						
TOTAL						
ii. Current Asset						
- Bills Receivable						
TOTAL						
iii. Revenue Expenditure						
- Site Prep. & allied work	0		1,26,270	56,594	2,78,396	2,78,396
- Remuneration & Allowances	61,328				36,550	36,550
- Travelling & Conveyance						
- Admn. expenses/Prof/Benv.						
- Tax Deducted at Source						
- Service Tax Paid/Payable						
- Contingencies						
- Share Of Overhead	27,346		47,460	22,500	2,78,396	2,78,396
- Trnf To Dev. Fund/Int. Receipt	61,328		1,24,430	56,594	1,04,708	1,04,708
TOTAL	1,50,000	2,10,000	2,98,160	1,35,688	6,98,050	6,98,050
d) Unsp. Amt/Trf. Othr Fund						
TOTAL (c)	1,50,000	2,10,000	2,98,160	1,35,689	6,98,050	6,98,050
e) Assets Trnf. to Corpus Fund						
NET BALANCE AS AT						
THE YEAR END (a+b-c-e)			-1,840			



INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	FUNDING AGENCY	GB TRAINING PROGRAMME: PROJECT 1861 SIX SIGMA	GB TRAINING PROGRAMME: PROJECT 1862 SIX SIGMA LTD	SSGB TRAINING PROGRAMME PROJECT 1863	STAT TECHNIC DADA MINING & PROJECT 1864 ANALYTICS	SSGB TRAINING PROGRAM L&T LTD PROJECT 1865
a) Opening Balance of The Funds						
b) Additions To The Funds :						
1. Donation/Grants/Othr. Fund						
2. Income From Investment made on account of Funds	14,27,966	6,50,000		6,50,000	96,000	3,29,773
3. Serv. Chrg/SQCOR Receipt						
4. OHA/dj/Other Income	2,14,195	94,250		97,500	14,400	49,465
5. Service Tax Recd/Receivable						
TOTAL	16,42,161	7,44,250		7,47,500	1,10,400	3,79,238
TOTAL (a+b)	16,42,161	7,44,250		7,47,500	1,10,400	3,79,238
c) Utilisation / Expenditure						
i. Capital Expenditure						
- Fixed Assets						
- Books & Journal						
- Other						
TOTAL						
ii. Current Asset						
- Bills Receivable						
TOTAL						
iii. Revenue Expenditure						
- Site Prep & allied work						
- Remuneration & Allowances		1,58,678		1,78,560		
- Travelling & Conveyance	1,17,966	30,886		1,96,483		29,772
- Admn. expenses/Prof/Benv		2,07,349		1,000		
- Tax Deducted at Source		94,250		97,500	14,400	
- Service Tax Paid/Payable	2,14,195	97,500		97,500		
- Contingencies		1,57,132		1,77,508		
- Trnf. To Dev. Fund/Int. Receipt						
TOTAL	3,32,161	7,45,795		7,48,551	14,400	79,237
d) Unsp. Amt/Trf. Othr Fund						
TOTAL (c)	3,32,161	7,45,795		7,48,551	14,400	79,237
e) Assets Trnf. to Corpus Fund						
NET BALANCE AS AT						
THE YEAR END (a+b-c-e)	13,10,000	-1,545		-1,051	96,000	3,00,001

INDIAN STATISTICAL INSTITUTE:  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDORSEMENT FUNDS	SSBB PROGRAMME: NAVAL ARMAMENT PROJECT 1866		INDIA-KOREA RESH PROGRAM PROJECT N003 DSI, GDI		INDO RUSSIA WORKSHOP PROJECT N004 NIHIM		UGC FELLOWSHIP GRANT TO JRI SRI PROJECT N005 UGC		KVPY AUTHORISED INTERVIEW PROC'S PROJECT N006 KVPY	
FUNDING AGENCY										
a) Opening Balance of The Funds				-1,234						98,651
b) Additions To The Funds		4,43,478			7,00,000		3,90,536			
1. Donation Grants, Othr. Fund										
2. Income From Investment made on account of Funds										
3. Serv. Charg./SOCOR Receipt										
4. OHA/Other Income										
5. Service Tax Recd./Receivable		66,522								
TOTAL		5,10,000								
TOTAL (a+b)		5,10,000		-1,234						98,651
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance										
- Admn. expenses/Prof/Benv.										
- Tax Deducted at Source										
- Service Tax Paid/Payable		66,522								
- Contingencies										
- Share Of Overhead										
- Trnf. To Dev. Fund/Int. Receipt										
TOTAL		66,522								
d) Unsp. Amt/Trf. Othr Fund										
TOTAL (c)		66,522								
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT THE YEAR END (a+b-c-e)		4,43,478		-1,234						98,651

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	RESEARCH ASSOCIATE K MUIR PROJECT N008 CSIR	SENIOR RESH FELLOW M DAS PROJECT N009 CSIR, N DELHI	NBHM SCHOLARSH MAHBUB ALAM PROJECT N010	DST-RFBR PROJEC DR. D GHOSH PROJECT N011 DST	TRAVEL GRANT DR. D GOSWAMI PROJECT N012 DAE
FUNDING AGENCY					
a) Opening Balance of The Funds			72,000	92,686	3,502
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	2,90,800			3,78,514	
3. Serv. Charg/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable	2,90,800			3,78,514	
TOTAL	2,90,800			3,78,514	
TOTAL (a+b)	2,96,665		72,000	4,71,200	3,502
c) Utilisation : Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asser					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep & allied work	0				
- Remuneration & Allowances	2,90,798				
- Travelling & Conveyance				4,24,345	
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf.To Dev.Fund/Int.Receipt					
TOTAL	2,90,798			4,24,345	
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	2,90,798			4,24,345	3,502
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	5,867		72,000	46,855	

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS FUNDING AGENCY	TRAVEL GRANT PAMPA PAL PROJECT N013 DAE	POST DOCTOR FELLOW PANPA PL PROJECT N014 DAE, NBHM	POST DOC FELLOW P K TIWARI PROJECT N015 NBHM, DAE	RAJA RAMANNA FELLOWSHIP PROJECT N017 NBHM/DAE	37TH ANNUAL MEETING OF THE PROJECT N018 COG. SC SOCIET
a) Opening Balance of The Funds					
b) Additions To The Funds			3,42,026	5,72,562	
1 Donation/Grants/Othr Fund made on account of Funds					
2 Income From Investment					
3 Serv. Chang./SQCOR Receipt					
4 OHADJ/Other Income					
5 Service Tax Recd/Receivable			3,42,026	5,72,562	
TOTAL	84,000	1,71,761	4,75,206	9,60,812	514
c) Utilisation Expenditure					
1 Capital Expenditure					
- Fixed Assets			2,398		
- Books & Journal					
- Other					
TOTAL			2,398		
ii Current Asset					
- Bills Receivable					
TOTAL					
iii Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances				4,80,000	
- Travelling & Conveyance				1,15,534	
- Admn. expenses/Prof Ben.				27,425	
- Tax Deducted at Source					
- Service Tax Paid Payable					
- Contingencies					
- Share Of Overhead					
- Trmf To Dev Fund/Int Receipt					
TOTAL			3,93,873	6,22,959	
d) Unsp. Amt./Trf. Othr Fund					
TOTAL (c)			3,96,271	6,22,959	
e) Assets Trmf to Corpus Fund					
NET BALANCE AS AT	84,000	1,71,761	78,935	3,37,853	514
THE YEAR END (a-b+c-e)					

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED- ENDOWMENT FUNDS	RAMAN CHAPRAK FELLOW SEBASTIN PROJECT N021 UNIVERS DE LA	POST DOC FELLOW S. SAMANTA PROJECT N022 NBHM/ DAE	PHD SCHOLARSHIP S.SANYAL PROJECT N023 NBHM/DAE	POST DOC FELLOW DR. S PAL PROJECT N024 NBHM/DAE	POST DOC FELLOW S. K. SASMAL PROJECT N025 NBHM
FUNDING AGENCY					
a) Opening Balance of The Funds		1,04,000	2,92,000	3,12,800	5,00,000
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund		5,93,600			
2. Income From Investment made on account of Funds	16,500				
3. Serv. Chang/SQCOR Receipt					
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	16,500	5,93,600	2,92,000	3,12,800	5,00,000
TOTAL (a+b)	7,200	6,97,600	2,92,000	3,12,800	5,00,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal				32,000	
- Other					
TOTAL				32,000	
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	7,200				
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source		5,40,000			
- Service Tax Paid/Payable		46,810			
- Contingencies		14,210			
- Share Of Overhead					
- Trmf To Dev. Fund/Int. Receipt					
TOTAL	7,200	6,01,020	1,25,807	1,67,574	4,74,649
d) Unsp. Am't.Trf. Othr Fund					
TOTAL (c)	7,200	6,01,020	1,25,807	1,99,574	5,23,563
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT		96,580	1,66,193	1,13,226	-23,563
THE YEAR END (a-b-c-e)					

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INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	TRAVEL GRANT K. S. GHOSH PROJECT N026 MICROSOFT RSH		POST DOC FELLOW S.A. LOKHANDE PROJECT N027 NBHM/DAE		MICROSOFT RESH TRAVEL GRANT PROJECT N028 MICROSOFT LAB		POST DOC FELLOW DR. K MAJUMDAR PROJECT N029 NBHM/DAE		POST DOC FELLOW TRIDIP SARDAR PROJECT N030 NBHM	
FUNDING AGENCY										
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund										
2. Income From Investment made on account of Funds	75,000		5,31,200		14,700		6,24,800		5,31,200	
3. Serv. Charg/SQCOR Receipt										
4. OHAdj/Other Income										
5. Service Tax Recd/Receivable										
TOTAL	75,000	-75,000	5,31,200	-1,24,800	14,700		6,24,800		5,31,200	
TOTAL (a+b)			4,06,400		14,700		6,24,800		5,31,200	
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance										
- Admn. expenses/Prof/Benv.										
- Tax Deducted at Source										
- Service Tax Paid/Payable										
- Contingencies										
- Share Of Overhead										
- Trnf To Dev.Fund/Int Receipt										
TOTAL					14,700		4,02,716		3,88,267	16,195
d) Unsp. Amt/Trf. Othr Fund										
TOTAL (c)					14,700		4,02,716		4,04,462	4,04,462
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a-b+c)			4,06,400				2,22,084			1,26,738

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	TRAVEL GRANT DWAIPAYAN ROY PROJECT N031 NBHM	SR. RESH FELLOW RAJA RAMAN FELO PROJECT N032 NBHM/DAE.	POST DOC FELLOW S K SINGH PROJECT N033 NBHM	POST DOC FELLOW SAGNIK CHAKRABR PROJECT N034 NBHM	POST DOC FELLOW AMIT KR SHARMA PROJECT N035 NBHM
FUNDING AGENCY					
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	1,80,000	4,68,800	5,93,600	5,93,600	5,93,600
3. Serv. Charg/SQCOR Receipt					
4. OHAdi/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	1,80,000	4,68,800	5,93,600	5,93,600	5,93,600
TOTAL (a+b)	1,80,000	4,68,800	5,93,600	5,93,600	5,93,600
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance	1,02,244	4,30,733	4,21,200	4,21,200	4,70,000
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable		30,495		28,382	
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	1,02,244	4,61,228	4,21,200	4,49,582	4,70,000
d) Unsp. Amu/Trf. Ohr Fund					
TOTAL (c)	1,02,244	4,61,228	4,21,200	4,49,582	4,70,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	77,756	7,572	1,72,400	1,44,018	1,23,600

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	TRAVEL GRANT D CHAKRABORTY PROJECT N036 SERB DST	TRAVEL GRANT D ROY PROJECT N037 NBHM	RX LAB INTERSHI P PROGM. 2016 PROJECT N038 MICROSOFT LAB	UGC PROJECT ON ETAL: FUNDA PROJECT N501 U G.C. BLORE	DOCTORAL FELLOWSHIP B KD PROJECT N502 DAE
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund	89,064	73,500	4,00,000		
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	89,064	73,500	4,00,000		22,065
TOTAL (a+b)	89,064	73,500	4,00,000	33,17,658	22,065
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets				58,968	
- Books & Journal				14,120	
- Other					
TOTAL				73,088	
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances		73,500		11,29,449	
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trmf To Dev Fund/Int. Receipt					
TOTAL	89,064	73,500		15,82,390	22,065
d) Unsp. Amu/Trf. Ohr Fund					
TOTAL (c)	89,064	73,500		16,55,478	22,065
e) Assets Trmf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)			4,00,000	16,62,180	



INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	U G C FELLOW SHIP SIVA ATHEA PROJECT N503 U G C	U G C FELLOW B V RAJARAM BH PROJECT N504 U G C	INSPIRE FACULTY DR. Y DHANDAPAI PROJECT N505 DST	NBHM FELLOW R MOHAN PROJECT N506 NBHM	FELLOWSHIP OF SRI S GOPAL PROJECT N507 NBHM
FUNDING AGENCY					
a) Opening Balance of The Funds	44,98,715	19,64,645	6,01,029	1,32,000	15,235
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund made on account of Funds				3,68,000	
2. Income From Investment					
3. Serv. Charg/SQCOR Receipt			17,000		
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	44,98,715	22,273	17,000	3,68,000	15,235
TOTAL (a+b)	44,98,715	22,273	17,000	3,68,000	15,235
c) Utilisation / Expenditure					
- Capital Expenditure					
- Fixed Assets	55,018				
- Books & Journal					
- Other					
TOTAL	55,018				
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	11,87,958		17,000	3,24,000	
- Travelling & Conveyance	2,25,997				
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source	59,175				
- Service Tax Paid/Payable	5,05,000				
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	19,78,130		3,87,483	3,56,000	
d) Unsp. Am/Trf. Ohr Fund					
TOTAL (c)	20,33,148	12,15,036	3,87,483	3,56,000	15,235
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT THE YEAR END (a+b-c-e)	24,65,567	7,71,882	2,30,546	1,44,000	15,235

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3-EARMARKED ENDOWMENT FUNDS	INSPIRE FACULTY AWARD DST PROJECT N509		INSPIRE FACULTY DR K. HARIA PROJECT N510		BANGALORE ALGEBRA SEMINAR PROJECT N511		TIFR-HSRC MADHAVA PROJECT N512		INSPIRE FACULTY R. KASILINGAM PROJECT N513	
	D. KESHARI		DST		M. KUMAR		COMPETITION		DST	
FUNDING AGENCY		5,22,651		9,16,826		4,20,000		6,060		12,10,333
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund	11,69,029		11,01,226				13,900		11,70,180	
2. Income From Investment made on account of Funds							18,800			
3. Serv. Charg/SQCOR Receipt										
4. OHAdj/Other Income										
5. Service Tax Recd/Receivable		11,69,029		11,01,226		32,700				11,70,180
TOTAL		16,91,680		20,18,052		38,760				23,80,513
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work	0		9,84,904				13,800		11,64,601	
- Remuneration & Allowances	7,14,514						506			
- Travelling & Conveyance										
- Admn. expenses/Prof/Benv.										
- Tax Deducted at Source										
- Service Tax Paid/Payable	1,27,158								2,19,172	
- Contingencies	26,250								35,000	
- Share Of Overhead										
- Trnf. To Dev.Fund/Int Receipt	8,23,758									
TOTAL		16,91,680		13,33,572				14,306		14,18,773
d) Unsp. Am/Trf. Ohr Fund						4,20,000		1,560		
TOTAL (c)		16,91,680		13,33,572		4,20,000		15,866		14,18,773
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a+b-c-e)				6,84,480				22,894		9,61,740

