NEWS AND VIEWS AT A GLANCE

FORTH COMING EVENTS:

* International Conference on Coastal Zones

  May 16-18,2016,Osaka Japan
  http://coastalzonemanagement.conferenceseries.com/

* ICEEB 2016-5th International Conference on Environment and Biotechnology

  May 25-27,2016 Jejuri, Maharashtra, India
  http://www.iceeb.org/

* International Conference on Oceanograhy and Earth Science (ICSCE) 2015

  June 12-13,2016 Lisbon, Portugal, Europe
  http://www.istdst.org/OES

* 5th International Conference on Earth Science and Climate change

  July 25-27,2016 Bangkok,Thiland
  http://earthscience.conferenceseries.com/

AWARDS AND RECOGNITION

***The Indian Science Congress Association :**Sectional Presidents for the Year 2015– 2016 **Earth System Sciences: Dr. Tejender Nath Jowhar,** Scientist 'F', Wadia Institute of Himalayan Geology, Dehradun-248 001 (Uttarakhand).

Environmental Sciences: Dr. Gangadhar Mishra, Retd. University Professor of Chemistry and Dean, Faculty of Science, Ranchi University, Ranchi.

* Dr. V.M. Tiwari, Scientist of CSIR-NGRI, Hyd has been appointed as Director of NCESS, Thiruvananthapuram.

* Dr. Madhavan Nair Rajeevan has been appointed Secretary of MOES, Govt of India

SCIENCE NEWS

***Earth's Water Came from Space Dust during Planetary Formation**

A new analysis of lava from the deep mantle indicates that water-soaked dust particles, rather than a barrage of icy comets, asteroids, or other bodies, delivered water to the newly forming Earth.

New research points to all of Earth's water originating from water-laden dust particles present in the nebula from which the solar system formed. (**Source**: Sullivan, C. (2015), *Eos, 96,* doi:10.1029/2015EO040147.)

***Majuli:A hungry river and a succumbing island**

Erosion in Majuli, a large island on the Brahmaputra, has left scores of people bereft of livelihoods and hope. While the government has spent crores on anti-erosion measures, it hasn't helped much. Plight of this island was discussed in detail during 2013 April workshop organised by IGU at Umiam, Meghalaya, as part of IGU Golden Jubilee celebrations. This island needs salvation of highest order (**Source**: Water Portal, Bengaluru)

***The Coming Blue Revolution**

Managing water scarcity, one of the most pressing challenges society faces today, will require a novel conceptual framework to understand our place in the hydrologic cycle. Human civilizations have always sprouted up around bodies of water. We've created increasingly efficient infrastructures to harness and store the precious resource, reaching a scale so enormous that human activities now have a substantial impact on the global water cycle. An Indian-American scientist provided a framework to integrate cross-disciplinary approaches to water scarcity in order to reveal innovative, holistic solutions. His integrated framework of the water cycle and humanity's place in it, which he calls "hydro-complexity," aims to identify the best practices for addressing emergent threats

against water security that come from climate change, increasing reliance on limited resources, and intensive land management and development. The underlying idea of the author's framework is that understanding our role in the complex water cycle is the first step toward managing inevitable water security challenges of the future. (**Source**: Water Resources Research, doi:10.1002/2015WR017342, 2015)

***Hawaii's Swelling Lava Lake Charts a Volcano's Hidden Plumbing**

Geophysicists used unique seismic signatures to track the cyclic rise and fall of lava inside Hawai'i Volcanoes National Park's Overlook crater. The action has been monitored by a network of Hawaiian Volcano Observatory seismometers, which allowed to track tremors originating from a kilometer below the surface. Before the lake formed, the instruments caught degassing bursts from the top of the lava column. Since then, much of the seismic activity can be explained by rockfalls as the crater grows. A third type of activity is more puzzling, consisting of unusual pressure drops from somewhere within the magma system, but with no signs of disturbance on the lake's surface. The authors focused their efforts on a fourth type of activity known as gas pistoning, in which the lava column sees a cyclic approximately 20-minute-long rise and fall of its thinly crusted surface. This study is central to determining the behavior of the magmatic system beneath Halema'uma'u and volcanic systems in general, protecting communities in Hawaii and around the world. (**Source**: Journal of Geophysical Research: Solid Earth, doi:10.1002/2014JB011789, 2015)

