

Krishnaswamy Kasturirangan



Krishnaswamy Kasturirangan is presently Honorable Member of Parliament (Rajya Sabha). Dr. Kasturirangan has steered the Indian Space programme gloriously for over 9 years as Chairman of the Indian Space Research Organisation, before laying down his office on August 27, 2003.

Krishnaswamy Kasturirangan was born on October 24, 1940, in the district of Ernakulam, in Kerala, India. He graduated (B.Sc. with Honours in Physics) in 1961 and completed post graduation (M.Sc. in Physics) in 1963 with specialization in Electronics, both from Bombay University. He started his academic career as a Research Associate in Physical Research Laboratory, Ahmedabad, and finally received Ph.D. in Experimental High Energy Astronomy in 1971. He began his long association with ISRO Satellite Centre, Bangalore, starting as a Physicist in 1971, then headed the Physics Group in Aryabhata Project Management Board (1974-78). He was connected to the Bhaskara (I and II) Projects as Project Director (1976-80). He finally served as the Director, ISRO Satellite Centre (1990-94) after which he became the Chairman, Space Commission/Secretary, Department of Space, Government of India, Bangalore (1994-2003), before joining the Rajya Sabha.

During his illustrious academic career, Krishnaswamy Kasturirangan has received a number of Doctorate degrees (D.Sc. (Honoris Causa)) from various institutions all over India, such as Anna University, Chennai (1998), Banaras Hindu University (1994), IIT, Bombay (2000), University of Calcutta (2002), to name a few. He is also Fellow of Indian Academy of Sciences (FASc), National Science Academy (FNA), Astronautical Society of India (ASI), etc., Distinguished Fellow of the Institution of Electronics and Telecommunication Engineers (IETE), and Life Member of Indian Physics Association (IPA), Indian Science Congress Association (ISCA), among other

reputed national academic organizations. In the international arena, he became Fellow of the Third World Academy of Sciences (since 1996) and Member of the International Academy of Astronautics (since 1985) and Member of the International Astronomical Union (since 1982).

As an Astrophysicist, Krishnaswamy Kasturirangan's interest includes research in high energy X-ray and gamma ray astronomy as well as optical astronomy. He has made extensive and significant contributions to studies of Cosmic x-ray sources, celestial gamma-ray and effect of cosmic x-rays in the lower atmosphere. When he was at the helm of ISRO Satellite Centre as Director, he oversaw the activities related to the development of new generation spacecraft, Indian National Satellite (INSAT-2) and Indian Remote Sensing Satellites (IRS-1A & 1B) as well as scientific satellites. He was also the Project Director for India's first two experimental earth observation satellites, BHASKARA-I & II and subsequently was responsible for overall direction of the first operational Indian Remote Sensing Satellite, IRS-1A. Under his leadership, as Chairman, ISRO, the space programme has witnessed several major milestones including the successful launching and operationalisation of the India's prestigious launch vehicle, the Polar Satellite Launch Vehicle (PSLV) and more recently, the first successful flight testing of the all important Geosynchronous Satellite Launch Vehicle (GSLV). Further, he has also overseen the design, development and launching of the world's best civilian satellites, IRS-1C and 1D, realization of the second generation and initiation of third generation INSAT satellites, besides launching ocean observation satellites IRS-P3/P4. These efforts have put India as a pre-eminent space-faring nation among the handful of six countries that have major space programmes.

Krishnaswamy Kasturirangan is a prolific scientist with 220 Papers in National and international Journals. He has also coauthored several books, some of which are, (with U R Rao, 1979) The Aryabhata project, Indian Academy of Sciences; (with U R Rao, K R Sridhara Murthi and Surendra Pai, 1987) Perspectives in communications, World Scientific; with (R K Varma, U S Srivastava and B H Subbaraya, 1992) Space- in pursuit of new horizons, (A Festschrift for Prof U R Rao)

Allahabad: National Academy of Sciences; (with R K Kochhar) The Geocentric planets; Problems of space science research: education and the role of teachers. COSPAR Journal 'Advances in Space Research', edited by K Kasturirangan, J L Fellous, S C Chakravarthy, R S Young and M J Rycroft. (1997).