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED/ ENDOWMENT FUNDS	POST DR FELLOWS P. CHAKRABORTY PROJECT N514 NBHM	POST DR FELLOWS B. BASAK PROJECT N515 NBHM	POST DR FELLOWS AMIT MAJHI PROJECT N516 NBHM	INSPIRE FACULTY E. VAIBHAV VAIS PROJECT N517 H DST	ALGEBRA & GEOME TRIC TOPOLOGY PROJECT N518 J. SARKAR
a) Opening Balance of The Funds	3,77,800	2,57,791	2,62,998	17,48,276	1,80,500
b) Additions To The Funds :					
1. Donation/Grams/Othr. Fund			6,56,000		
2. Income From Investment made on account of Funds		5,93,547			
3. Serv. Charg/SQCOR Receipt				72,000	
4. OHA/dj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	3,77,800	5,93,547	6,56,000	72,000	
TOTAL (a+b)	3,77,800	8,51,338	9,18,998	18,20,276	1,80,500
c) Utilisation Expenditure					
i. Capital Expenditure					
- Fixed Assets					99,850
- Books & Journal					16,534
- Other					
TOTAL					1,16,384
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	3,39,426		5,92,800	10,32,000	
- Travelling & Conveyance					25,937
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int. Receipt					
TOTAL	3,70,426	4,47,088	6,24,487	12,18,611	50,902
d) Unsp. Ami/Trf. Othr Fund	7,374	4,04,250			
TOTAL (c)	3,77,800	8,51,338	6,24,487	12,18,611	1,67,286
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a,b,c-e)		2,94,511		6,01,665	13,214

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	NBHM SCHOLAR ABHIRA A. KUN PROJECT N519 NBHM		NBHM SCHOLARS SOVANLAL MONDAL PROJECT N520 NBHM,BILORE		NBHM SCHOLARP PRAVAKAR PAUL PROJECT N521 NBHM		INSPIRE FACULTY AWARD DHANYA PROJECT N523 RAJENDRAN		NBHM TRAVEL GRANT SIVA PROJECT N524 ATHREYA	
		72,000	72,000	72,000	72,000	72,000	19,00,000	19,00,000	1,11,000	1,11,000
a) Opening Balance of The Funds										
b) Additions To The Funds :		72,000	72,000	72,000	72,000	72,000	19,00,000	19,00,000	1,11,000	1,11,000
1. Donation/Grants/Othr. Fund made on account of Funds										
2. Income From Investment										
3. Serv. Charg/SQCOR Receipt										
4. OHA(d)/Other Income										
5. Service Tax Recd/Receivable										
TOTAL		72,000	72,000	72,000	72,000	72,000	19,00,000	19,00,000	1,11,000	1,11,000
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work		0								
- Remuneration & Allowance		72,000								
- Travelling & Conveyance										
- Admn. expenses/Prof/Benv.										
- Tax Deducted at Source										
- Service Tax Paid/Payable										
- Contingencies										
- Share Of Overhead										
- Trnf To Dev. Fund/Int Receipt										
TOTAL		72,000	72,000	72,000	72,000	72,000	9,09,339	15,826	1,11,000	1,11,000
d) Unsp. Amt Trnf. Othr Fund										
TOTAL (c)		72,000	72,000	72,000	72,000	72,000	9,25,165	15,826	1,11,000	1,11,000
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT										
THE YEAR END (a+b-c-e)										9,74,835

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INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	POST DOCTORAL FELLOWSHIP PROJECT N526	INSPIRE FACULTY AWARD S SARKAR PROJECT N527	J. C. BOSE FELL OWSHIP PROF B.V PROJECT N528	NBHM TRAVEL GRAND DR. SANDI PROJECT N529	TRAVEL GRANT IN RESPECT OF PROJECT N530
FUNDING AGENCY	T. R. REDDY	DST,GOI	RAJARAM BHATT	PAN DEY	IUSSTF-BANG
a) Opening Balance of The Funds					
b) Additions To The Funds :	9,60,000	19,00,000	1,00,000	1,04,418	1,00,000
1. Donation/Grants/Othr. Fund made on account of Funds					
2. Income From Investment					
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	9,60,000	19,00,000	1,00,000	1,04,418	1,00,000
TOTAL (a+b)	9,60,000	19,00,000	1,00,000	1,04,418	1,00,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	1,10,000	4,00,000	25,000	98,133	1,00,000
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies		2,581			
- Share Of Overhead					
- Trnf. To Dev.Fund/Int. Receipt					
TOTAL	1,10,000	4,02,581	25,000	98,133	1,00,000
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)	1,10,000	4,02,581	25,000	98,133	1,00,000
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	8,50,000	14,97,419	75,000	6,285	

INDIAN STATISTICAL INSTITUTE:  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	INSPIRE FACULTY DR. SOURAV PAL PROJECT N701 DST	NBHM POST DOC FELLOW D DUBEY PROJECT N702 NBHM	ENTRANCE TEST I M A BHUBANESW PROJECT N703 DAE, MUMBAI	NBHM FELLOWSHIP R SENGUPTA PROJECT N704 NBHM DAE	CHENNAI MATHEMATICAL PROJECT N705 CHENNAI MATH
a) Opening Balance of The Funds	12,03,092			6,350	
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund made on account of Funds		4,57,552	3,700	5,87,250	58,860
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL		4,57,552	3,700	5,87,250	58,860
TOTAL (a+b)	12,03,092	4,64,000	3,700	5,93,600	58,860
c) Utilisation : Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep & allied work					
- Remuneration & Allowances		2,50,800	3,100	2,88,000	13,200
- Travelling & Conveyance					
- Admn. expenses Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies		1,853	103	22,294	45,660
- Share Of Overhead					
- Trnf To Dev Fund/Int Receipt					
TOTAL		2,52,653	3,203	3,10,294	58,860
d) Unsp. Amt Trf. Othr Fund	12,03,092				
TOTAL (c)	12,03,092	2,52,653	497	3,10,294	58,860
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)		2,11,347		2,83,306	

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	NBHM M.A M S C SCHOLARSH PROJECT N706	NBHM EXAM JAN 2016 PROJECT N707	CEFIPRA RESEARC H PROJECT TRAVE PROJECT N708 L SUPPORT	TRAVEL SUPPORT DELHI UNIVERSIT PROJECT N709 Y WORKSHOP	SERB FELLOWSHIP DIPTY DUBEY PROJECT N710
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund		35,000		11,60,000	9,60,000
2. Income From Investment made on account of Funds	32,266				
3. Serv. Chrg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	32,266	35,000	2,30,003	11,60,000	9,60,000
TOTAL (a+b)	32,266	35,000	2,30,003	11,60,000	9,60,000
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	19,300	17,700		10,11,847	3,31,834
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.			25,426		
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead	12,966	14,664			
- Trnf. To Dev. Fund/Int. Receipt					1,00,000
TOTAL	32,266	32,364	25,426	10,11,847	4,31,834
d) Unsp. Am/Trf. Othr Fund					
TOTAL (c)	32,266	32,364	25,426	11,60,000	4,31,834
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)		2,636	2,04,577		5,28,166

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	TRAVEL REIM. NIBHM MEETING PROJECT N711 NIBHM	VISIT OF DR ANTHI RASIA PROJECT N801 DST	FELLOWSHIP N RAJESH PROJECT N803	FELLOWSHIP SAIRAM KAIIRAJ PROJECT N804	POST DOCTORAL FELLOWSHIP DR PROJECT N805 SREE LAKSHMI N
FUNDING AGENCY					
a) Opening Balance of The Funds		98,000		3,77,800	
b) Additions To The Funds	1,00,000		5,93,600	6,01,299	9,29,135
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds					
3. Serv. Charg/SQCOR Receipt					
4. OHAD/Other Income					
5. Service Tax Recd/Receivable			5,93,600	6,01,299	9,29,135
TOTAL	1,00,000		5,93,600	6,01,299	9,29,135
TOTAL (a+b)	1,00,000	98,000	4,53,200	9,79,099	
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					17,499
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Ben.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev. Fund/Int Receipt					
TOTAL	24,347		46,800	6,01,299	5,77,500
d) Unsp. Amt/Trnf. Othr Fund					
TOTAL (c)	24,347		46,800	6,06,649	6,84,861
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	75,653	98,000	4,06,400	3,72,450	2,26,775



INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	FELLOWSHIP DR NAVNEET LAL PROJECT N806 SHARMA	INSA SENIOR SC. FELLOWSHIP-CHIN PROJECT 0244 DIT	HANDWRITING ANALYSIS PROJECT 0246 DIT	DIGITAL IMAGING FOR INVESTIGATN PROJECT 0255 D.S.T.MIN SC &	REPORT ON STATE DEVELOPMENT PROJECT 0258 GOVT. W.B
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donations/Grants/Othr. Fund	9,60,000	-334	6,747	-45,128	-16,285
2. Income From Investment made on account of Funds					
3. Serv. Chrg/SQCOR Receipt		334		45,128	16,285
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	9,60,000	334	6,747	45,128	16,285
TOTAL (a+b)	9,60,000		6,747		
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work	0				
- Remuneration & Allowances	4,52,910				
- Travelling & Conveyance	14,496				
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf To Dev.Fund/Int.Receipt					
TOTAL	4,67,406				
d) Unsp. Amu/Trf. Othr Fund					
TOTAL (c)	4,67,406				
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a-b-c-e)	4,92,594		6,747		

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED ENDOWMENT FUNDS	MAFIC CRUSTAL XENOLITHS IN PROJECT 0260 D.S.T. GOI	DEV OF EXP PARADIGMS VISUL PROJECT 0295 MINS. OF DEEN	CRYPTOCRYPTOGRAPHY LUND UNIVERSITY PROJECT 0345 DEPT USENIX	ENDOWMENT FUND - S. H. ARAVIND		ENDOWMENT FUND MS. SUNITI PAL
				650A - 650H	651A - 651H	
a) Opening Balance of The Funds	-73,613	4,27,321	-7,699	1,39,925	2,15,247	
b) Additions To The Funds :						
1. Donation/Grants/Othr. Fund						
2. Income From Investment made on account of Funds			7,699	11,960	18,321	
3. Serv. Charg/SQCOR Receipt	73,613					
4. OHAdj/Other Income						
5. Service Tax Recd/Receivable			7,699	11,960	18,321	
TOTAL	73,613	4,27,321		1,51,885	2,33,568	
c) Utilisation / Expenditure						
i. Capital Expenditure						
- Fixed Assets						
- Books & Journal						
- Other						
TOTAL						
ii. Current Asset						
- Bills Receivable						
TOTAL						
iii. Revenue Expenditure						
- Site Prep & allied work						
- Remuneration & Allowances						
- Travelling & Conveyance						
- Admn. expenses/Prof/Benv.				13,280	26,564	
- Tax Deducted at Source						
- Service Tax Paid/Payable						
- Contingencies						
- Share Of Overhead						
- Trnf. To Dev. Fund/Int. Receipt				13,280	26,564	
TOTAL				13,280	26,564	
d) Unsp. Amnt/Trnf. Othr Fund						
TOTAL (c)				13,280	26,564	
e) Assets Trnf. to Corpus Fund						
NET BALANCE AS AT THE YEAR END (a-b-c-e)		4,27,321		1,38,605		2,07,004

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: EARMARKED/ ENDOWMENT FUNDS	ENDOWMENT FUND J.M. SENGUPTA	ENDOWMENT FUND SABYASACHI ROY	ENDOWMENT FUND MUKUL CHOWDHURY	ENDOWMENT FUND USRI GANGOPADHY	ENDOWMENT FUND NIKHILESH BHATT
FUNDING AGENCY	652A - 652H	653A - 653H	654A - 654H	655A - 655H	656A - 656H
a) Opening Balance of The Funds	1,51,133	2,14,463	8,24,051	2,29,632	1,85,672
b) Additions To The Funds :					
1. Donation/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	12,677	15,508	68,365	18,935	15,278
3. Serv. Charg./SQCOR Receipt					
4. OHAJ/Other Income					
5. Service Tax Recd/Receivable		15,508	68,365	18,935	
TOTAL	12,677	15,508	68,365	18,935	15,278
TOTAL (a+b)	1,63,810	2,29,971	8,92,416	2,48,567	2,00,950
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Berv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trnf. To Dev.Fund/Int Receipt					
TOTAL			9,000		13,282
d) Unsp. Amu/Trf. Othr Fund			9,000		13,282
TOTAL (c)			9,000		13,282
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT					
THE YEAR END (a+b-c-e)	1,63,810	2,29,971	8,83,416	2,48,567	1,87,668

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3: FARMARKED ENDOWMENT FUNDS	FUNDING AGENCY	ENDOWMENT FUND	ENDOWMENT FUND	ENDOWMENT FUND	GOLDEN JUBILEE	ENDOWMENT FUND	ENDOWMENT FUND
		B. K. CHAKRABORTY	L. T. SK. BANERJEE	D. BASU MEMORI.	ALUM - INT INV	N. S. IVENGAR	
		657A - 657H	658A - 658H	659A - 659H	660A - 660H	661A - 661H	
a) Opening Balance of The Funds		4,71,598	5,69,650	3,68,965	8,81,030	26,416	2,95,186
b) Additions To The Funds							
1. Donation Grants Other Fund							
2. Income From Investment made on account of Funds	41,472	51,226	30,324	73,764			
3. Serv. Chrg. SOCR Receipt							
4. OHADI Other Income							
5. Service Tax Recd. Receivable	41,472	51,226	30,324	73,764			
TOTAL	5,13,070	6,20,876	3,99,289	9,54,794			26,416
c) Utilisation Expenditure							
i) Capital Expenditure							
- Fixed Assets							
- Books & Journal							
- Other							
TOTAL							
ii) Current Asset							
- Bills Receivable							
TOTAL							
iii) Revenue Expenditure							
- Site Prep & allied work							
- Remuneration & Allowances							
- Travelling & Conveyance							
- Admn. expenses Prof. Benf.							
- Tax Deducted at Source							
- Service Tax Paid Payable							
- Contingencies							
- Share Of Overhead							
- Trnf To Dev Fund Int Receipt							
TOTAL	20,543	22,372	20,000	20,000			
d) Unsp. Am't/Trf. Othr Fund							
TOTAL (c)	20,543	22,372	3,99,289	9,54,794			20,000
e) Assets Trnf. to Corpus Fund							
NET BALANCE AS AT	4,92,527	5,98,504	3,99,289	9,54,794			3,01,602
THE YEAR END (a-b-c-e)							

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INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3-EARMARKED ENDOWMENT FUNDS	ISI DEVELOPEMENT FUND		MAHALANOBIS INT SYMPOSIUM		R C BOSE CENTRE DEV. FUND		ISI GENERAL FUND		ENDOWMENT FUND (LECT. IN ECON)	
	660 - 669	47,83,30,051	670 - 679	1,79,520	680 - 689	20,38,763	690 - 699	2,26,90,198	870A - 87011	1,20,321
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund										
2. Income From Investment made on account of Funds	3,77,67,325		15,000		32,43,244	19,09,937			10,035	
3. Serv. Charg/SQCOR Receipt	3,07,03,819									
4. OHA/dj/Other Income	75,03,026									
5. Service Tax Recd/Receivable										
TOTAL	7,59,74,170		15,000		32,43,244	19,09,937			10,035	
TOTAL (a+b)	55,43,04,221		1,94,520		52,82,007	2,46,00,135			1,30,356	
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance										
- Admn. expenses/Prof/Benv.	66,72,088									
- Tax Deducted at Source	45,64,517									
- Service Tax Paid/Payable										
- Contingencies										
- Share Of Overhead										
- Trnf. To Dev. Fund/Int Receipt										
TOTAL	1,12,36,604									
d) Unsp. Amt./Trf. Othr Fund										
TOTAL (c)	1,12,36,604									
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT	3,77,782									
THE YEAR END (a-b-c-e)	54,26,89,835		1,94,520		52,82,007	2,46,00,135			1,30,356	