***Results from the MAVEN Mission to Mars**

NASA's MAVEN spacecraft has been in orbit around Mars since September 2014, seeking to understand processes driving the escape of atmospheric gases to space at present and their variations with solar and local heliospheric conditions together with geographical and seasonal influences. The first data are in (and archived in NASA's Planetary Data System [http://pds.nasa.gov/]), and a special collection of papers simultaneously in *Geophysical Research Letters* (*GRL*) and *Science* provide a large number of key first results, including measurements of the overall geometry and variability of the magnetosphere, upper atmosphere, and ionosphere, and their responses to interplanetary coronal mass ejections and influxes of solar energetic particles. (**Source:** NASA/Brain et al., 2015, doi:10.1002/2015GL065293)

***India`s environment report card during 2015**

India witnessed a challenging year in terms of its environmental conditions, starting the year with a title, the capital city New Delhi earned last year -- the world's most polluted city according to the World Health Organisation --- which it retained this year as well. Delhi and cities surrounding it have surpassed the pollution levels of Beijing, which was the most polluted in the world until Delhi took its spot. Pollution surfaced in unexpected ways -- like a lake in Bengaluru turning toxic and frothy with the industrial pollutants being mixed with the water. This incident caught not just national attention but that of the whole world. In nutshell Soaring pollution levels, crippling floods, quivering Richter notes to scores of environment laws awaiting implementation — this, in short, was India's environmental standing during 2015. (**Source:**http://www.thehindu.com/todays-paper/tp-in-school/indias-environment-report-card/article8042761.ece)

***Post Paris Climate meet initiatives by Government of India**

In an effort to meet targets under the recently approved Paris climate change agreement and to take forward the ongoing clean and green India drive, the government is expected to take multiple measures in 2016 which will help it cut the country's carbon footprint and also promote efficient use of energy and natural resources. The government will soon declare rules for management of various types of waste, as part of its action plan for 2016 to achieve post-Paris Climate Change targets. In a slew of review meetings held recently to form a roadmap in this regard, Environment Minister Prakash Javadekar said state governments will also be directed to ensure proper working of their Sewerage Treatment Plants. (**Source**: http://www.business-standard.com/

article/pti-stories/rules-on-waste-management-soon-javadekar-116010100574_1.html)

***Usable climate information to better expose common man to climate change impact**

As climate science and modeling evolve and the need for usable climate information becomes more urgent, the role of geospatial technologies, driven by the needs of users across research, education, government, and the private sector, will become more prominent. The new approach to exploring global climate change across space and time, as well as the two applications (Climate Inspector and Extreme Heat Climate Inspector), illustrates how we can integrate disciplinary knowledge from climate sciences, Web-based technologies, and GIS. The concept of interactive data exploration, visualization, and distribution, developed through Climate Inspector applications, has great potential for delivering usable climate information to a broad range of users. **(Source**:https://eos.org/project-updates/visualizing-the-climates-future)

***Hydraulic Fracturing Water Use Is Tied to Environmental Impact:**

The increasing number of hydraulic fracturing operations around the USA has prompted concerns about its impact on the environment. Assessing these impacts has been difficult, partly because of a lack of timely, comprehensive data on hydraulic fracturing in general and on injected water volumes in particular. To track variation in water volumes across well types and geography, researchers from the U.S. Geological Survey created a national-scale map of injected water usage, a crucial step in assessing the potential environmental impact of hydraulic fracturing. Researchers examined data from over 263,800 oil and gas wells of all types, hydraulically fractured between 2000 and 2014. They found that water usage varied depending on the type of reservoir. On average, the highest volumes of water were injected into wells in shale gas areas, as opposed to coal bed methane, tight oil, or tight gas areas.

Drilling direction also had an effect on water volume. Hydraulic fracturing draws water from local resources, so it can affect water availability, agricultural practices, and the behaviour of waterways and the wildlife that depend on them. These effects are amplified in drought-prone regions. Hydraulic fracturing has also caused concern over potential contamination of drinking water by wastewater and fluids that can flow back to the surface after injection. Although wastewater is often disposed of in deep wells, this practice has become more contentious after being tied to induced seismicity in some areas. This study contributes to a more complete knowledge of hydraulic fracturing. (**Source**: Water Resources Research, doi:10.1002/2015WR017278, 2015).

