

January 15, 2013 New Delhi

PM's remarks on the occasion of the conferment of DAE's Lifetime Achievement Awards 2011

"I am delighted that we are today honouring four of our most distinguished scientists for their outstanding achievements and very important contributions in the field of atomic energy and, more broadly, to the advancement of science and technology as a whole in our country.

I would like to warmly congratulate Shri K. Balaramamoorthy, Prof. R. Balasubramanian, Dr. R.B. Grover and Dr. S.K. Sikka on being conferred the Department of Atomic Energy's Lifetime Achievement Award for the year 2011. Each one of you is truly worthy of this recognition. I am confident that you will serve as beacons of inspiration for our younger generations of scientists and technologists. I would also like to thank your families, and in particular your wives, for their sacrifices and the support they have provided to you in your endeavours to promote the nation's well being.

I would also like to compliment the Department of Atomic Energy for instituting these Awards. The DAE works in one of the most complex, sophisticated and challenging areas of science, technology and engineering. Despite decades of facing international technology denial regimes, our scientists and technologists have worked with unfailing commitment, dedication and skill. It is to their credit that India has now mastered advanced technologies and developed indigenous capabilities across the entire nuclear fuel cycle. Their efforts have not only given us deterrence capabilities and nuclear energy, but national capacity to apply the benefits of nuclear science to areas such as agriculture and healthcare.

As we pursue our national growth objectives to meet the rising aspirations of our people, the supply of affordable clean energy will be one of our foremost national challenges and a key priority for our government. Nuclear energy will remain an essential and increasingly important element of our energy mix. We are in the process of expanding our indigenous nuclear power programme. We will reach a new milestone soon, as the first nuclear reactor with Russian collaboration at Kudankulam starts operating, with the second reactor to follow later in the current year.

Even as we implement our power programme, we will continue to ensure that nuclear power remains wholly safe. The Fukushima incident in 2011 raised justifiable safety concerns about nuclear power. I am happy that reviews of all our nuclear power plants have been completed. Our cooperation with the International Atomic Energy Agency has been enhanced, and the first Operational Safety Review Team recently visited the Rajasthan Atomic Power Station. Parliament is also examining a Bill to set up a new Nuclear Safety Regulatory Authority. We will ensure that the safety and livelihoods of people are not jeopardized in our pursuit of nuclear power.

The Department of Atomic Energy was a vital part of our national efforts that led to adjustment of the global nuclear order and reintegration of India into international nuclear commerce for peaceful purposes. I am pleased that DAE is also closely involved in fostering international science and technology cooperation, including through its participation in mega-science projects such as the International Thermonuclear Experimental Reactor and the Large Hadron Collider. I wish DAE all success in its multiple endeavours.

I am confident that DAE will continue to make valuable contributions to further developing India's capabilities in nuclear energy and related fields. We should ensure that we continue to attract the best scientific minds among our younger generations to these fields. Even more, I hope that our nuclear scientists would continue to be guided by the basic goal of directing scientific activities to bring about an improvement in the quality of life of our people.

I am very pleased that Dr R Chidambaram is present here. I would like to use this opportunity to pay tribute to him for guiding India's atomic energy programme with such great distinction. His life and work are a source of inspiration for all scientists and technologists in our country. I once again congratulate the four distinguished recipients of the 2011 DAE Lifetime Achievement Award, and I wish them and the Department of Atomic Energy all the very best."

DEPARTMENT OF ATOMIC ENERGY

LIFETIME ACHIEVEMENT AWARD 2011

Shri K. Balaramamoorthy

Former Chief Executive, Nuclear Fuel Complex, Hyderabad and

Former Director, Materials Group, Bhabha Atomic research centre, Mumbai

is conferred the Lifetime Achievement Award for the year 2011 for his outstanding contributions in the field of nuclear fuel and nuclear components fabrication and for pioneering the development of non-destructive testing techniques in India.



Born in 1933, he completed his B.Sc from A C College, Guntur and D.I.I.Sc (Metallurgy) from the Indian Institute of Science, Bangalore. After joining the then Atomic Energy Establishment, Trombay in 1956, he was instrumental in developing and implementing various quality control procedures, with special emphasis on different non-destructive testing techniques to assess the metallurgical quality and integrity at all stages of fabrication of nuclear fuel and other critical components for nuclear research and power reactors.