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED: ENDOWMENT FUNDS	STAFF BENEVOLE: NT FUND		ISI ALUMNI ASSO PRIZE- FUND		HALDANE- PRIZE FUND		RAJA RAO MEMORIAL FUND		MAHALANOBIS CHAIR FELLOW FD	
	871A - 871H	2,06,061	872A - 872H	96,632	873A - 873H	3,28,522	874A - 874H	2,62,194	875A - 875H	26,64,927
a) Opening Balance of The Funds										
b) Additions To The Funds :										
1. Donation/Grants/Othr. Fund			79,688							
2. Income From Investment made on account of Funds	17,587		7,917		27,876		22,209		2,28,932	
3. Serv. Chang/SQCOR Receipt										
4. OHAdj/Other Income										
5. Service Tax Recd/Receivable		17,587		87,605		27,876		22,209		2,28,932
TOTAL		2,23,648		1,84,237		3,56,398		2,84,403		28,93,859
c) Utilisation / Expenditure										
i. Capital Expenditure										
- Fixed Assets										
- Books & Journal										
- Other										
TOTAL										
ii. Current Asset										
- Bills Receivable										
TOTAL										
iii. Revenue Expenditure										
- Site Prep. & allied work										
- Remuneration & Allowances										
- Travelling & Conveyance										
- Admn. expenses: Prof/Benv.			79,688						13,281	
- Tax Deducted at Source										
- Service Tax Paid/Payable										
- Contingencies										
- Share Of Overhead										
- Trnt. To Dev. Fund/In. Receipt				79,688						13,281
TOTAL				79,688						13,281
d) Unsp. Amv/Trf. Othr. Fund										
TOTAL (c)										
e) Assets Trnf. to Corpus Fund										
NET BALANCE AS AT		2,23,648		1,04,549		3,56,398		2,84,403		28,80,578
THE YEAR END (a+b-c-e)										

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3 - EARMARKED/ ENDOWMENT FUNDS	M.N. MURTHY MEMORIAL FUND 876A - 876H	A.S. GHOSH ENDOWMENT FUND 877A - 877H	ASIAN CONGRESS ON QUALITY 878A - 878H	DR. P.K. MENON MEMORIAL FUND 879A - 879H	HOUSE BUILDING ADVANCE
FUNDING AGENCY	4,31,237	9,50,369	14,60,616	1,41,352	3,08,97,319
a) Opening Balance of The Funds					
b) Additions To The Funds :					
1. Donations/Grants/Othr. Fund					
2. Income From Investment made on account of Funds	36,626	76,714	1,26,060	11,942	
3. Serv. Charg/SQCOR Receipt					
4. OHAdj/Other Income					
5. Service Tax Recd/Receivable					
TOTAL	36,626	76,714	1,26,060	11,942	
TOTAL (a+b)	4,67,863	10,27,083	15,86,676	1,53,294	3,08,97,319
c) Utilisation / Expenditure					
i. Capital Expenditure					
- Fixed Assets					
- Books & Journal					
- Other					
TOTAL					
ii. Current Asset					
- Bills Receivable					
TOTAL					
iii. Revenue Expenditure					
- Site Prep. & allied work					
- Remuneration & Allowances					
- Travelling & Conveyance					
- Admn. expenses/Prof/Benv.					
- Tax Deducted at Source					
- Service Tax Paid/Payable					
- Contingencies					
- Share Of Overhead					
- Trmf. To Dev. Fund/Int. Receipt					
TOTAL					
d) Unsp. Amt/Trf. Othr Fund					
TOTAL (c)					
e) Assets Trnf. to Corpus Fund					
NET BALANCE AS AT	4,67,863	10,27,083	15,86,676	1,53,294	3,08,97,319
THE YEAR END (a-b-c-e)					

INDIAN STATISTICAL INSTITUTE:  
 SCHEDULE 3 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

SCHEDULE 3- EARMARKED/ ENDOWMENT FUNDS	CURRENT YEAR TOTAL.		PREVIOUS YEAR TOTAL	
<b>FUNDING AGENCY</b>				
a) Opening Balance of The Funds		67,62,65,889		60,82,58,506
b) Additions To The Funds :				
1. Donation/Grants/Othr. Fund	14,08,76,153		14,00,56,447	
2. Income From Investment made on account of Funds	4,38,85,650		3,73,67,044	
3. Serv. Chrg/SQCOR Receipt	3,07,03,819		3,26,83,806	
4. OHAdj/Other Income	3,67,86,183		47,78,060	
5. Service Tax Recd/Receivable	62,56,778		38,29,330	
<b>TOTAL</b>		25,85,08,582		21,87,14,687
<b>TOTAL (a+b)</b>		93,47,74,471		82,69,73,193
<b>c) Utilisation / Expenditure</b>				
i. Capital Expenditure				
- Fixed Assets	32,36,105		46,13,158	
- Books & Journal	16,67,323		30,94,946	
- Other	6,27,653		13,63,000	
<b>TOTAL</b>		55,31,081		90,71,104
ii. Current Asset				
- Bills Receivable			2,46,173	
<b>TOTAL</b>				2,46,173
iii. Revenue Expenditure				
- Site Prep. & allied work	0			
- Remuneration & Allowances	8,25,74,607		6,77,84,138	
- Travelling & Conveyance	1,28,92,987		1,10,64,312	
- Admn. expenses/Prof/Benv	1,50,86,028		1,65,78,808	
- Tax Deducted at Source	45,64,517		49,34,086	
- Service Tax Paid/Payable	86,93,560		54,34,553	
- Contingencies	1,10,69,214		63,15,108	
- Share Of Overhead	1,54,64,208		85,80,562	
- Trnf To Dev. Fund/Int Receipt	1,84,32,906		77,86,747	
<b>TOTAL</b>		16,87,78,026		12,84,78,314
d) Unsp. Amt/Trf. Othr Fund		1,65,29,410		1,59,51,662
<b>TOTAL (c)</b>		19,08,38,517		15,37,47,253
e) Assets Trnf. to Corpus Fund		3,77,782		21,40,312
<b>NET BALANCE AS AT</b>		74,76,59,917(Cr)		67,10,85,628
<b>THE YEAR END (a-b-c-e)</b>		41,01,745(Dr)		

(A) Mukherjee, S.K. Chakraborty  
 Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
 Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
 Director



**INDIAN STATISTICAL INSTITUTE**  
203, B.T. ROAD, KOL-108

STATEMENT OF ASSETS ACQUIRED OUT OF EXTERNALLY FUNDED PROJECT												
SL.NO	ITEM OF ASSETS	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995	1995-1996	1996-1997	1997-1998	1998-1999		
1	LABORATORY ITEM	5238.00	22300.00	7725.00	459065.99	-	936811.00	-	1573020.00	-		
2	COMPUTER & PERIPHERAL	188144.00	328192.47	886471.80	686889.69	1590445.66	1721989.10	1172530.00	755045.00	3240469.00		
3	OFFICE FURNITURE	487142.74	21570.01	218168.13	8910.00	38245.00	161634.00	63144.00	80011.00	35700.00		
	<b>TOTAL :</b>	<b>890524.74</b>	<b>372062.48</b>	<b>1212384.93</b>	<b>1151565.68</b>	<b>1632291.66</b>	<b>2820414.10</b>	<b>1235674.00</b>	<b>2378076.00</b>	<b>3276169.00</b>		
	<b>ITEM OF ASSETS</b>	<b>1998-2000</b>	<b>2000-2001</b>	<b>2001-2002</b>	<b>2002-03</b>	<b>2003-04</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>		
1	LABORATORY ITEM	264083.00	534692.00	12524410.00	2015745.00	1432922.00	6541261.00	328336.00	2510803.00			
2	COMPUTER & PERIPHERAL	3898650.00	1208462.00	643932.00	1608687.00	1311428.00	3806472.00	9069726.00	2804337.00	4289464.00		
3	OFFICE FURNITURE	8800.00	20250.00	45905.00	52784.00	15690.00	814452.00	1478638.00	433955.00	8700.00		
	<b>TOTAL :</b>	<b>4171633.00</b>	<b>1763404.00</b>	<b>13214247.00</b>	<b>3677196.00</b>	<b>1327118.00</b>	<b>8053846.00</b>	<b>19089825.00</b>	<b>3566628.00</b>	<b>6808967.00</b>		

STATEMENT OF ASSETS ACQUIRED OUT OF ISEC FUND												
SL.NO	ITEM OF ASSETS	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	TOTAL UP TO	
1	LABORATORY ITEM	941781.00	1710833.00	3381241.00	11115875.00	3934549.00	5385084.00	4681704.00	169267.00	203588.00	71056633.99	
2	COMPUTER & PERIPHERAL	2210514.00	3680286.00	3169365.00	4498361.00	6405667.00	8564688.00	4520380.00	1162786.00	2793338.00	73321652.72	
3	OFFICE FURNITURE	578650.00	34892.00	815964.00	161574.00	1025824.00	534060.00	271923.00	93916.00	47759.00	7625380.88	
	<b>TOTAL :</b>	<b>12206445.00</b>	<b>5428013.00</b>	<b>7366580.00</b>	<b>16778810.00</b>	<b>11366040.00</b>	<b>11475612.00</b>	<b>9374007.00</b>	<b>1425969.00</b>	<b>3044685.00</b>	<b>151904067.59</b>	

**STATEMENT OF ASSETS ACQUIRED OUT OF IGP PROJECT**

SL.NO	ITEM OF ASSETS	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-16	2016-17	TOTAL UP TO	
1	LABORATORY ITEM	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	0.00	
2	COMPUTER & PERIPHERAL	250890.00	NIL	482004	NIL	NIL	NIL	NIL	NIL	NIL	732894.00	
3	OFFICE FURNITURE	NIL	NIL	482004	NIL	NIL	NIL	NIL	NIL	NIL	0.00	
	<b>TOTAL</b>	<b>250890.00</b>	<b>NIL</b>	<b>482004</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>NIL</b>	<b>732894.00</b>	

**STATEMENT OF ASSETS ACQUIRED OUT OF IGP PROJECT**

SL.NO	ITEM OF ASSETS	2011-12	2012-2013	2013-2014	2014-2015	2015-2016	2016-17	TOTAL UP TO	
1	LABORATORY ITEM	123355.00	72500.00	151480.00	83300.00	79069.00	149420.00	648134.00	
2	COMPUTER & PERIPHERAL	763369.00	284800.00	311485.00	1756419.00	3059659.00	42000.00	6217762.00	
3	OFFICE FURNITURE	199306.00	-	20000.00	0.00	19431.00	0	237737.00	
	<b>TOTAL :</b>	<b>1076030.00</b>	<b>337300.00</b>	<b>482976.00</b>	<b>1839719.00</b>	<b>3187169.00</b>	<b>191420.00</b>	<b>7113633.00</b>	

A. MUKHERJEE I.B.K. CHAKRABORTY  
Deputy Chief Executive (F)

SARUN MUKHOPADHYAY  
Chief Executive (A & F)

SANGHAMITRA BANDYOPADHYAY  
Director

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 7 FORMING PART OF BALANCE SHEET AS AT 31 March, 2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
A CURRENT LIABILITIES		
1 Acceptances		
2 Sundry Creditors:		
(a) For Goods	0 00	0
(b) Others	0 00	0
3 Advances Received	0 00	0
4 Interest Accrued but not due on:		
(a) Secured Loans/Borrowings	0 00	0
(b) Unsecured Loans/Borrowings	0 00	0
5 Statutory Liabilities		
(a) Overdue	0 00	0
(b) Others - ST,IT, P T Ser Tax etc	60,71,896.30	22,59,810
6 Other Current Liabilities	20,07,36,568.92	23,20,31,715
<b>TOTAL</b>	<b>20,68,08,465</b>	<b>23,42,91,525</b>

(A Mukherjee/ S K Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & I)

(Sanghamitra Bandyopadhyay)  
Director

INDIAN STATISTICAL INSTITUTE

SUB SCHEDULE OF SCHEDULE 7 FORMING PART OF BALANCE SHEET 31 March, 2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
SUB SCHEDULE OF SCHEDULE 7		
A. CURRENT LIABILITIES		
1. STATUTORY LIABILITIES		
Income Tax Staff/PLP	32,33,399.00	33,613
Income Tax Contractor	14,95,833.00	12,13,567
Professional Tax	2,76,657.00	2,67,292
VAT TDS	1,42,267.00	3,03,255
Service Tax	8,64,618.30	3,49,828
Cess on W.B. Cont. Worker Welfare	59,122.00	92,255
Sub-Total (1)	60,71,896.00	22,59,810
2. Other Current Liabilities		
Deposit -Library	53,49,954.84	56,70,738
Deposit -Laboratory	1,15,000.00	1,79,000
Deposit-Hostel	8,31,337.00	8,29,542
Deposit-Electric Caution	19,165.00	19,165
Earnest Money Deposit	13,69,526.00	21,70,496
Security Deposit	1,20,90,454.48	1,55,68,538
Amt Payable - RC Bose Center To ISI Kolkata	21,30,979.00	20,07,839
CTD and Annuity Deposit	2,450.00	12,250
Outstanding Liabilities Goods and Services	6,53,32,008.00	8,99,45,369
ISI Co-operative Credit Society Ltd-Kol+Giridih	2,27,937.00	14,83,321
ISEC ISI Fund	68,57,239.00	82,82,454
Loan To/From Fund	40,95,197.00	1,02,63,507
Group Insurance - Delhi and Giridih	47,209.00	24,907
Staff Insurance Premium Group Insurance	1,75,320.00	3,77,173
Staff Insurance Premium PPU	60.00	60
ISI Salary Saving - LIC	0.00	4,85,867
Staff Insurance Premium - Delhi & Giridih	21,800.00	21,240
GLIC Claim From Insurance Company	9,312.00	9,312
Claim under GSLI Scheme	0.00	37,178
Disposal Of Asset	20,06,618.00	16,39,764
Undisbursed Salary, Stipend and Pension	32,17,590.00	38,29,079
Allahabad Bank - Overdraft Account	0.00	0
Contribution to NPS Tier-1	37,048.00	60,999
Interest Payable On NPS	312.00	312
Matching Contribution	17,767.00	17,767
Stale Cheques	26,98,613.00	35,51,977
Accrued Liability -Travel,LTC and Others	1,44,19,959.46	33,30,416
Customer Advance	4,45,758.00	6,90,939
Intl.Conf-Premi (MIU)	9,68,941.00	9,68,941
Indocrypt 2013 14th Intl.Conf. on Cryptology RBI	1,98,000.00	1,98,000
Discreet Mathematics & Application (INDO-JAPAN)	0.00	19,498
INDO JAPAN Research Project-Dr.S.Ruj	1,38,895.00	1,98,890
Paleoproterozoic Supercontinents & Global Evolution	0.00	38,885
Workshop Conf. Of Multivariate Stat Method	12,71,331.70	13,66,431