LIVING LEGENDS---- KNOW YOUR PEERS

Prof. B. L. Deekshatulu

B.L. Deekshatulu did his BSc (Electrical Engg) from BHU (1958) and ME (1960) and PhD (1964) from Indian Institute of Science (IISc), Bangalore. He joined IISc as a lecturer in 1964, became Assistant Professor in 1965 and Professor in 1970 and continued till 1976. Deekshatulu was a Visiting Scientist at IBM, Watson Research Center, NY (1971-72). He joined the National Remote Sensing Agency (NRSA), Hyderabad (1976) as Head, Technical Division, and became Director of NRSA (1982). He retired in 1996, as Distinguished Scientist and Director, NRSA. He was also the Director of the UN affiliated Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) from 1995 to 2002. Presently he is a Visiting Professor at the University of Hyderabad (UoH).

Academic and Research Achievements: Dr. Deekshatulu contributed in the areas of linear and non-linear systems, digital image processing and remote sensing (data processing and applications) and taught related subjects at IISc, UoH, etc. He developed methods for analyzing non-linear systems in different types of phase planes. He also developed methods for analyzing optimal, adaptive, eye movement control and multivariable systems. Methods for pattern classification methods for generation of Telugu

characters, feature extraction from images using Gabor filters, etc. were also developed by him. He has published research papers and mentored MTech and PhD students. At NRSA, he developed wide spread applications of remote sensing, commercial version of the large format drum scanner, image analysis equipment, etc. He was the Chairman, Remote Sensing Application Missions (ISRO), IGBP and SCOPE.

Awards and Honours: Deekshatulu is a recipient of number of awards that include Sir M Visveswaraya Award (1984), NRDC Invention Awards (1986, 1993), Dr Biren Roy Space Science Award (1988), Padma Shri (1991), Brahm Prakash Memorial Medal (1992) of INSA, Om Prakash Bhasin Award (1995), Sivananda Eminent Citizen Award from Vice President of India (1998), Boon Indrambarya Gold Medal, Thailand (1999), Aryabhatta Award by Astronautical Society of India(2002) and National Systems Award (Gold Medal). He is a Fellow of National Academy of Sciences (FNA), Fellow of Indian Academy of Sciences, Bangalore, the Institute of Electrical and Electronic Engineers, USA, the Academy of Sciences for the Developing World (Italy), Indian National Academy of Engineering, Andhra Pradesh Academy of Sciences, National Academy of Sciences (India), Allahabad and a Distinguished Fellow of the Institute of Electronics and Telecommunication Engineer, ASI.

He was President of IGU from 1991 to 1993 and contributed significantly to IGU`s growth. He is Life Fellow of IGU.

Dr. Janardan Ganpatrao Negi

Prof.J.G.Negi was born in a village that did not have a school. He experienced travails of poverty as an youth. Yet, a person from that background served as a full professor at the age of 30 in the USA, contributing to NASA's space missions. It is an inspirational achievement by any standards.

Dr.Negi, served as the Director General, Madhya Pradesh Council of Science and Technology, Science Advisor to the Govt. of Madhya Pradesh (1992-94 and 2005-6). He also was the founder Director General of the Institute of Seismological Research, Gandhinagar, Gujarat (2004-05). Previously he had held positions of Scientist Emeritus, and Director Grade Scientist at CSIR-National Geophysical Research Institute, Hyderabad. He was a Visiting Fellow (1968) at Boulder, Colorado USA at the Cooperative Institute for Research in Environmental Sciences, a partnership institute of NOAA (USA) and the University of Colorado Boulder. He was also a Visiting Professor in Geophysics (1975-77) at Universidade Federal Da Bahia, Instituto De Fisica, Federaco, Salvador, Bahia, Brazil and also at Federal University of Pará, Belem, Brazil. As UNESCO lecturer he taught Geophysics in the then countries behind the iron curtain - Bulgaria, Czechoslovakia.