He raised the performance at NFC to unprecedented levels of excellence and was instrumental in setting up Training Division at NFC for imparting education and giving refresher courses in different topics for the benefit of employees at various levels.

As Chairman of the NDT committee constituted by the Bureau of Indian Standards, he brought out standards on different methods and techniques pertaining to industrial and other special needs. He is an active member in various professional societies in the country and was the President of 'Indian Society for Non-Destructive Testing' for two years. He has made valuable contributions towards the preparation of Quality Assurance documents for Nuclear Power Plants by the International Atomic Energy Agency.

Shri Balaramamoorthy is the recipient of VASVIK Industrial Research Award in Materials Sciences & Technology, Life Time Achievement Award from Indian Society for Non-Destructive Testing, the Institution of Engineers – A.P. State Eminent Metallurgical Engineers Award.

Shri Balaramamoorthy is the acclaimed *Guru* of the Non-Destructive Testing and Quality Assurance community within the Department of Atomic Energy as well as in other research organisations, academic community and industries including strategic sector.

The Department of Atomic Energy takes great pleasure in conferring this award on him for his distinction and achievements.

DEPARTMENT OF ATOMIC ENERGY

LIFETIME ACHIEVEMENT AWARD 2011

Prof. R. Balasubramanian

Director, Institute of Mathematical Sciences, Chennai

is conferred the Lifetime Achievement Award for the year 2011 for his outstanding contributions in the field of higher mathematics, cryptology and theoretical computer science.



Born in 1951, Prof. R. Balasubramanian completed M.Sc. in mathematics from Madras University in 1972 and a Ph.D also in Mathematics from Bombay University in 1979. He spent the initial years after his PhD at TIFR before joining the Institute of Mathematical Sciences, Chennai of which he has been Director since 2000. He has worked in Analytic Number Theory, mainly the study of the properties of the Riemann Zeta Functions and Dirichlet L function and arithmetic consequences thereof. He has also worked on the mathematical questions related to Cryptology, in particular on Elliptic Curve Discrete Log Problem. His other interests include combinatorial problems in Number Theory, functions of a single complex variable and theoretical computer science. He has been Chairman of National Board for Higher Mathematics, Honorary Executive Director of Society for Electronic Transaction and Security, Chennai and is President of the Cryptology Research Society of India since 2001.

He received Young Scientist Award of Indian National Science Academy in 1980 and S S Bhatnagar, and B M Birla awards in 1990. In 2000, he was awarded Chevalier Ordre National du Mérite by the French Government for furthering Indo-French cooperation in the field of mathematics. He became the first plenary speaker from India at the International Congress of Mathematics-2010. He is a fellow of all three national science academies namely, Indian National Science Academy, New Delhi, Indian Academy of Sciences, Bangalore and National Academy of Sciences, Allahabad. He is also a fellow of American Mathematical Society.

In 2006, he was awarded Padma Shri by the President of India. In a career spanning more than three decades, Prof Balasubramanian has distinguished himself as a highly capable mathematician.

The Department of Atomic Energy takes great pleasure in conferring this award on him for his distinction and achievements.

DEPARTMENT OF ATOMIC ENERGY

LIFETIME ACHIEVEMENT AWARD 2011

Dr. Ravi Bhushan Grover

Principal Adviser, Department of Atomic Energy,

Member, Atomic Energy Commission and

Director, Homi Bhabha National Institute (HBNI), Mumbai

is conferred the Lifetime Achievement Award for the year 2011 for his outstanding contributions in the field of nuclear engineering, towards national initiative to open international civil nuclear trade, further development of framework for governance of nuclear power and human resource development.



Born in 1949, he completed a bachelor's degree in mechanical engineering at Delhi College of Engineering, Delhi University, and a Ph.D. in the faculty of engineering at Indian Institute of Science, Bangalore. During first 25 years of his career, Dr. Grover worked as a nuclear engineer and specialised in thermal hydraulics. He worked on fluid to fluid modelling techniques for two-phase flows, reactor fuel and core thermal hydraulics, safety analysis and process design of reactor systems and equipments.