INDIAN STATISTICAL INSTITUTE

SUB SCHEDULE OF SCHEDULE 7 FORMING PART OF BALANCE SHEET 31 March, 2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
Workshop on Disciplinary Proceedings	2,00,000.00	2,00,000
Study to Review the Existing System DGCIS	2,29,677.00	2,29,677
Workshop online Groupoids and Lie Algebroids NBHM	0.00	30,515
UNDP Project -Kanika Mahajan	1,537.00	1,537
International Conference on ICONQR -08 SQC	81,682.00	1,58,403
Robust Statistics 2015 ICORS 2015 Prof Ayan Basu	6,61,828.43	7,21,973
Indocrypt 2014 Microsoft Research Lab BLR	3,00,000.00	3,00,000
ICAPR Conference of ECSU, ICAPR	1,27,486.00	1,27,486
Fire Workshop of CVPR	2,00,000.00	2,00,000
International Workshop on Operator Theory	210.00	210
Planning Unit Conf (Einter School Delhi)	21,909.14	43,689
Data Mining Workshop of S.S. Handa-Delhi	2,73,051.00	2,73,051
SMBI Workshop 08.01.15 To 09.01.15 - Chennai	2,411.00	2,411
Sundry Creditors for Goods & Services.	6,63,25,040.00	7,34,94,795
DST-Workshop in Network Analysis.	275.00	275
Joint International Indo-AMA Meeting	1,343.00	1,343
Workshop on R language ISI AERU	3,124.00	3,124
Integretion 2015	0.00	90,000
IEEE Ants 2015	182.00	182
TCS INDO US Bilateral Workshop Dec. 2015	575.00	37,575
IWCIA 2015	1,52,397.65	2,78,898
Workshop Big Data Analytics 2015	0.00	1,06,680
36Th Batch Of ISS Probationers	50,592.00	1,02,342
Pre Regional Maths Olympiad 2015	1,59,107.00	1,54,107
Workshop On Topology IIT Mumbai	0.00	53,404
Training Program Demography & Population Studies	0.00	2,04,731
Statistics For Officer of RBI	1,71,804.00	2,15,804
Compilation Trade INDICES:INDGCIS	1,03,520.00	1,57,356
Handling UnitLevel Data & Analysis using R	1,60,841.00	1,83,941
School On Analysis & Topology NorthEast	1,70,509.05	2,95,729
37th Batch Of ISS Probationers Of NSSTA	1,18,507.00	1,70,507
Review meet Of Electrical, Electronics & Computer	0.00	2,12,371
Integration 2016	1,00,000.00	2,00,000
Raja Rammohan Roy Bangalore	398.00	398
Complex Geometry & Operator Theory	959.00	959
Advance Instructional School On Algebraic Geometry	0.00	4,14,800
OTOA Conference 2016	0.00	30,000
Registration Fees Of EPU Conference	0.00	33,587
PGDBA Course ISI+IIT+IIM 2017-19	30,58,438.00	0
State Level Workshop on Fin. Incl & Rural	1,61,082.00	0
Sample Survey Methodology & Estimation	89,488.00	0
Training Prog. On Reliability Engr. at SQC & OR	18,866.00	0
Indo USA Collaborative Samsi Savi Workshop	1,54,409.00	0
Maths On Olympiad 2016-17	84,372.00	0
Encryption Workshop R C Bose	2,00,708.00	0

INDIAN STATISTICAL INSTITUTE

SUB SCHEDULE OF SCHEDULE 7 FORMING PART OF BALANCE SHEET 31 March, 2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
DST/PAC Meeting 16-09-16	11,195.00	0
DST-PAC Meeting SERB	7,42,673.00	0
Workshop on Machine Learning & Data Mining 2016	22,515.00	0
Sponsorship Fees RCBCCS 06.06-11.06.16	1,39,000.00	0
Annual ISMS Meeting	1,66,542.00	0
Workshop on species Distr. Model	19,884.00	0
Int. Workshop on Pattern Analysis & Appl. 2017	32,735.00	0
Univ. of Manchestor & ISI Reaserch Collaboration	1,69,101.00	0
Workshop on ACM Student Chapter on CVPR	91,141.00	0
Workshop On High Performance on Comp. ACMU	68,833.00	0
Symposium 2018(Countries in Econ Symposium)	3,45,838.00	0
Training Prog. At RCBCCS For 2017 Japan	49,669.00	0
Int. Conference on Cryptology- Indocrypt.	18,730.00	0
Indocrypt 2016 for Registration	62,423.94	0
R C Bose Conference	1,29,000.00	0
ISS Probationers 38th Batch	28,894.00	0
National Symposium on Psychology in Diabetes	451.00	0
Expert Group Meet in MIU	14,915.00	0
Advanced Instruct school H Principle	5,76,000.00	0
Workshop on Data Sc & Machine Learning	1,35,446.13	0
Recent Adv. in Operator Theory -Jaydeb Sarkar	8,531.00	0
OTOA Conference 2017	1,818.00	0
Electric charger recoverable from NSSO-ISI Giridih	87,488.10	0
ISI/HANDS on workshop HGU Prof.Indranil Mukherjee	3,31,636.00	0
Sub-Total (2)	20,07,36,569.00	23,20,31,715
<b>GRAND TOTAL (1+2)</b>	<b>20,68,08,466</b>	<b>23,42,91,525</b>

**INDIAN STATISTICAL INSTITUTE**

203, B.T. ROAD, KOL-108

**SCHEDULES FORMING PART OF BALANCE SHEET AS AT MARCH 31, 2017**

DESCRIPTION	GROSS BLOCK			DEPRECIATION			NET BLOCK		
	A	B	C	D=(A+B)-C	E	F	G	H=(E+F)-G	I=(D-H)
Cost / Valuation as at beginning of the year	Additions during the year	Deductions during the year/Adjustment	Cost / Valuation at the year end	As at the beginning of the year	On Additions during the year	On Deductions during the year	Total upto the year-end	As at the Current year-end	As at the Previous year-end
<b>SCHEDULE 8 - FIXED ASSETS</b>									
<b>FIXED ASSETS</b>									
<b>ASSETS ACQUIRED UPTO MARCH 1986</b>									
<b>A. LAND &amp; LAND DEVELOPMENT</b>									
LAND : FREEHOLD	46,80,907.17	0.00		46,80,907.17	0.00	0.00	0.00	46,80,907.17	46,80,907.17
LAND : LEASE HOLD	256,46,94.35	0.00	481.42	25,64,212.93	0.00	0.00	0.00	25,64,212.93	256,46,94.35
<b>B. BUILDING</b>									
BUILDING : ON FREEHOLD LAND	1,22,13,650.47	0.00		1,22,13,650.47	0.00	0.00	0.00	1,22,13,650.47	1,22,13,650.47
BUILDING : ON LEASEHOLD LAND	84,58,563.82	0.00		84,58,563.82	0.00	0.00	0.00	84,58,563.82	84,58,563.82
SUPERSTRUCTURES ON LAND NOT BELONGING TO THE ENTRY	9,08,495.59	0.00		9,08,495.59	0.00	0.00	0.00	9,08,495.59	9,08,495.59
<b>D. VEHICLES</b>	2,96,533.16	0.00		2,96,533.16	0.00	0.00	0.00	2,96,533.16	2,96,533.16
<b>E. FURNITURES, FIXTURES</b>	35,06,756.92	0.00		35,06,756.92	0.00	0.00	0.00	35,06,756.92	35,06,756.92
<b>F. OFFICE EQUIPMENT</b>	19,74,134.19	0.00		19,74,134.19	0.00	0.00	0.00	19,74,134.19	19,74,134.19
<b>G. COMPUTER &amp; PERIPHERALS</b>	9,65,312.58	0.00		9,65,312.58	0.00	0.00	0.00	9,65,312.58	9,65,312.58
<b>H. ELECTRIC INSTALLATIONS</b>	27,77,138.27	0.00		27,77,138.27	0.00	0.00	0.00	27,77,138.27	27,77,138.27
<b>I. LIBRARY BOOKS</b>	1,68,61,803.75	0.00		1,68,61,803.75	0.00	0.00	0.00	1,68,61,803.75	1,68,61,803.75
<b>J. TUBEWELLS &amp; WATER SUPPLY SYSTEM</b>	4,37,890.40	0.00		4,37,890.40	0.00	0.00	0.00	4,37,890.40	4,37,890.40
<b>K. LABORATORY EQUIPMENT</b>	24,15,998.39	0.00		24,15,998.39	0.00	0.00	0.00	24,15,998.39	24,15,998.39
<b>TOTAL OF CURRENT YEAR</b>	5,80,61,879.06	0.00	481.42	5,80,61,397.64	0.00	0.00	0.00	5,80,61,397.64	5,80,61,879.06
<b>PREVIOUS YEAR</b>	5,80,62,360.48	0.00	481.42	5,80,61,879.06	0.00	0.00	0.00	5,80,61,879.06	5,80,61,879.06
<b>TOTAL : SCH 8</b>									

(A. Mukherjee/S.K.Chakraborty)  
Dy.Chief Executive (F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

**INDIAN STATISTICAL INSTITUTE**  
203, B.T. ROAD, KOL-108

**SCHEDULES FORMING PART OF BALANCE SHEET AS AT MARCH 31, 2017**

DESCRIPTION	GROSS BLOCK				DEPRECIATION				NET BLOCK	
	Cost / Valuation as at beginning of the year	Additions during the year	Deductions / Adjustments during the year	Cost / Valuation at the year-end	As at the beginning of the year	On Additions/Adj during the year	Deductions / Adjustments during the year	Total upto the year-end	As at the Current year-end	As at the previous year-end
	A	B	C	D=(A+B)-C	E	F	G	H=(E+F)+G	I=(D-H)	
<b>SCHEDULE 8A - FIXED ASSETS</b>										
<b>ASSETS ACQUIRED ON OR AFTER APRIL 1986</b>										
<b>FIXED ASSETS:</b>										
<b>A. LAND &amp; LAND DEVELOPMENT</b>										
LAND : FREEHOLD	2,95,92,391.20	0.00	0.00	2,95,92,391.20	0.00	0.00	0.00	0.00	2,95,92,391.20	2,95,92,391.20
LAND : LEASE HOLD	46,29,990.00	0.00	0.00	46,29,990.00	0.00	0.00	0.00	0.00	46,29,990.00	46,29,990.00
<b>B. BUILDING</b>										
BUILDING : ON FREEHOLD LAND	51,50,66,901.24	1,80,97,023.00	0.00	53,31,63,924.24	35,95,10,396.78	2,69,80,977.83	0.00	38,64,91,374.61	14,66,72,549.63	15,55,56,504.46
BUILDING : ON LEASEHOLD LAND	13,62,22,453.69	86,78,088.00	0.00	14,49,00,541.69	9,52,63,603.32	99,35,315.50	0.00	10,51,99,918.82	3,97,01,802.87	4,09,58,850.37
<b>LAND NOT BELONGING TO THE ENTRY</b>	53,85,634.92	0.00	0.00	53,85,634.92	53,85,631.92	0.00	0.00	53,85,631.92	3.00	3.00
<b>D. VEHICLES</b>	94,73,239.38			94,73,239.38	94,59,155.46	6,637.20	0.00	94,65,786.68	7,462.70	14,083.90
<b>E. FURNITURES, FIXTURES</b>	21,04,41,156.91	2,08,88,151.00	0.00	23,13,29,307.91	12,83,72,451.49	1,56,45,928.35	0.00	14,40,18,379.64	8,73,10,928.07	8,20,88,705.42
<b>F. OFFICE EQUIPMENT</b>	7,36,33,103.35	46,19,831.00	0.00	7,82,52,934.35	5,65,13,151.22	58,34,560.40	0.00	6,23,47,711.62	1,59,05,222.73	1,71,19,952.13
<b>G. COMPUTER &amp; PERIPHERALS</b>	50,51,48,962.44	2,40,12,827.00	0.00	52,91,61,789.44	46,85,05,870.34	4,33,50,281.20	0.00	51,19,56,151.54	1,73,05,637.90	3,66,43,092.10
<b>H. ELECTRIC INSTALLATIONS</b>	6,24,30,286.32	11,21,770.00	0.00	6,35,52,056.32	5,18,97,890.25	37,02,763.25	0.00	5,56,00,653.50	79,51,402.82	1,05,32,396.07
<b>I. LIBRARY BOOKS</b>	1,04,34,61,268.32	10,76,61,175.00	0.00	1,15,11,42,443.32	97,05,95,996.10	9,63,95,253.90	0.00	1,06,69,91,250.00	8,41,51,193.32	7,28,85,272.22
<b>J. TUBEWELLS &amp; WATER SUPPLY</b>	1,07,82,162.06	1,95,510.00	0.00	1,09,77,672.06	96,94,709.94	3,50,837.60	0.00	1,00,45,547.54	9,32,124.52	10,87,452.12
<b>K. LABORATORY EQUIPMENT</b>	4,99,37,256.07	48,77,838.00	0.00	5,47,15,094.07	3,87,41,114.97	35,22,338.13	0.00	4,22,63,453.10	1,24,51,640.97	1,10,96,141.10
<b>WORK IN PROGRESS</b>	58,28,48,852.00	23,94,74,096.00	1,80,79,124.00	80,52,43,924.00	0.00	0.00	0.00	80,52,43,924.00	58,28,48,852.00	58,28,48,852.00
<b>TOTAL OF CURRENT YEAR</b>	3,23,89,73,657.90	42,96,26,289.00	1,60,79,124.00	3,65,25,20,922.90	2,19,39,39,971.81	20,57,24,887.36	0.00	2,39,98,84,959.17	1,25,28,55,963.68	1,04,50,33,686.09
<b>PREVIOUS YEAR</b>	2,87,89,49,027.90	36,01,12,959.00	88,329.00	3,23,89,73,657.90	1,97,16,90,502.79	22,22,49,469.02	0.00	2,19,39,39,971.81	1,25,28,55,963.68	1,04,50,33,686.09
				<b>TOTAL : SCH-8A</b>						

(A. Mukherjee/S.K. Chakraborty)  
Chief Executive (A & F)