AWARDS:

He was awarded Shanti SwarupBhatnagar Award (1980) for "significant contribution in theoretical geophysics, particularly in geoelectromagnetics and geomagnetism. His work has led to the development of important conceptual frameworks for delineating the earth's internal features from the distribution of its gravity, heat flow and electromagnetic fields at the surface". In 1974 he was awarded the Krishnan Medal for his outstanding contributions in Theoretical Geophysics by the Indian Geophysical Union (IGU). He is also recognized for his contributions and elected Life Fellow of the Royal Astronomical Society, London (1979); Fellow National Academy of Sciences, (1984). He is a Life Fellow of IGU. He was awarded by UGC as National Lecturer (1984-85) in Geophysics. Association of Exploration Geophysicists Award (1991). He delivered prestigious Dr HN Siddique Memorial Lecture (Gold Medal) from IGU (2003). He also has the Holkar Science College Centenary Award, Vigyan Ratna amongst other recognitions. He was honoured by Association of Exploration Geophysicists (AEG) in 1991 for his " contributions to cause of Geophysics in India".

BOOK: "Anisotropy in geoelectromagnetism" J.G. Negi and P.D. Saraf, Elsevier, Amsterdam, 1989

He is often quoted in the context of intra-plate earthquakes in peninsular India such as those in Latur 1993 and later Jabalpur earthquake of 1996. He is also on record for giving tectonic reasons for the decline of Indus Valley civilization. He was a member of an independent scientific team invited by Malayalam Manorama to investigate scientific and seismological reasons for well collapses in Kerala. He is also famous in the media for his statements on climate change regarding solar cycle global cooling prevailing over greenhouse gas warming. He has lectured on global warming controversy in seminars, notably at National Institution of Environmental Engineering, Nagpur (Science Day 2003). He has uniquely identified precursors of Dec. 23, 2004 New Zealand Earthquake, Dec. 26, 2004 North Sumatra Earthquake and associated Tsunami waves in fluctuations of the wobble of the earth. He has very many numerous media references to his work.

Some Technical Contributions

He has to his credit more than 200 research publications (majority of them in American and European Journals and conferences). Some of his importantcontributions deal with the discovery of unstable Kurudwadi rift leading to Latur Earthquake (India), lateral velocity gradients for prediction of Mexico earthquake of 1985, seismic surface waves for thickness estimate in Western Himalaya, Non-linear Transparency of propagation of Seismic pulses, effect of seismic anisotropy in seismic surface wave fields. Discovery of Biological mass extinction due to a K/T boundary astroidal impact near Bombay offshore; 33 million year periodicity of Geomagnetic Reversals and continental magnetism; discovery of Subterranean Himalayan fold in Central India from magnetic satellite data, Super mobility of Indian subcontinent; Phenomenon of negative Electromagnetic Screening; Astronomical Theory of climate, predictability limits of effects of monsoon – like bodies and Strange attractors in fluctuations of Length of the Day. He has also made important contributions in estimating the effects of Seismic and Electric anisotropy of Earth, communication with re-entering space vehicles, propagation of seismic and electromagnetic waves, anistorpy, etc. His early work was cited by Kerker (Kerker, Milton (1969)"The scattering of light, and other electromagnetic radiation". Academic Press, New York), as "a rather unique example of scattering by an inhomogeneous cylinder". He also worked on the problems involved techniques of signal processing of satellite, airborne, sea borne and surface geophysical data to delineate subsurface and geo-processes and examine predictability of nonlinear critical geophysical phenomena. He has applied advanced mathematical methods like Walsh transforms, Fourier transforms, Maximum Entropy Spectral methods, adaptive signal processing, time series analyses for linear and nonlinear earth process analyses.

He had joined NGRI at Hyderabad in 1964 and founded the Society for Theoretical Geophysics (STG) with his co-workers. He was keenly interested to mentor younger research fellows and was associated with BHU Geophysics Department, Dhanbad School of Mines, and Centre for Exploration Geophysics, OsmaniaUniversity. Under his guidance more than 10 talented young scientists received Ph.D.Many of them reached higher academic levels, using the strong foundation built under Dr.Negi`s guidance. When the theoretical geophysics group honoured him on 5th Sept, 2014 on teacher's day, one of his students Dr.R.K.Tiwari, Chief Scientist, NGRI mentioned that a manuscript co-authored by Negi and Tiwari was revised/ edited by them tens of times to reach the quality level aimed at. It is quoted, even now, as a classical contribution by many learned scientists. It shows his commitment, patience and perseverance to achieve quality. It also shows the extreme amount of faith and tenacity of his team**.** He always wished to invite talented scientists into Geophysics and had authored the article, ("Geophysical education and opportunities in india: A discussion", Geoexploration, 10-2, pp.125-127, 1972). In CSIR he served in the research advisory bodies for National Institute of Oceanography, Goa and NISTAADS, New Delhi.