Post 1996, he took up managerial responsibilities including technology transfer, human resource development and extra-mural funding. He played maximum role in all steps taken by the Government of India towards opening international civil nuclear trade. In the year 2005, he played a lead role during successful negotiations with the then six Parties to admit India as a full partner in the ITER venture and has been leading the Indian delegation to the ITER council since its inception. He conceptualized and set up HBNI as a university level institution.

Recent awards won by Dr. Grover include INS Award-2006 for Nuclear Reactor Technology, including Nuclear Safety; Dhirubhai Ambani Oration Award in 2008; Distinguished Alumnus Award by Delhi College of Engineering Alumni Association in 2009; and Distinguished Alumnus Award by Indian Institute of Science and Indian Institute of Science Alumni Association in 2011. He is a Fellow of the Indian National Academy of Engineering, and President of Indian Society of Heat and Mass Transfer for the period 2010-2013.

During a career spanning four decades, Dr. Grover has distinguished himself as an academic, research and development engineer and a science administrator. His knowledge of nuclear engineering and nuclear law has earned him the title 'nuclear diplomat'.

The Department of Atomic Energy takes great pleasure in conferring this award on him for his distinction and achievements.

DEPARTMENT OF ATOMIC ENERGY

LIFETIME ACHIEVEMENT AWARD 2011

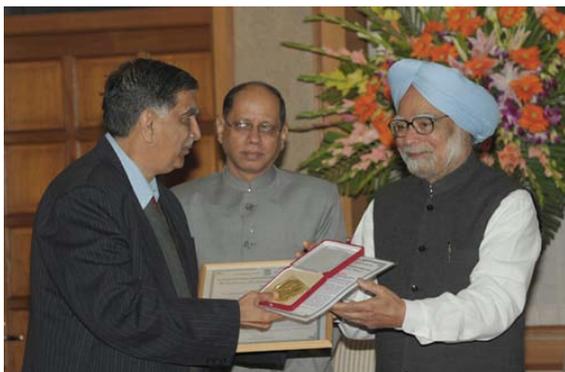
Dr. Satinder Kumar Sikka,

Homi Bhabha Chair Professor, Bhabha Atomic Research Centre, Mumbai,

Former Scientific Secretary to the Principal Scientific Advisor to the Government of India and

Former Director, Atomic and Condensed Matter Physics Group, BARC, Mumbai

is conferred the Lifetime Achievement Award for the year 2011 for his outstanding contributions in the field of condensed matter physics and the strategic programme of the Department.



Born in 1942, Dr. Sikka obtained a Ph.D. in Physics from Bombay University and worked in the fields of neutron and x-ray crystallography, high pressure and shock wave physics. He steered the development of beam lines for INDUS1 and INDUS2 synchrotrons at RRCAT, Indore, and expansion of BARC's seismic network in the country. He initiated the development of a project for explosive shockwave research. He is the author of several highly cited papers. He participated in conducting the Peaceful Nuclear Explosion experiment in 1974. For the 1998 nuclear test series, he was the leader of the design team. For these tests, he set up diamond anvil cells for static pressure generation, gas gun and high explosive techniques for shock waves.

He is a Fellow of all the three national science academies and also an elected member of the Asia Pacific Academy of Materials. Other honours received by him are: H.K. Firodia Award for Excellence in Science & Technology (1998), MRSI-ISCS Superconductivity and Materials Science Annual Prize (2001), M.M. Chugani Award for Excellence in Applied Physics of Indian Physics Association (2002), The Homi Jehangir Bhabha Medal for Experimental Physics of INSA (2005), Indian Nuclear Society 'Homi Bhabha Lifetime Achievement' Award (2007) and Prof. Meghnad Saha Memorial Lecture Award (2011). He was a member of the Executive Committee of International Association for Advancement of Research and Technology under High Pressure during 1997-2000, and Consultant to the Commission on High Pressure of International Union of Crystallography during 2002-2006. He was awarded 'Padma Shri' in 1999.

The Department of Atomic Energy takes great pleasure in conferring this award on him for his distinction and achievements.

Other Photographs of the EVENT.