(Bairu Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

# INDIAN STATISTICAL INSTITUTE

203, B.T. ROAD, KOL-108

## SCHEDULES FORMING PART OF BALANCE SHEET AS AT MARCH 31, 2017

SCHEDULE BB. FIXED ASSETS DESCRIPTION: ASSETS ACQUIRED FROM DEVELOPMENT FUND	GROSS BLOCK				DEPRECIATION				NET BLOCK	
	A	B	C	D=(A+B)-C	E	F	G	H=(E+F)-G	I=(D-H)	As at the previous year end
Cost - Valuation as at beginning of the year	Additions during the year	Deductions/ Adjustments during the year	Cost / Valuation at the year end	As at the beginning of the year	During the year	Deductions/ Adjustments during the year	Total upto the year-end	As at the Current year-end	As at the previous year end	
<b>FIXED ASSETS:</b>										
<b>A. LAND &amp; LAND DEVELOPMENT</b>										
LAND LEASE HOLD	40,443.00	0.00	0.00	40,443.00				40,443.00	40,443.00	
<b>B. BUILDING</b>										
BUILDING ON FREEHOLD LAND	11,44,410.00	0.00	0.00	11,44,410.00	11,554.00		5,32,863.00	6,13,547.00	7,25,101.00	
BUILDING ON LEASEHOLD LAND	1,22,06,291.00	0.00	0.00	1,22,06,291.00	0.00		1,22,06,291.00	8.00	8.00	
D. VEHICLES	89,69,593.00	0.00	0.00	89,69,593.00	10,45,436.95		52,44,982.04	7,24,610.96	20,70,045.91	
E. FURNITURES, FIXTURES	46,31,710.00	0.00	0.00	46,31,710.00	2,42,441.45		26,92,268.55	19,29,200.85	19,76,865.30	
F. OFFICE EQUIPMENT	43,57,310.00	0.00	0.00	44,31,432.00	4,97,251.55		33,34,251.55	11,22,180.40	15,43,332.05	
G. COMPUTER & PERIPHERALS	1,78,56,110.00	0.00	0.00	2,79,40,912.00	1,11,562.50		2,78,29,349.50	74,862.50	1,72,320.00	
H. ELECTRIC INSTALLATIONS	1,89,434.00	0.00	0.00	1,89,434.00	2,497.11		1,91,931.11	1,19,407.55	1,06,204.65	
K. LABORATORY EQUIPMENT	14,53,233.00	0.00	0.00	16,53,233.00	0.00		16,53,233.00	22.00	22.00	
<b>TOTAL OF CURRENT YEAR</b>	<b>6,11,65,130.00</b>	<b>3,77,782.00</b>	<b>0.00</b>	<b>6,15,42,912.00</b>	<b>5,45,28,784.09</b>	<b>23,89,845.65</b>	<b>5,89,10,629.74</b>	<b>46,24,282.26</b>	<b>66,36,345.91</b>	
<b>PREVIOUS YEAR</b>	<b>5,90,24,818.00</b>	<b>21,40,312.00</b>	<b>0.00</b>	<b>6,11,65,130.00</b>	<b>5,19,36,067.90</b>	<b>75,91,916.19</b>	<b>5,45,28,784.09</b>	<b>46,24,282.26</b>	<b>66,36,345.91</b>	
<b>TOTAL : SCH-8B</b>										
<b>TOTAL : SCH-8 + SCH-8A + SCH-8B</b>									<b>1,31,55,41,643.58</b>	<b>1,10,97,31,911.06</b>

( A Mukherjee/S K Chakraborty )  
Dy Chief Executive ( F )

( Barun Mukhopadhyay )  
Chief Executive ( A & F )

(Sanghamitra Bandyopadhyay )  
Director



INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 9 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
SCHEDULE - 9 INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS		
1. In Government Securities	0.00	0
2. Other Approved Securities	0.00	0
3. Shares	0.00	0
4. Debentures and Bonds	0.00	0
5. Subsidiaries and Joint Ventures	0.00	0
6. Fixed Deposit with Banks	55,31,57,587.00	43,37,60,769
<b>TOTAL</b>	<b>55,31,57,587</b>	<b>43,37,60,769</b>

INDIAN STATISTICAL INSTITUTE  
SUB-SCHEDULE OF SCHEDULE 9

(Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
SUB - SCHEDULE OF SCHEDULE 9		
DETAILS OF INVESTMENT IN FIXED DEPOSIT IN BANK		
1. ISI General Fund	2,27,30,498.00	2,25,69,498
2. ISI Development Fund	51,42,64,268.00	39,80,90,271
3. Mahalonobis International Prize Fund	1,79,500.00	1,78,000
4. Endowment Fund For Lecture in Economics	1,20,300.00	1,18,800
5. Staff Benevolent Fund	2,06,000.00	2,04,000
6. ISI Alumni Association Prize Fund	95,900.00	88,900
7. Haldane Prize Fund	3,28,500.00	3,27,000
8. Raja Rao Prize Fund	2,62,000.00	2,60,500
9. P.C. Mahalonobis Fellowship Chair	26,64,500.00	26,56,000
10. M.N. Murthy Memorial Prize Fund	4,31,000.00	4,29,000
11. Ambar Nath & Santi Ghosh Endowment Fund	9,52,821.00	9,52,500
12. Asian Congress on Quality & Reliability Fund	14,60,000.00	14,51,000
13. P.K. Menon Memorial Fund	1,41,000.00	1,39,500
14. Suniti Pal Endowment Fund	2,16,500.00	2,16,500
15. S.Arvind Endowment Fund	1,41,000.00	1,41,000
16. Endowment Fund-Prof J.M. Sengupta	1,51,000.00	1,50,000
17. Golden Jubilee Alumnus Award Fund	8,80,900.00	8,79,900
18. Sabyasachi Memorial Award Fund	2,14,400.00	2,09,900
19. D. Basu Memorial Gold Medal	3,68,500.00	3,68,500
20. Mukul Choudhury Memorial Fund	8,24,000.00	8,15,000
21. USRI Gangopadhyay Memorial Fund	2,29,000.00	2,29,000
22. Nikhilesh Bhattacharya Memorial Fund	1,84,800.00	1,84,800
23. Bimal Chakraborty Endowment Fund	4,70,800.00	4,60,800
24. Lt. Sushil Banerji Endowment Fund	5,76,000.00	5,76,000
25. Dr. N.S. Iyengar Endowment Fund	3,14,400.00	3,14,400
26. R.C. Bose Centre Development Fund	47,50,000.00	17,50,000
Total	55,31,57,587	43,37,60,769

(A. Mukherjee: S.K. Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
(A) CURRENT ASSETS:		
1 Inventories		
(a) (i) Stores And Spares	0.00	0
(ii) Building Materials	0.00	0
(b) Loose Tools	0.00	0
(c) Stock - in trade		
Finished Goods	0.00	0
Work - in - progress	0.00	0
2 Sundry Debtors:		
(a) Debts Outstanding Exceeding Six Months	8,65,042.20	6,99,612
(b) Debts Outstanding Less Than Six Months	1,34,39,235.00	85,85,367

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
3. Cash in Hand		
At Kolkata	59,371.00	91,001
At Delhi	86,980.00	1,73,086
At Giridih	30,904.00	94,596
At Bangalore	2,12,575.00	9,33,601
At Hyderabad	10,853.19	8,196
At Coimbatore	41,807.00	49,558
At Mumbai	2,943.00	36,051
At Chennai	94,340.00	66,726
At Pune	3,589.00	471
At Tezpur	18,920.00	43,391
<b>SUB TOTAL OF CASH</b>	<b>5,62,282</b>	<b>14,96,677</b>

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
4. Bank Balances		
(a) With Scheduled Banks:		
On Current Accounts		
Allahabad Bank	1,37,39,679.22	2,99,10,116
SBI -Shyambazar Branch	5,37,943.31	17,35,150
UBI-Dunlop Bridge Branch	3,11,99,513.85	9,40,58,696
Indian Bank New Delhi	41,54,913.74	3,57,36,997
Indian Bank (FCRA-A/C) New Delhi	3,32,813.00	0
UBI -Giridih	40,82,664.50	49,01,710
UCO Bank-Giridih	5,933.06	5,933
UCO Bank- Bangalore	2,14,28,149.95	1,08,29,342
Bank of Baroda-Bangalore	45,48,436.62	37,07,317
Syndicate Bank- Coimbatore	2,36,701.65	5,65,316
SBI -Chennai	1,23,27,489.69	86,63,125
Canara Bank -Chennai	13,03,063.99	1,44,982
SBI- Mumbai	8,23,903.06	8,63,372
Bank of Baroda -Baroda	15,182.52	15,588
Syndicate Bank-Hyderabad	5,353.25	18,24,978
SBI -Pune	12,35,386.99	7,78,903
Nath Bank Ltd	0.00	3,647
Allahabad Bank-(PPU)- ISI Extension Counter	13,42,461.00	3,911
Punjab National Bank-Tezpur	52,13,765.50	10,07,413
IDBI Bank - RCB Center For Cryptology & Security	2,00,31,740.94	4,59,83,717
SBI- Ac No 3353455418	0.00	1,37,735
SBI - Tezpur Branch	1,86,589.00	2,00,088
SBI - Ac No 35514239311	35,12,514.75	35,40,976
UBI -Overseas Branch Ac	85,11,820.00	13,79,054
SUB TOTAL OF AMOUNT WITH BANK	13,47,76,020.00	24,59,98,066
<b>TOTAL OF CASH AND BANK :-</b>	<b>13,53,38,302</b>	<b>24,74,94,743</b>

**INDIAN STATISTICAL INSTITUTE**  
**SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)**

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
5. On Deposit Accounts (including margin money)	0.00	0
<b>TOTAL (A)</b>	<b>14,96,42,579</b>	<b>25,67,79,722</b>

INDIAN STATISTICAL INSTITUTE  
SCHEDULE II FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
<b>B. LOANS, ADVANCES AND OTHER ASSETS</b>		
1. Loans:		
(a) Staff		
Travel Advance	18,65,599.25	22,24,325
LTC Advance	4,89,412.00	6,10,937
Cycle Advance	2,780.00	4,580
General Advance	13,72,912.00	26,19,780
Festival Advance	23,09,300.00	24,69,600
Medical Advance	1,92,750.00	2,21,000
Scooter Advance	8,30,370.00	12,34,472
House Building Advance	31,91,434.00	42,05,134
Motor Car Advance	34,880.00	65,220
Computer Advance	16,61,580.00	20,79,786
Flood & Drought Relief Loan	1,67,400.00	6,74,600
(b) Deptt. Imprest	0.00	0
Loan to /from Fund	0.00	0

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
2 Advances and other amounts recoverable on cash or in kind		
(a) Prepaid Expenses	2,73,39,613.00	4,97,72,288
(b) Others		
Security Deposit	1,73,42,112.00	93,47,755
Suppliers Advance	80,25,067.17	59,21,770
Income Tax deducted -Other than Dev Fund	78,05,176.20	55,73,992
Advance for Land	0.00	30,848
Service Tax Receivable-Over Construction	47,56,336.00	47,56,336
Cenvat Credit	142.92	146
Amount Receivable By ISI From RC Bose Center For	21,30,979.00	20,07,839
Electric charger recoverable from NSSO-ISI Giridih	0.00	47,818
3. Income Accrued		
(a) On Investments for Unmarked Endowment Funds	40,61,690.00	27,04,786
4 Claims Receivable		
Regional Provident Fund Commissioner	0.00	0
5 Conference Seminar		
Intl. Conference on Multivariate Stat method	0.00	2,01,819
NBHM Math Olympiad	1,71,203.00	1,82,083
Training Program On Knowledge Discover Data Base	0.00	2,93,219
INDO FRENCH Meeting Nov 2014	0.00	20,98,244
Organising Census Data Dissemination Workshop -2014	0.00	499
Compilation of Trade Indices of Trade DGCIIS	0.00	9,746
State Level Workshop On Financial Inclusion & Rural	0.00	26,513
Workshop on Multivariate Stat method 2006	0.00	18,388
Training Program Demography & Population Studies	46,487.00	0
Annual Group Meeting of AICRP Giridih	0.00	0
6 Remittance in Transit	0.00	0
7 Accrued Income	14,30,01,877.23	36,98,947
8 ISI: C ISI Fund-Capital	7,32,894.00	7,32,894
TOTAL (B)	22,75,31,995.00	10,38,35,365



INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 11 FORMING PART OF BALANCE SHEET AS AT 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
	37,71,74,574	36,06,15,087

(A. Mukherjee/ S.K. Chakraborty)  
 Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
 Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
 Director

INDIAN STATISTICAL INSTITUTE  
SCHEDULE 12 FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	PLAN REVENUE	NONPLAN REVENUE	PLAN REVENUE	NONPLAN REVENUE
SCHEDULE - 12 MISC RECEIPTS.				
1) Share of Income from SQCOR				
Consultancy Services	0.00	1,57,98,536.00	0	47,79,364
2) Membership Fees	0.00	1,58,994.00	0	1,18,450
3) Fees for Training Course and Sale of Prospectus, Bye Laws etc	0.00	1,30,94,370.00	0	1,08,23,436
4) Receipt from Sale of Farm Products at Giridih	0.00	0.00	0	0
5) Misc Receipt, Examination Fees and Other Receipts	13,21,178.00	53,39,662.37	9,16,975	45,44,192
6) Interest on Short Term Deposit	10,35,693.00	1,00,17,003.34	56,93,772	53,85,461
7) Sale of Sankhya Publication	0.00	19,540.00	0	32,039
8) Hostel Seat Rent	0.00	6,16,737.00	0	5,54,759
9) Rent Realised -Premises	0.00	19,71,013.00	0	22,30,508
10) Rent Realised - Guest House	0.00	42,95,367.00	0	51,15,988
11) License Fees From Workers -Quarters	0.00	7,31,561.00	0	4,91,933
12) Interest on Motor Car Advance	0.00	78,559.00	0	1,84,130
13) Interest on Scooter Advance	0.00	1,18,363.00	0	93,240
14) Interest on Computer Advance	0.00	34,734.00	0	30,586
15) Share of Overhead from Externally Funded Project	0.00	75,05,032.50	0	44,16,414
16) Interest on Marginal Deposit	0.00	0.00	0	0
17) Interest on House Building Advance	0.00	13,29,533.00	0	17,57,501
<b>TOTAL</b>	<b>23,56,871</b>	<b>6,11,09,005</b>	<b>66,10,747</b>	<b>4,05,58,001</b>

(A Mukherjee/ S.K. Chakraborty)  
Dy Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 13 FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	PLAN REVENUE	NONPLAN REVENUE	PLAN REVENUE	NONPLAN REVENUE
<b>SCHEDULE - 13 GRANTS/SUBSIDIES</b>				
<b>A. 1. Grant From Ministry of Statistics &amp; Program Implementation, Govt of India</b>	13,36,17,395.04	1,67,16,10,238.80	11,59,56,104	1,54,36,63,416
2. State Government	0.00	0.00	0	0
3. Government Agencies	0.00	0.00	0	0
4. Institutions-Welfare Bodies	0.00	0.00	0	0
5. Others (Specify)	0.00	0.00	0	0
<b>TOTAL</b>	<b>13,36,17,395</b>	<b>1,67,16,10,239</b>	<b>11,59,56,104</b>	<b>1,54,36,63,416</b>

(A Mukherjee S.K. Chakraborty)  
 Dy Chief Executive(F)

(Barun Mukhopadhyay)  
 Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
 Director

INDIAN STATISTICAL INSTITUTE  
 SCHEDULE 20 FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	PLAN REVENUE	NONPLAN REVENUE	PLAN REVENUE	NONPLAN REVENUE
SCHEDULE - 20 ESTABLISHMENT EXPENSES				
01 Salary & Allowances (DA, HRA, CCA, Transport allowances, Bonus, Leave Salary, Extra Remuneration, LTC, Medical Reimbursement and Medical Welfare Expenses, Visiting Scientist's Remuneration, Med Ins Prm-Emp	4,94,97,642.00	1,11,09,95,259.25	6,21,58,528	1,06,41,65,707
02 Overtime Allowance	2,150.00	9,50,669.00	22,696	10,60,829
03 Employer's Contribution to CPF/NPS	4,04,851.00	2,29,37,993.00	1,71,902	2,17,01,970
04 Expenses on Employee's Retirement and Terminal benefits (Gratuity, etc)	0.00	3,19,90,790.00	0	3,53,93,970
05 Scholarship Stipend & Other Assistance to Trainees	11,53,29,383.00	0.00	9,98,06,586	0
06 Pension, Graded Relief & Commuted Value of Pension	0.00	37,46,55,806.00	0	33,22,39,576
<b>TOTAL</b>	<b>16,52,34,026</b>	<b>1,54,15,30,517</b>	<b>16,21,59,711</b>	<b>1,45,45,62,052</b>

(A Mukherjee/ S.K. Chakraborty)  
Dy Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

INDIAN STATISTICAL INSTITUTE

SCHEDULE 21 FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31/03/2017 (Amount in Rupees)