Scientific achievements of Krishnaswamy Kasturirangan have received acclaim from a number of national and international bodies. He has been bestowed numerous national awards such as Shanti Swarup Bhatnagar Award in Engineering Sciences, (1983); M N Saha Birth Centenary Award for 1999-2000 conferred by 87th Indian Science Congress; (2000); Padma Vibhushan, (2000); Aryabhata Medal Award 2000 conferred by INSA, Calcutta, (2001); Life Time Contribution Award in Engineering for 2004 by the Indian National Academy of Engineering, New Delhi, (2004); Balvantbhai Parekh Gold Medal 2005 for life-time achievements in space science by the Indian Planetary Society, Mumbai, (2005). International recognitions have come in the forms of Award of Intercosmos Council of the Soviet Academy of Sciences; (1981); International Collaboration Accomplishment Award 2001 conferred by International Society for Air Breathing Engines (ISOABE), Bangalore (2001); Award of 'Officer of the Legion d'honneur' by the President of the French Republic, France (2002); ISPRS Brock Medal by International Society for Photogrammetry and Remote Sensing ISPRS and the American Society for Photogrammetry and Remote Sensing (ASPRS) at the ISPRS Conference, Istanbul, Turkey (2004); The Alan D Emil Memorial Award by the International Astronautical Federation (IAF) at the 55th International Astronautical Congress, Vancouver, Canada (2004).

Krishnaswamy Kasturirangan has held several special positions, such as Honorary Professor, PRL, Ahmedabad (1997 onwards); Honorary Professor for Space Science and Applications, College of Naval Warfare, Mumbai (1996 onwards); Senior Associate, National Institute of Advanced Studies, Bangalore (1995 onwards); Honorary Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore (1995 onwards for 5 years). He has also served as General President, Indian Science Congress 2002-2003; President, Indian Academy of Sciences 2001-2003; Chairman, Council of Raman Research Institute (RRI) 2000-

2004; Ex-officio Member, Scientific Advisory Committee to Cabinet 2000; Chairperson, Research Council of National Aerospace Laboratories, Bangalore; Vice President, Indian Academy of Sciences 1998-2000. He has also chaired some of the prestigious international committees, such as, the International Committee on Earth Observation Satellites (CEOS), Panel for Space Research in Developing countries of COSPAR/ICSU, and the committee meeting at senior official level of UN-ESCAP, that led to the adoption of the "Delhi Declaration" by the Ministers of the region (1999-2000). He is also the Chairman of the Governing Board of the UN Centre for Space Science & Technology Education (UN-CSSTE), of the Board of Governors of IIT Chennai, of the Governing Council of the Raman Research Institute and Research Council of the National Aerospace Laboratory.

Some of the important roles he has played in international bodies are: Member, International Academy of Astronautics Sub-Committee on Mars Exploration (1992-1993); Indian Representative, IEEE Space Panel (1992); Chairman, Governing Body of the United Nations Centre for Space Science and Technology Education in Asia and the Pacific (since 1995); Member, Board of Trustees of the International Academy of Astronautics, Paris; Member, Advisory Board of International Space University (ISU), Strassbourg, France.

Dr. Kasturirangan delivered the 35th Convocation Address in 2001 at the Indian Statistical Institute. He very lucidly discussed the fundamental role played by the science of statistics in almost all branches of knowledge and all workings of a modern society, such as dynamic weather modeling, trade and industrial activities, information processing, communications, housing, health, transportation, security, environment monitoring and management – to name a few. He also lauded the scientific workers of Indian Statistical Institute for their past and present achievements.

Article by: Subir Ghosh, Professor, Physics and Applied Mathematics Unit, Indian Statistical Institute, Kolkata, India.