Many of his admirers and colleagues wish him to get over health problems and once again guide the deserving to make a mark in Earth Sciences.

Prof. VK Gaur

Vinod Gaur studied Geophysics at Banaras Hindu University, Varanasi and at Imperial College, London (UK) where he discovered the hitherto unsuspected 'host rock effect' in geo-electromagnetics for which he was awarded PhD from the University of London in 1959. His academic career began, immediately thereafter, as a Scientist at the National Physical Laboratory, UK. In 1966, he joined the University of Roorkee as Professor where he initiated a modern academic programme in geophysics, incorporating signal analysis, inverse theory and computational geophysics. These were subsequently propagated by the UGC to other universities by sponsoring short-term intensive courses that were organized by Gaur at Roorkee. In 1983, he moved to Hyderabad as Director of the National Geophysical Research Institute and set about restructuring the Institute's research programmes with scientific rigour, guided by hypothesis formulation and experiment design.

Academic and Research Achievements: Gaur's landmark contributions to science include: Discovery and explanation of the host-rock effect in the electromagnetic response of subsurface geological conductors; Experimental confirmation of the hypothesis that the Indian plate under-thrusts the Asian plate @ ~ 1 cm /year along the Main Himalayan Fault, by direct measurement of slow deformation across a tunnel in the Tons valley, Uttaranchal; Discovery of the thick Deccan lithosphere using the first seismic tomography experiments in India; First quantitative measurement of the Indian plate velocity with respect to the Eurasian using Global Positioning System (GPS) Geodesy and an upper bound for the strain rate in the Southern Peninsula; First high resolution crustal images using broadband seismology of the south Indian shield and of north-eastern India; First Indian experiment to constrain global carbon fluxes, over India and Central Asia, through inversion of ultra-high precision atmospheric concentration data (0.1 ppm) generated at the WMO accredited CO2 laboratory established by him at the Indian Astronomical Observatory, Hanle, Ladakh. Gaur's other contributions towards advancing scientific endeavours include the design of modern Geophysics curricula (UGC, 1970s), restructuring of NGRI research programmes, design and writing of CBSE VIII and X class Science books (1990), design and implementation of Marine Satellite and Ocean Information Services, and modern Antarctic Research (1989-92) as Secretary to the Government of India, and the founding of a 'Science to People' programme in Hyderabad (1984). He has served on INSA Council (1985-87 and 1994-96). He was leader of Indian delegation to XXI General Assembly of IUGG at Boulder, USA

Awards and Honours: Professor Gaur was honoured with lectureships, namely, GP Chatterji Memorial Lecture (1991) and DN Wadia Medal (2007) both of INSA. His other awards include the Bhatnagar Prize (1980), Flinn Award of the American Geophysical Union (2000) and Saha Birth Centenary Award of the Indian Science Congress (2006). Prof.Gaur was Distinguished Professor, Indian Institute of Astrophysics. He is a Fellow of National Academy of Sciences (FNA), New Delhi; Fellow of the Indian Academy of Sciences, Bangalore and The Academy of Sciences for the Developing World (TWAS). As per his advice IGU introduced in mid 1980s Ocean science, space and planetary sciences in addition to solid earth geosciences as themes of IGU. He received Krishnan medal of IGU in 1979.

Prof. Harsh K. Gupta

Born on June 28, 1942, Dr Gupta had his education at the Indian School of Mines,Dhanbad and University of Roorkee (Ph.D.).Dr. Gupta held many prestigious positions including: Member of the National Disaster Management Authority of India (2011-2014); Secretary to Government of India, Department of Ocean Development (2001- 2005); Director, N.G.R.I. (1992-2001); Advisor, Department of Science and Technology, Government of India (1990- 1992); Vice Chancellor, Cochin University of Science and Technology (1987-1990); Director, Centre of Earth Science Studies, Trivandrum (1982- 1987); and Project Director, Kerala Mineral Development and Exploration Project (1982- 1987); Adjunct Professor, University of Texas at Dallas (1978- 2001); Research Scientist, University

of Texas at Dallas (1972-1977); Senior UNESCO Fellowship, International Institute of Seismology and Earthquake Engineering (IISEE), Tokyo (1971-1972); UNESCO Fellowship, IISEE, Tokyo (1966-1967;Advisor/ Consultant to UNESCO, Common Wealth Science Council, International Atomic Energy Authority and ICSU .