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	PLAN REVENUE	NONPLAN REVENUE	PLAN REVENUE	NONPLAN REVENUE
<b>SCHEDULE - 21 OTHER ADMIN. EXPENSES</b>				
01. Purchase & Expenses on Giridih Agricultural	0.00	1,60,451.00	0	54,963
02. Electricity Expenses	18,69,895.00	4,57,99,141.73	1,500	4,58,99,115
03. Repairs, Replacement and Maintenance of Office Equipment, Computers and Accessories etc	1,74,48,328.00	1,12,66,518.00	2,27,03,951	1,04,98,786
04. Rent,Rates,Taxes and Water Charges	1,21,75,500.00	99,44,606.00	1,54,49,196	81,53,257
05. Transport Expenses-Vehicles Running and Maintenance.	16,31,919.00	35,52,793.00	19,57,227	44,68,331
06. Postage, Telephone and Communication	14,84,795.00	69,84,112.00	18,24,273	68,96,628
07. Stationeries, Liveries and Consumable Stores for Electrical & Building	61,51,385.00	44,96,038.00	71,92,378	50,39,080
08. Travelling & Conveyance Expenses	2,09,09,278.00	1,25,78,233.00	2,64,06,902	1,84,07,395
09. Society Type Activities, Seminar and	39,90,003.00	2,62,168.00	35,85,498	16,61,777
10. Statutory Audit Fees & Expenses	0.00	3,12,700.00	0	3,04,750
11. Freight and Forwarding Expenses, Insurance, Advertisement, Examination Expenses	3,63,59,443.00	1,66,72,144.63	44,08,531	1,48,74,882
12. Books & Journals	11,33,27,553.00	0.00	9,28,56,220	0
13. Printing & Publication	1,38,071.00	5,45,188.00	1,35,693	5,14,633
14. Interest & Bank charges	2,631.00	1,15,819.02	5	11,88,984
15. Repairs, Maintenance of Building & Petty Constructions	45,34,313.00	1,10,63,600.00	86,11,731	71,13,254
16 Workers & Student's Welfare & Amenities (Excluding Medical Expenses)	2,19,275.00	54,62,496.80	18,14,969	55,43,833
17 Lab & Reprography Stores, Consumbles, Tools & Minor Accessories	79,36,418.00	1,03,707.00	1,48,41,671	79,457
<b>TOTAL</b>	<b>22,81,78,807</b>	<b>12,93,19,716</b>	<b>20,17,89,745</b>	<b>13,06,99,126</b>

(A. Mukherjee/ S.K. Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director

**INDIAN STATISTICAL INSTITUTE**  
**RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDED ON 31.03.2017.**

RECEIPTS		PAYMENTS	
PARTICULARS	AMOUNT(Rs.)	PARTICULARS	AMOUNT(Rs.)
OPENING BALANCE	245998066.20		
BALANCES WITH SCHEDULED BANKS	1496677.19		
CASH IN HAND	247494743.39		
RECEIPTS-EXTERNALLY FUNDED PROJECTS		ESTABLISHMENT EXPENSES	1199778907.00
RECEIPTS-ENDOWMENT FUND		ADMINISTRATIVE EXPENSES	40702437.28
DEPOSITS & ADVANCES(RECOVERIES)		PAYMENTS-EXTERNALLY FUNDED PROJECTS	51897044.61
STATUTORY RECEIPTS		PAYMENTS-ENDOWMENT FUND	1410987.25
OTHER RECEIPTS		DEPOSITS & ADVANCES	40357801.50
RECEIPTS-SQC PROG		STATUTORY PAYMENTS	144466153.20
RECOVERIES AGAINST PROVIDENT FUND		OTHER PAYMENTS	504102469.94
INTEREST ON SHORT TERM DEPOSIT.		PAYMENTS-SQC PROG	922220.00
		PAYMENTS TO PROVIDENT FUND	175507341.00
		FINANCE CHARGES AND INTEREST	100116.02
		INVESTMENTS	119463697.00
		PLAN CAPITAL EXPENDITURE	114506161.00
GRANTS RECEIVED	2267650000.00	PLAN CAPITAL EXPENDITURE-OS	1467138.00
		PLAN REVENUE EXPENDITURE	213091931.18
		PLAN REVENUE EXPENDITURE-OS	27159234.72
		BRANCH TRANSFER	11877601
		CLOSING BALANCE	
		BALANCES WITH SCHEDULED BANKS	134776019.59
		CASH IN HAND	562282.19
<b>TOTAL</b>	<b>2782150542.48</b>	<b>TOTAL</b>	<b>2782150542.48</b>

(B. Mukherjee / S. K. Chakraborty)  
 Dy. Chief Executive(I)

(Barun Mukhopadhyay)  
 Chief Executive (B & F)

Saughamitra Bandyopadhyay)  
 Director

**INDIAN STATISTICAL INSTITUTE**  
**203, B.T. Road, Kolkata - 700 108**

**SCHEDULE FORMING PART OF THE ACCOUNTS**  
**FOR THE YEAR ENDED 31<sup>ST</sup> MARCH 2017**

**Schedule 24 – Significant Accounting Policies**

**1. Accounting Convention**

- 1.1. The Indian Statistical Institute is an Institute of National Importance by an Act of Parliament. It is fully funded by Govt. of India. The Financial Statements are prepared on the basis of historical cost convention and on the accrual method of accounting (unless otherwise stated).
- 1.2. All Income / Receipts and Expenditure are maintained on accrual basis excepting in following cases: -
  - (a) Receipts on Interest on HB Loan are accounted on recovery basis.
  - (b) Ad hoc Bonus and portion of D.A. to employees are accounted for in the year government orders are received.
  - (c) Expenditure on disbursement of Share of Faculty members in respect of income sharing externally funded SQCOR consultancy project is accounted for on Cash basis.
  - (d) Prepaid expenses are charged off in the year these are incurred other than subscription of Journals.
- 1.3. In absence of prior period adjustment account, all transactions pertaining to the past year are accounted for in the regular head of accounts.

**2. Depreciation**

- 2.1. Depreciation on assets acquired up to accounting year 1985 – 1986 have been charged up to 1985 – 1986 as per Income Tax Rules and thereafter no depreciation has been charged on those assets and the same have been kept in fixed assets Schedule-8 separately.

- 2.2. The system of charging depreciation has been reintroduced from the Financial year 2003–2004 on assets acquired from 01.04.1986 and depreciation is charged on opening balances covered under Schedules 8A and 8B as per rates specified in the Income Tax Rules 1962 on Straight Line Method.
- 2.3. Depreciation on assets acquired after 30<sup>th</sup> September has been charged @50% of applicable rates. Assets which are fully depreciated have been retained at Re. 1/-
- 2.4. Depreciation on fixed assets for the year is deducted / reduced from the Capital Fund.

### **3. Fixed Assets**

- 3.1. Fixed Assets are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition.
- 3.2. All assets which are put to use during the year are capitalized.
- 3.3. Sale or disposal of fixed assets are recognized on realization basis and credited to Miscellaneous Receipt as Income. The written down value of such asset are deducted from fixed assets as well as from Capital Fund.

### **4. Retirement Benefits**

Provision for the accrued liabilities for Retirement Benefits are not made in the accounts except unpaid liability of retired employee because those expenses are paid out of grant received from Government.

### **5. Earmarked / Endowment Fund**

All externally / internally funded earmarked / endowment fund are accounted for under distinctive heads. Closing Balances of externally / internally funded earmarked / endowment fund are depicted in the Balance Sheet.

### **6. Foreign Currency Transaction**

Transactions in foreign currencies are recorded at exchange rate at the time of settlement.



## **7. Investments**

- 7.1. Investments against General Fund and other Funds stands in the name of Indian Statistical Institute, the disclosure of such investments, in Schedule- 9 forming part of the Balance Sheet as at 31.03.2017, under different fund heads are based on internal records.
- 7.2. Interest received on Investment on General and other Funds are accounted for directly in the fund account itself.

## **8. Books and Journals**

All the cost of books and journals are charged to Income & Expenditure Account. However, 95% of such cost is capitalized by crediting the Capital/Corpus Fund.

## **9. Government Grant:**

- 9.1. Plan Revenue Grant is specifically meant for Teaching, Training and Research activities of the Institute.
- 9.2. Allocation between Capital and Revenue amount of Plan Grant is made by the Institute as per its own convention.

## **10. Inventories:**

In case of laboratory stores, minor accessories, stationary items including computer stationeries, medicine are charged off to Income and Expenditure Account in the year of purchase. Year end stock under these heads not being material, are not taken back to the accounts.

**(A. Mukherjee/S. K. Chakraborty)**  
Dy. Chief Executive(F)

**( Barun Mukhopadhyay )**  
Chief Executive ( A & F )

**(Sanghamitra Bandyopadhyay)**  
Director

**INDIAN STATISTICAL INSTITUTE**  
**203, B. T. Road, Kolkata-700108**  
**SCHEDULE FORMING PART OF THE ACCOUNTS**  
**FOR THE YEAR ENDED 31<sup>ST</sup> MARCH 2017**

**Schedule - 25: Notes on Accounts**

**I. Fixed Assets**

- 1.1 Depreciation on fixed assets for the current year has been charged in the accounts on assets acquired on and after 01.04.1986 and depreciation on fixed assets acquired up to 31<sup>st</sup> March 1986 except Lease hold Land and Development could not be charged although process of incorporation of data in the revised software have been made as on date.
- 1.2 Land and Land Development as per Schedule – ‘8’ of this Accounts refers to “Takdah Planters Club, Darjeeling” acquired in 1964 - 1965 for 54 years. A sum of ₹481.42 is being amortized every year.
- 1.3 Work-in-Progress in Schedule ‘8A’ represent E-Governance project in Kolkata, Baruipur Land, Construction of Platinum Jubilee Academic Building, Platinum Jubilee International Statistical Education Centre (ISEC) Building, Construction of new Academic Building at Kolkata, Construction of new Students’ Hostel at Kolkata, Augmentation & distribution of electrical power, Repair, Renovation & Restoration work of R A Fisher Bhavan & S N Bose Bhavan at Kolkata, Construction of new campus for R C Bose Centre for Cryptology and Security at Gupta Niwas, Kolkata, SITC of Solar PV System in ISI campus at Delhi Centre, Mess Building at Delhi Centre, Construction of Boundary wall at Chennai, Filling of low lying areas of Karapakkam Road at Chennai, Construction work of first floor of Gymnasium at Bangalore, Construction of rain water harvesting structures at Bangalore, Construction of 2<sup>nd</sup> floor of Guest House at Bangalore, Construction of new Academic Block at Bangalore and Construction of Tezpur Campus.
- 1.4 The Institute has formed a new Committee for the Physical Verification of its fixed assets (except for Land, Books & Journals) under the Chairmanship of Dr. Ranjan Sett. Tender were invited from Professional Firms for Physical Verification of Fixed Assets. M/s Sarkar Gurumurthy & Associates, Chartered Accountants were appointed to carry out Physical Verification. As per letter dated 01.03.2016 of M/s Sarkar Gurumurthy & Associates, they have completed the Physical Verification work of different items of fixed assets available as on 31.03.2014 for all the departments of Head Office and other branches/centres. As per Work Order, M/s Sarkar Gurumurthy & Associates will submit the Fixed Assets Register, as prepared by them, to the C & AG auditors for convincing the auditors in respect of audit questionnaires on this matter.
- 1.5 Insurance Coverage of Fixed Assets excepting vehicle has not been taken in view of the communication received from Government that there is no provision under rule for insuring Government Building, library books, equipment and computers etc.

1.6 Assets include under Schedule 8A a computer system value of which is ₹ 7.00 Lakhs (Fixed approx.) was stolen in 1992 – 1993. The Council has resolved to write off the value of the computer system and the Government has been approached for necessary approval. Adjustment is awaited for approval from Government of India. Requisite documents as sought by Government of India ( MOS & PI) were sent on 22.02.2011 & 04.02.2011 for further processing of the case. Ministry informed vide letter dated 28/11/2011 to ascertain the present position of the case from Police Station. Based on this, vide letter no.CAF/14-1/13/17 dt.12/12/2011 was written to the officer-in-charge, Baranagar Police Station to provide status of the case. Reply is awaited from the OIC, Baranagar Police Station. More over this point was also raised in the council meeting held on 30<sup>th</sup> October 2012 and it was decided to send the necessary request to the Ministry to settle the matter. The letter seeking approval was sent to ministry vide letter no. CAF/2-2-1/556 dt.20/11/2012. Ministry vide its Letter No. G-29011/6/2012-B&F (Part-I) dt.29/11/2012 asked us to prepare a loss statement and submit sanction of competent authority. The requisite information was sent to the Ministry vide our Letter No.- C/ISI/A/cs/SKC dt.04/01/2013. No adjustment has been made since the requisite approval from ministry is pending. A reminder letter (No. : C/772/A/cs dt.06/09/2016) was sent to Ministry once again requesting kind consideration of the proposal at that end.

1.7 Current Liabilities include ₹ 20,06,618.00 (Previous Year ₹ 16,39,764.00) being sale proceeds of fixed assets disposed off and lying unadjusted.

1.8 Contingent Liabilities not provided for in respect of Interest levied on property tax from 2004-2005 to 2012-2013 amounting to ₹ 34,43,388.00 for New Delhi Centre. Appeal for the same has been filed in the High Court of Delhi vide W.P(C) No.4027/2013 Dated.22/04/2014. The High Court of Delhi had given the judgement in favour of Indian Statistical Institute, Delhi Centre clearly stating that we need not to pay any property tax and we need to pay only the service charges. However, the judgement of the High Court has been challenged by South Delhi Municipal Corporation by filing a LPA (Letter Patent Appeal) in the High Court of Delhi. The matter is pending in the High Court of Delhi.

## 2 Current Assets, Loans & Advances (Schedule – 11)

2.1 T.A. advance under Loans & Advances for ₹18,65,599.25 as on 31.03.2017 includes old balances of ₹6268.00 (over one year). Action has been taken to identify and adjust the old Advances.

2.2 Old balance of ₹ 3,647.00 relating to Nath Bank Ltd.(which has since liquidated) was charged off to Development Fund Account in the current year as per approval of the competent authority of the Institute.

2.3 There are old balances of ₹39,94,295.17(over 2 years) shown as advance to suppliers which includes ₹ 29,09,388.58 paid to erstwhile Statistical Publishing Society. Action is being taken to adjust these balances after proper scrutiny.

2.4 Old balance of ₹30,848.34 on account of Advance for land towards cost of contingent establishment and law charges for proposed acquisition of premises at 202 B.T. Road (in 1955) and at 123 Gopal Lal Thakur Road (in 1957) was charged off to Development Fund Account in the current year as per approval of the competent authority of the Institute.

2.5 Advances to Staff & Others, include ₹ 5,482.00 old / unreconciled debit balances (over two years). Action is being taken to identify and adjust these balances.

2.6 Bills receivable from SQC consultancy amounting ₹ 1,43,04,254.20 represent value of professional services rendered including ₹ 1,70,245.20 due for more than 2 years and ₹ 9,58,900.00 has since been received out of current year's billing.

### **3. Income and Expenditure Account:**

3.1 Expenditures on account of Visiting Professor Remuneration and Expenditure on Medical Reimbursement & Medical Welfare, LTC have been included under the head of expenditure under Salary and Allowances as recommended by Section 8(1) Committee of the Institute.