Major Scientific Contributions:

Prof. Gupta's work is globally recognized for 1) Providing the first evidence of an extremely thick crust (65~70 km) below Himalaya and Tibet Plateau region in 1967;2) Developing criteria to discriminate artificial water reservoir triggered earthquakes from normal earthquakes, 3) Chairing the Steering Committee of the Global Seismic Hazard Assessment Program (G-SHAP) and preparing the Global Seismic Hazard map, 4) Pioneering the Gas Hydrate program and delimiting the zones for stability of gas hydrates within the exclusive economy zone of India, 5) Taking up detailed studies of genesis of triggered earthquakes in the Koyna region, 6) Prof. Gupta spear headed setting up India's tsunami warning system., 7)setting up of the first low-temperature thermal desalination plant in Kavaratti, Laksha Dweep, 8)directed the Legal Continental Shelf program of India, which has led to India's submitting a claim to the UN Commission on the Limits of the Continental Shelf, 9) Leader of the Third Indian Scientific Expedition to Antarctica (1983- 1984), which succeeded in establishing a permanent base station for scientific research, 10) leader ofdeep drilling project in Koyna.

Dr. Gupta has published over 200 scientific papers in internationally reputed journals, has authored 5 books, published by Elsevier and Springer, and edited 21 volumes. Prof Gupta compiled and edited "Encyclopedia of Solid Earth Geophysics". This monumental 1500+ pages two volume treatise, published by Springer is globally a landmark (website: www.spinger.com).

IUGG/ICSU/AGU/AOGS.

Long-time involvement with IUGG (President 2011-2015, Vice President 2007-2011, Bureau Member for two terms, 1999- 2003 and 2003- 2007); IASPEI (Vice President, 1995- 1999, Executive Committee Member 1991- 1995); ICSU (Member CSPR, 2005-2008 and 2008- 2011); Chair, Hazards Group, ICSU Regional Office for Asia and Pacific; ILP (Bureau Member, 1986- 1989; Founder President of the Asian Seismological Commission (1996- 2000); IUGS (Councilor, 2000- 2004); Vice President and President AOGS (2010-2013); Member Scientific and Technical Committee of ISDR (2009-); Member AGU Committee on Public Affairs and a member of AGU Committee on International Participation.

Awards: More than 30, including the listed few:

1977-Indian School of Mines Golden Jubilee "Outstanding Alumni" Award; 1978-Krishnan Gold Medal of the Indian Geophysical Union; 1983-Shanti Swarup Bhatnagar Prize for Science & Technology in Earth Sciences; 1985-USSR Academy of Sciences "100 Years of International Geophysics" Memorial Medal; 1991-National Mineral Award, Government of India; 1997-CSIR Technology Prize for Business Development and Technology Marketing; 1997-98;Second Outstanding performance Award by the 11th International Kharazmi Festival of Iranian Research Organization for Science and Technology, Teheran, Iran; 1998-Indian Geophysical Union Decennial Award; 1999-IGU Millennium Award; 2000-Indian Society of Applied Geochemists Millennium Award; 2001-Vikram Sarabhai Memorial Lecture, Department of Space; 2001-First Dr. H.N. Siddiquie Memorial Lecture, Indian Geophysical Union; 2003- National Mineral Award for Excellence;2006-Padma Shri; 2008-Prof. Y. Nayudamma Memorial Gold Medal, APAS; 2008-Waldo E. Smith Medal Award for 2008 from AGU; 2009-Sivananda Eminent Citizen Award 2009 by Sanathana Dharma Charitable Trust; 2012-Distinguished Alumnus Award, I.I.T. Roorkee; 2011-Dr. Harinarain Life Time Achievement Award of IGU; 2013-Basant Samman (Outstanding Alumnus award), Indian School of Mines; 2014-The Daulat Singh Kothari Memorial Lecture of Indian National Science Academy**.**

Dr.Gupta has been lending support to IGU for more than two decades as President (1993-1995), advisor, Patron and Chief Patron.

He was also instrumental in instituting Prof.Jagdeo Singh memorial grant and its renaming as Prof. Jagdeo Singh and Dr.Balakrishna memorial grant. He is a Life Fellow of IGU.

P.R.Reddy