3.2 Out of net receipts on Statistical Quality Control Services a sum of ₹1,57,98,536 (being 25% of net receipts on SQC & OR Services, with effect from F.Y. 2005 - 2006) is shown in the Income Expenditure Account of the Institute and the balance amount has been retained with the Development Fund.

3.3 The Institute as per its convention had been showing Stipend and Scholarship Account and Books and Journal partly in Plan and partly in Non-Plan account. From 2014-15 onwards, Stipend and Scholarship Accounts and Books and Journal are shown in Plan Account.

### **4 Development Fund:**

4.1 Closing balance of Development fund is net off TDS and Bills receivables.

4.2 Assets amounting to ₹ 3,77,782.00 during the year, acquired out of Development Fund were taken into the asset Schedule 8B.

### **5. Capital Commitments:**

Contracts remaining to be executed on Capital Account amount to ₹15,408.72 lakhs (Previous year ₹ 11277.41 lakhs).

## **6. Gratuity Liabilities:**

The Gratuity Liability as per Payment of Gratuity Act, 1972 estimated as on 31.03.2016 is ₹ 64.80 Crores (Previous year ₹ 64.20 Crores) and not provided for.

## **7. Current Liabilities:**

Other current liabilities include ₹87,59,076.48 on account of Earnest Money / Security Deposits and ₹31,55,756.84 on account of Library / Laboratory / Hostel Caution Money Deposit which are outstanding for more than three years and five years respectively. Action has been taken to scrutinize and make appropriate adjustment in the accounts for these balances. Current liabilities include stale cheques of Rs. 26,98,613 and the same is under scrutiny.

## **8. General:**

- 8.1 As per decision of the Council, the Institute recovered overhead charges on fund received from externally funded projects and such recoveries are credited to the Miscellaneous Receipt Account and the Development Fund Account in equal proportion.
- 8.2. Assets acquired out of fund of Externally Funded Projects, during the year under audit, have been shown in the Schedule 3 – Earmarked / Endowment Fund.
- 8.3. The Institute has been approved by the Central Government of India, Ministry of Finance (Department of Revenue) for the purpose of clause (ii) of sub-section (1) of Section 35 of the Income Tax Act, 1961, read with Rule 6 of the Income Tax Rules, 1961 from the Assessment year 2004 onwards.
- 8.4. Uniform format of Account recommended by the Government of India has been implemented to the extent it is applicable and suitable to the Institute. Schedules of Accounts forming part of Balance sheet and Income & Expenditure are drawn which are relevant to the Institute. Schedules No. 2, 4, 5, 6, 10, 14, 15, 16, 17, 18, 19, 22 & 23 are not applicable to the Institute.

8.5. House Building Advances are made to the employees out of Specific Fund granted by the Government of India. Interests are recovered after recovery of the principal amounts and credited to Income and Expenditure Account. On recovery, principal amount is credited to the House Building Advance Account and thereby gets funded for payment of fresh House Building Advance.

8.6. Break-up of Audit Fees & Expenses – Audit Fee ₹2,80,250.00\* (Previous Year–₹2,73,125.00\*), Provident Fund Audit – ₹ 32,450.00\* (Previous Year – ₹31,625.00\*) (\* Inclusive of GST in 2016-17 / Inclusive of Service Tax in 2015-16).

8.7. The Institute has been granted registration by the Income Tax Department as Charitable / Religious Trust / Institution under Section 12AA of the Income Tax Act, 1961. Certificate granted on 10.11.2010 by the Office of the Director of I.T.(Exemption) with effect from 01.04.2010.

**(A. Mukherjee/S. K. Chakraborty)** **(Barun Mukhopadhyay)** **(Sanghamitra Bandyopadhyay)**  
**Dy. Chief Executive(F)** **Chief Executive ( A & F )** **Director**

## **Plan And Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE**

### **Independent Auditors' Report**

#### **Report on the Financial Statements**

We have audited the accompanying financial statements of Plan And Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE which comprise the Balance Sheet as at 31<sup>st</sup> March 2017, and the Income and Expenditure Account, and a summary of the significant accounting policies and other explanatory information.

#### **Management's Responsibility for the Financial Statements**

The Fund management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the Plan and Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE in accordance with the accounting principles generally accepted in India, including the Accounting Standards as specified by the Institute of Chartered Accountants of India. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the relevant Act for safeguarding the assets of the Plan And Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE, and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the accuracy and completeness of the accounting records relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

#### **Auditor's Responsibility**

1. Our responsibility is to express an opinion on these financial statements based on our audit.
2. We have taken into account the accounting and auditing standards and matters which are required to be included in the audit report.
3. We conducted our audit in accordance with the Standards on Auditing generally accepted in India. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements.

Continued.....2

4. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institute's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on whether the Plan And Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE has in place an adequate internal financial control system over financial reporting and operating effectiveness of such controls. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Institute's management, as well as evaluating the overall presentation of the financial statements.
5. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### **Opinion**

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give the information in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (Balance sheet) of the Plan And Policy Research Fund (PPRF) of INDIAN STATISTICAL INSTITUTE as at 31<sup>st</sup> March, 2017 and Income And Expenditure for the year ended on that date.

#### **Report on Other Legal and Regulatory Requirements**

Further to the above, we report that :

- a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
- b) In our opinion, proper books of account as required by law have been kept by the Institute so far as it appears from our examinations of those books.
- c) The Balance Sheet, the Income and Expenditure Statement dealt with by this reports are in agreement with the books of account.

Place : Kolkata  
Dated: 12<sup>th</sup> September, 2017  
324892E)

For **S.K. Mallick & Co.**  
Chartered Accountants  
(Firm Registration No.

( **Srijit Mukherji** )  
Partner  
Membership No. **050688**



**INDIAN STATISTICAL INSTITUTE - DELHI CENTRE**  
**PLAN AND POLICY RESEARCH FUND, FUNDED BY PLANNING COMMISSION**  
**BALANCE SHEET AS AT 31st March 2017**

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	Rs.	P.	Rs.	P.
<b>ENDOWMENT FUND :</b>				
As per Last Account	5,03,04,358.19		5,02,52,661.19	
ADD : Excess / (Deficit) of Income over Expenditure	2,17,303.00		51,697.00	
	<b>5,05,21,661.19</b>		<b>5,03,04,358.19</b>	
<b>GENERAL FUND</b>				
Amount Transferred from Endowment Fund	19,83,257.00		19,57,570.00	
ADD : 95 % of Cost of Books & Journals & TDS on Accrued Interest				
<b>CURRENT LIABILITIES</b>				
Outstanding Liabilities	10,34,520.00		9,47,082.00	
<b>LOAN AND ADVANCES</b>				
Loan on FDR				
<b>TOTAL</b>	<b>5,35,39,438.19</b>		<b>5,32,09,010.19</b>	
<b>ASSETS</b>				
Fixed Assets	1,00,05,828.00		95,44,736.00	
Investment	3,82,00,000.00		3,92,00,000.00	
Tax Deducted at Source	24,00,957.00		20,80,806.00	
Books & Journals	19,83,257.00		19,43,820.00	
<b>CURRENT ASSETS</b>				
Interest accrued but not due on Fixed Deposit	1,03,689.00		1,60,615.00	
Advance & Prepaid Expenditure	23,970.00			
Cash & Bank Balance With Indian Bank	8,21,737.19		2,79,033.19	
<b>TOTAL</b>	<b>5,35,39,438.19</b>		<b>5,32,09,010.19</b>	

(A.Mukherjee / S.K.Chakraborty)  
Deputy Chief Executive(F)

( Barun Mukhopadhyay )  
Chief Executive (A&F)

Sanghamitra Bandyopadhyay  
Director

In terms of our report of even date  
Kolkata, September 12, 2017

For S.K.Mallick & Co.  
Chartered Accountants  
(Firm Registration No.324892E)

Srijit Mukherji  
Partner  
Membership No. '050688

Date: 12<sup>th</sup> September 2017

**INDIAN STATISTICAL INSTITUTE - DELHI CENTRE**  
**PLAN AND POLICY RESEARCH FUND, FUNDED BY PLANNING COMMISSION**  
**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st March 2017**

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	Rs.	P.	Rs.	P.
<b>INCOME</b>				
Interest on Investment	32,01,383.00		33,38,859.00	
Interest on Saving Bank A/c	24,179.00		1,03,269.00	
<b>TOTAL ( A )</b>	<b>32,25,562.00</b>		<b>34,42,128.00</b>	
<b>EXPENDITURE</b>				
Salary, Honorarium	19,43,017.00		14,93,737.00	
Travelling, conveyance etc.	1,21,774.00		6,83,014.00	
Books & Journals	2,076.00		5,261.00	
Repair & Maintenance of Equipment & Computer and Contingencies	1,42,326.00		1,04,262.00	
Stores & Stationeries and General Charges	2,24,410.00		1,05,408.00	
Postage, Telephone & Electricity Charges	1,14,561.00		79,953.00	
Seminar & Conference	2,70,525.00		7,36,864.00	
Overhead Charges to ISI	1,89,570.00		1,81,932.00	
<b>TOTAL ( B )</b>	<b>30,08,259.00</b>		<b>33,90,431.00</b>	
<b>Excess / (Deficit) of Income over Expenditure</b>	<b>2,17,303.00</b>		<b>51,697.00</b>	

(A. Mukherjee / S. K. Chakraborty)  
Deputy Chief Executive (F)

( Barun Mukhopadhyay  
Chief Executive (A&F)

Sanghamitra Bandyopadhyay  
Director

In terms of our report of even date  
Kolkata, September 12, 2017

For S. K. Mallick & Co.  
Chartered Accountants  
(Firm Registration No. 324892E)

Srijit Mukherji  
Partner  
Membership No. '050688

Date: 12<sup>th</sup> September 2017

**COMMENTS OF AUDITORS FORMING PART OF THEIR REPORT ON THE ACCOUNTS OF  
THE INDIAN STATISTICAL INSTITUTE FOR THE YEAR ENDED ON 31ST MARCH 2017  
AND REPLIES OF THE ADMINISTRATION**

**Annexure A**

1. Depreciation on fixed assets acquired up to accounting year 1985-86 have not been charged in the accounts from the financial year 1986-87 onwards which is not in compliance with AS 6. [Refer Note 2.1 on Schedule 24]

**Reply:**

*The process of incorporation of Asset data has been completed. Necessary accounting effect will be given after taking approval of the competent authority of the Institute. Efforts are being made to complete the process in the Financial Year 2017-18. This is disclosed in Schedule 24: Significant Accounting Policies of the Institute under 2.1 and also in Schedule 25: Notes on Accounts under point no. 1.1.*

*M/s Sarkar Gurumurthy & Associates, Chartered Accountants, who were appointed to carry out Physical Verification, have informed vide letter dated 01.03.2016, that the Physical verification work of different items of fixed assets available as on 31.03.2014 for all the departments of Head Office and other branches/centres, has been completed and under compilation. Up on submission of Physical Verification Report, the matter will be placed for taking approval of the Committee constituted by the Institute in this regard and competent authority of the Institute. Further as per Work Order, M/s Sarkar Gurumurthy & Associates will submit the Fixed Assets Register, as prepared by them, to the C & AG auditors for convincing the auditors in respect of audit questionnaires on this matter. This is disclosed in Schedule 25: Notes on Accounts under point no. 1.4.*

2. Certain employee benefits including retirement benefits are accounted for on cash basis and accordingly compliance with AS 15 Employee Benefits cannot be ensured. [Refer Notes 1.2(b) and 4 on Schedule 24]

**Reply:**

*Certain employee benefits like Bonus, Gratuity, DA etc. are paid out of the Grant received from Government of India and are accounted for on cash basis from time to time on the basis of sanctions received from the Government to that effect. The amount to the extent of the accrued liability for Gratuity is disclosed in the Schedule 25: Notes on Accounts under point no. 6. This practice is also disclosed in Schedule 24: Significant Accounting Policies of the Institute under point nos. 1.2(b) and 4 respectively.*

3. All transactions pertaining to earlier periods are accounted for as year's transactions under the regular heads of account in the absence of Head "prior period adjustment account" and accordingly compliance with AS 5, Net profit or loss for the period, Prior period items and changes in accounting policies cannot be ensured. [Refer Note 1.3 on Schedule 24]

**Reply:**

*The transactions pertaining to earlier period are accounted for during the financial year in regular heads of account, as the institute is not maintaining prior period adjustment account. This is followed as per the policies of the Institute and the same is disclosed in Schedule 24: Significant Accounting Policies of the Institute under point no. 1.3.*

4. Transactions in foreign currencies are recorded at exchange rate prevailing at the time of settlement which is not in compliance with AS 11 Effect of changes in foreign exchanges rates". [Refer Note 6 on Schedule 24]

**Reply:**

*Transactions in foreign currencies are recorded at exchange rate at the time of settlements as per the practice followed in the Institute. The foreign exchange transactions mainly include subscription for Journal which is normally paid in advance for which there is no foreign exchange variation and Per Diem allowance to employees and students on their foreign tour. This practice is disclosed in Schedule 24: Significant Accounting Policies of the Institute under point no.6.*

5. Accounting of interest on house building loans and expenditure on disbursement of share of faculty members respectively has been done on cash basis. [Refer Note 1.2(a) and 1.2(c) on Schedule 24]

**Reply:**

*Receipts on account of Interest on house building loans are accounted on recovery basis from time to time. The expenditure on disbursement of share of faculty members in respect of income sharing from externally funded consultancy project pertaining to SQC & OR is accounted for on cash basis as per the practice being followed in the Institute. The same is disclosed in Schedule 24: Significant Accounting Policies of the Institute under point nos. 1.2(a) and 1.2(c).*

6. Due to non completion of physical verification of fixed assets and in absence of a comprehensive physical inventory of fixed assets the book balance thereof could not compared with physical balances. [Refer Note 1.4 on Schedule 25]

**Reply:**

*The Institute has formed a new Committee for the Physical Verification of its fixed assets (except for Land, Books & Journals) under the Chairmanship of Dr. Ranjan Sett. Tender were invited from Professional Firms for Physical Verification of Fixed Assets. M/s Sarkar Gurumurthy & Associates, Chartered Accountants, were appointed to carry out Physical Verification. M/s Sarkar Gurumurthy & Associates, Chartered Accountants, vide letter dated 01.03.2016, have informed that the Physical verification work of different Items of fixed assets available as on 31.03.2014 for all the departments of Head Office and other Branches /centres, has been completed and under compilation. Up on submission of Physical Verification Report, the matter will be placed for taking approval of the Committee constituted by the Institute in this regard and competent authority of the Institute. Further as per Work Order, M/s Sarkar Gurumurthy & Associates will submit the Fixed Assets Register, as prepared by them, to the C & AG auditors for convincing the auditors in respect of audit questionnaires on this matter. This is disclosed in Schedule 25: Notes on Accounts under point no. 1.4.*

(A.Mukherjee/S.K.Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive(A & F)

(Sanghamitra Bandyopadhyay)  
Director

**COMMENTS OF AUDITORS FORMING PART OF THEIR REPORT ON THE ACCOUNTS OF  
THE INDIAN STATISTICAL INSTITUTE FOR THE YEAR ENDED ON 31ST MARCH 2017  
AND REPLIES OF THE ADMINISTRATION**

**Annexure B**

1. There are old advances that may not be ultimately realizable against which no provisions have been made in the accounts. [Refer Note 2.3 on Schedule 25]

**Reply:**

*There is no practice in the institute to make provision for doubtful advances. However, all old advances are being reviewed on case to case basis and follow up action for adjustment or write off of such advances is in progress.*

2. Computer systems having book value of Rs. 7,00,000.00/- were stolen in year 1992-1993 and no adjustment has been made regarding such loss in financial statements. [Refer Note 1.6 on Schedule 25]

**Reply:**

*The Council of the Institute in its meeting held on 26<sup>th</sup> August, 2006 at Kolkata has resolved to write off the value of computer amounting to Rs.7,00,000/- (Rupees Seven Lacs only). The Nodal Ministry is requested to accord necessary approval for the same. Necessary accounting effects will be made on receipt of the approval from the Ministry. Present status in this regard is indicated in Schedule 25: Notes on Accounts under point no. 1.6.*

3. No adjustment of Rs. 20,06,618/- have been done which is included under current liabilities, being sale proceeds of assets disposed off including Rs. 16,39,764/- for disposals in an earlier year. [Refer Note 1.7 on Schedule 25]

**Reply:**

*Sale proceeds of fixed assets are accounted for after ascertaining the cost (book value), date of purchase, depreciation etc. from the unit/division/centre to which such assets belong. Efforts are being made to ascertain the relevant data pertaining to sale proceeds of such fixed assets to enable giving necessary accounting treatment at the earliest.*

*M/s Sarkar Gurumurthy & Associates, Chartered Accountants, who were appointed to carry out Physical Verification, have informed vide letter dated 01.03.2016, that the Physical verification work of different items of fixed assets available as on 31.03.2014 for all the departments of Head Office and other branches/centres, has been completed and under compilation. Up on submission of Physical Verification Report, the matter will be placed for taking approval of the Committee constituted by the Institute in this regard and competent authority of the Institute.*

*Further as per Work Order, M/s Sarkar Gurumurthy & Associates will submit the Fixed Assets Register ,as prepared by them, to the C & AG auditors for convincing the auditors in respect of audit questionnaires on this matter. This is disclosed in Schedule 25: Notes on Accounts under point no. 1.4.*

4. There have been projects which has excess of expenditure incurred over and above revenue during the year 2016-17. [Refer Schedule 3 of Balance Sheet]

**Reply:**

*All the externally funded projects, having debit balances, are being reviewed and in few cases, amount has been realised from the funding agency in 2017-18.*

5. Out of the above there have been a few projects which has opening debit balance for the past two financial years. [Refer Schedule 3 of Balance Sheet]

**Reply:**

*The Project Investigators have been issued letters to follow up the same with funding agency to recover the debit balances.*

(A.Mukherjee/S.K.Chakraborty)  
Dy. Chief Executive(F)

(Barun Mukhopadhyay)  
Chief Executive(A & F)

(Sanghamitra Bandyopadhyay)  
Director

# **INDIAN STATISTICAL INSTITUTE**

## **Independent Auditors' Report**

### **Report on the Financial Statements**

We have audited the accompanying financial statements of CONTRIBUTORY PROVIDENT FUND (CPF) and GENERAL PROVIDENT FUND (GPF) of INDIAN STATISTICAL INSTITUTE, which comprise the Balance Sheet as at 31<sup>st</sup> March 2017, and the Income and Expenditure Account, and a summary of the significant accounting policies and other explanatory information.

### **Management's Responsibility for the Financial Statements**

The CPF and GPF management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the CPF and GPF of INDIAN STATISTICAL INSTITUTE in accordance with the accounting principles generally accepted in India, including the Accounting Standards as specified by Institute of Chartered Accountants of India. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the relevant Act for safeguarding the assets of the Institute CPF and GPF, and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the accuracy and completeness of the accounting records relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

1. Our responsibility is to express an opinion on these financial statements based on our audit.
2. We have taken into account the accounting and auditing standards and matters which are required to be included in the audit report.
3. We conducted our audit in accordance with the Standards on Auditing generally accepted in India. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements.

Continued .2

4. An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Institute's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on whether the CPF and GPF has in place an adequate internal financial control system over financial reporting and operating effectiveness of such controls. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the CPF and GPF management, as well as evaluating the overall presentation of the financial statements.
5. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give the information required in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (Balance Sheet) of the Indian Statistical Institute CPF and GPF as at 31<sup>st</sup> March, 2017 and Income And Expenditure Account for the year ended on that date.

#### Emphasis of Matters

We draw attention to the following matter of the financial statements. However our opinion is not qualified in respect of these matters.

An amount of Rs.88,00,864.96 is receivable from GPF by CPF .

#### Report on Other Legal and Regulatory Requirements

Further to above, we report that:

- a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.
- b) In our opinion, proper books of account as required by law have been kept by the Institute so far as it appears from our examination of those books.
- c) The Balance Sheet, the Income and Expenditure Statement dealt with by this reports are in agreement with the books of account.

Place: Kolkata  
Dated: 12<sup>th</sup> September, 2017



For S. K. Mallick & Co.  
Chartered Accountants  
Firm Registration No. 324892E)

*Srijit Mukherji*  
[Srijit Mukherji]  
Partner

Membership No. 050688





(2)

**INDIAN STATISTICAL INSTITUTE  
CONTRIBUTORY PROVIDENT FUND  
Balance Sheet as at 31st March, 2017**

As at 31st March 2016		As at 31st March 2017		As at 31st March 2016		As at 31st March 2017	
Rs.	P.	Rs.	P.	Rs.	P.	Rs.	P.
Fund and Liabilities				Property & Assets			
<b>Brought Forward :</b>				<b>Brought Forward :</b>			
<b>Interest :</b>				<b>Cash and Bank Balances</b>			
<b>(b) On Employers' Contribution</b>				<b>In Savings Bank Account with :-</b>			
As per last account		As per last account		(i) Allahabad Bank		Duniop Bridge Branch	
6,69,96,821.24		7,62,35,124.39		6,43,893.42		40,667.10	
4,97,056.59		0.00					
3,097.00		122.00					
1,25,99,657.05		1,43,86,142.30		4,105.56		8,116.56	
38,61,507.49		27,77,648.66		19,610.60		---	
7,62,35,124.39							
<b>(c) On Members' Additional Subs.</b>				(ii) Union Bank of India, Ashokgarn Branch			
As per last account		As per last account		(iii) Bank of India, Baranagar Branch		(iv) United bank of India, Dunlop Bridge Branch.	
3,73,68,638.38		4,65,48,510.67		30,495.14		32,043.14	
1,79,49		0.00					
1,30,74,909.00		1,24,66,900.00		23,781.00		24,991.00	
38,95,216.20		17,18,501.00					
4,65,48,510.67							
<b>Amount due to ISI</b>				<b>(v) State Bank of India Dunlop Bridge Branch.</b>			
.....		.....		5,690.00		5,982.00	
<b>Amount Due to GPF</b>				<b>(vi) Bank of Maharashtra Shyambazar Branch</b>			
.....		.....		7,27,575.72			
<b>Income and Expenditure A/c.</b>				<b>Amount Due from GPF</b>			
As per last Balance Sheet		As per last Balance Sheet		Amount Due from ISI			
13,01,76,122.24		14,40,74,166.37		14,11,314.96		88,00,864.96	
Add Undistributed Income during		1,77,30,898.37		1,02,63,506.69		40,95,196.69	
1,38,98,044.13							
14,40,74,166.37							
<b>64,61,98,529.92</b>		<b>72,89,71,067.29</b>		<b>64,61,98,529.92</b>		<b>72,89,71,067.29</b>	

NOTES ON ACCOUNTS, ANNEXURE - 'A'

In terms of our report of even date.

For S. K. Mallick & Co  
Chartered Accountants  
(Firm Registration No.324892E)

(Swapan Kumar Panu) \*  
Member

(A. Mukherjee)  
Manager/Secretary

(Sajit Mukherjee)  
Partner

(Saswati Bandyopadhyay)  
Member

Membership No.050688  
Kolkata, September 12, 2017







**ANNEXURE – ‘A’**  
**INDIAN STATISTICAL INSTITUTE PROVIDENT FUND**

**Notes on Accounts of Indian Statistical Institute**  
**Contributory Provident Fund and General Provident Fund**

1. The Balance Sheet and Income and Expenditure Account of Indian Statistical Institute Contributory Provident Fund (CPF) and General Provident Fund (GPF) are prepared from the books of account maintained by the Indian Statistical Institute (Institute) wherein transactions and balances relating to CPF and GPF are separately recorded facilitating their identification and extraction for summarization. For the purpose of preparation of financial statements of CPF and GPF, the transactions and balances extracted from the Institute's books are agreed with the records maintained at the Provident Fund Section of the Institute that include separate Investment Ledgers for CPF and GPF and personal ledgers of the member-subscribers containing details of loans, withdrawals and final settlement of provident fund balances.
2. Interest is credited to the subscribers' account for each financial year after the audit of the annual accounts of CPF and GPF for the respective year as per rules of the fund. However, in case of a subscriber quits the service of the Institute or dies, interest, for the period for which the rate of interest is yet to be declared, is allowed up to the date of payment at the rate declared last less 2% per annum or rate as fixed by the Government for its employees whichever is lower as an interim payment and balance of interest, if any due are paid to the member or the member's nominee or legal heir as the case may be after the declaration of interest for that period. Accordingly, interest which have been credited to the accounts of the member-subscribers pertains to the previous financial year i.e. 2015-2016 and these have been booked in the Income and Expenditure Account of CPF and GPF respectively for the year 2016-2017.
3. On the amount of Loan paid to members of both CPF and GPF, interest is not realized. However, interest is credited to the account of member-subscriber of CPF/GPF after deducting any sums withdrawn (including loan) during the current year.
4. D.A to P.F. is being shown in the books of P.F. Accounts since 1990 and Other Deposits both of GPF and CPF respectively represents some arrears arising from the implementation of IVth Central pay commission in the Institute.
5. Interest is not allowed on the balances of erstwhile employees brought forward from earlier years and included as under.

<u>CPF :</u>	
Members' Own Subscription	: Rs.21,05,862.30
Employers' Contribution	: Rs.18,05,738.09
<u>GPF :</u>	
Members' Own Subscription	: Rs. 9,95,425.50

6. In the event of any shortfall of distributable surplus at the disposal of CPF and GPF to ensure distribution of interest on member-subscriber balances at the Government declared rates, no additional contribution is receivable either from the Government or the Institute. To avoid such situation and with an objective of earning higher investment income, for the benefit of the subscribers, investment of CPF and GPF funds were often made jointly resulting inter-fund balances. Awaiting adjustment on reconciliation as at 31<sup>st</sup> March 2017 Rs.88,00,864.96 was due to CPF by GPF (31<sup>st</sup> March 2016 Rs. 14,11,314.96 was due to CPF by GPF).
7. Previous year figure have been regrouped/rearranged wherever necessary.

(A. Mukherjee)  
Manager/Secretary

(Swapan Kumar Parui)  
Member

(Saswati Bandyopadhyay)  
Member

(Pinaki Roy)  
Member

(Rajat Kanti Chatterjee)  
Member

Dated . Kolkata  
September 12, 2017

COMMENTS OF AUDITORS (FORMING PART OF THEIR REPORT) ON THE ACCOUNTS OF THE INDIAN STATISTICAL INSTITUTE CONTRIBUTORY PROVIDENT FUND (ISICPF) AND INDIAN STATISTICAL INSTITUTE GENERAL PROVIDENT FUND (ISIGPF) FOR THE YEAR ENDED ON 31<sup>ST</sup> MARCH 2017 AND REPLIES OF THE BOARD OF TRUSTEES, ISICPF & BOARD OF MANAGEMENT, ISIGPF THEREON.

**An amount of Rs.88,00,864.96 is receivable from GPF by CPF.**

*Reply : ISIPF while making investments, keeping in view the benefit of the subscribers and in order to earn more interest, clubs money available both under CPF & GPF. This creates dues, from and to, each of the funds. This is done for the benefit of the subscribers. However, constant efforts are made to nullify the disbalance by shifting of funds from the debtor fund to the creditor one. Hence, the balance of Rs. 88,00,864.96 that was due from GPF to CPF (31<sup>st</sup> March 2016 Rs.14,11,314.96 due from GPF to CPF). Endeavour is on to nullify the same by mid 2017-2018.*

(Amitava Mukherjee)  
Manager/Secretary

(Swapan Kumar Parui)  
Member

(Saswati Bandyopadhyay)  
Member

(Pinaki Roy)  
Member

(Rajat kanti Chatterjee)  
Member

INDIAN STATISTICAL INSTITUTE  
203 B L ROAD, KOLKATA - 700 108

AMOUNT DEPOSITED (RS. 500.00 & RS. 1000.00) INTO VARIOUS  
BANK ACCOUNTS DURING DEMONETIZATION

Sl. No.	Bank Institution	Account Number	Transaction	Status
1	INDIAN BANK	405048625	Cash Deposit	3,88,500.00
2	ALLAHABAD BANK	20571463899	Cash Deposit	7,99,500.00
<b>Total</b>				<b>11,88,000.00</b>
3	SYNDICATE BANK	61232010006596	Cash Deposit	95,500.00
4	PUNJAB NATIONAL BANK	330600210001518	Cash Deposit	38,000.00
5	SYNDICATE BANK	30441019000079	Cash Deposit	11,500.00
6	UNITED BANK OF INDIA	0055050013392	Cash Deposit	62,500.00
7	STATE BANK OF INDIA	00000010144205206	Cash Deposit	39,000.00
8	UCO BANK	0293020000702	Cash Deposit	6,06,500.00
9	STATE BANK OF INDIA	00000010996682279	Cash Deposit	50,000.00
<b>Total</b>				<b>9,03,000.00</b>

(A. Mukherjee - S.K. Chakraborty)  
Dy. Chief Executive (Finance)

(Barun Mukhopadhyay)  
Chief Executive (A & F)

(Sanghamitra Bandyopadhyay)  
Director



## EDITORIAL BOARD

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## **Acknowledgements**

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The Editorial Board gratefully acknowledges the assistance rendered by the staff of the CE (A&F)'s Office, Public Relations Unit, Publication & Printing Unit and Reprography & Photography Unit in the preparation of this Annual Report.

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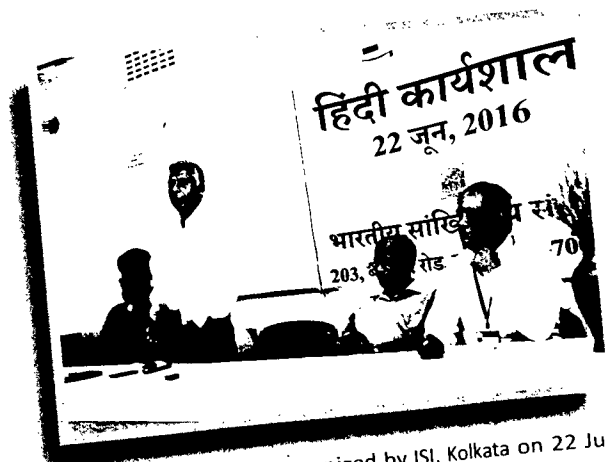
● Shri D. V. Sadananda Gowda, Minister of Statistics & Programme Implementation, visiting ISI Kolkata on 08 September 2016



● Farewell of Shri Arun Shourie, former Chairman, ISI Council on 09 September 2016



● Visit of Smt. Sudha Murthy at ISI, Kolkata on 26 March 2017



● 'Hindi Karyashala' organized by ISI, Kolkata on 22 June 2016



● Workshop on 'Business Statistics' organized by ISRU at ISI North-East Center, Tezpur during 05-09 December 2016



● 51st ISI Convocation at ISI, Kolkata on 23 January 2017