Shanti Swarup Bhatnagar Prize for Science & Technology 2011

Shanti Swarup Bhatnagar (SSB) Prize for Science and Technology was instituted in the year 1957, in the memory of late Dr (Sir) Shanti Swarup Bhatnagar, FRS, the founder director of the Council of Scientific & Industrial Research (CSIR). The SSB Prize is awarded each year on the basis of conspicuously important and outstanding contributions to human knowledge and progress, made through work done primarily in India during the five years, preceding the year of the prize.

Any citizen of India engaged in research in any field of science and technology up to the age of 45 years is eligible to be nominated. Overseas Citizen of India (OCI) and Persons of Indian Origin (PIO) working in India are also eligible.

The SSB Prize, comprising a citation, a cash award of ₹ 5,00,000/- (Rupees five lakh only) and a plaque, is given to each person selected for the award in the following disciplines:

- **Biological Sciences**
- **Chemical Sciences**
- **Earth, Atmosphere, Ocean and Planetary Sciences**
- **Engineering Sciences**
- **Mathematical Sciences**
- **Medical Sciences**
- **Physical Sciences**

Till 2011, 474 scientists have received the prestigious Shanti Swarup Bhatnagar Prize for Science and Technology. Majority of SSB Awardees have remained in the country and contributed immensely to Indian Science & Technology.

Today, the 26th September 2012, Hon'ble Prime Minister of India would be presenting the Shanti Swarup Bhatnagar Prizes to 11 awardees for the year 2011.

Biological Sciences

Dr Amit Prakash Sharma

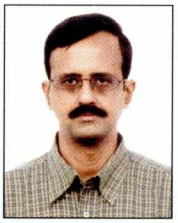
The Shanti Swarup Bhatnagar Prize for the year 2011 in Biological Sciences has been awarded to Dr Amit Prakash Sharma of International Centre for Genetic Engineering and Biotechnology, New Delhi, for his seminal contributions leading to the delineation of principles governing structure function relationships of key proteins involved in malaria parasite biology. This work may also lead to the design of inhibitors targeting critical stages of the parasite in the human host.

Dr Rajan Sankaranarayanan

The Shanti Swarup Bhatnagar Prize for the year 2011 in Biological Sciences has been awarded to Dr Rajan Sankaranarayanan of CSIR-Centre for Cellular and Molecular Biology, Hyderabad, for his outstanding contributions in the area of structural biology of protein biosynthesis. He has advanced new concepts about how protein biosynthesis achieves extraordinarily high levels of fidelity, which is so essential for cell survival.

Chemical Sciences

Dr Balasubramanian Sundaram



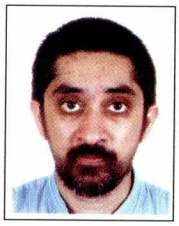
The Shanti Swarup Bhatnagar Prize for the year 2011 in Chemical Sciences has been awarded to Dr Balasubramanian Sundaram of Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, for his outstanding contributions based on realistic models to supercritical CO_2, ionic liquids and several other molecular systems.

Dr Garikapati Narahari Sastry

The Shanti Swarup Bhatnagar Prize for the year 2011 in Chemical Sciences has been awarded to Dr Garikapati Narahari Sastry of the CSIR-Indian Institute of Chemical Technology, Hyderabad, for his outstanding contributions to understanding co-operativity in non-bonded interactions, cation-pi interactions and computational design of enzyme inhibitors.

Earth, Atmosphere, Ocean & Planetary Sciences

Dr Shankar Doraiswamy



The Shanti Swarup Bhatnagar Prize for the year 2011 in Earth, Atmosphere, Ocean and Planetary Sciences has been awarded to Dr Shankar Doraiswamy of CSIR-National Institute of Oceanography, Goa, for his outstanding contributions to our understanding of the dynamics of the Indian Ocean through observations and mathematical modelling.

Engineering Sciences

Dr Sirshendu De

The Shanti Swarup Bhatnagar Prize for the year 2011 in Engineering Sciences has been awarded to Dr Sirshendu De of Indian Institute of Technology, Kharagpur, for his fundamental contributions to innovative membrane separations, membrane fabrication and electrokinetics which have found direct applications in dialysis & in water and food purification.

Dr Upadrasta Ramamurty

The Shanti Swarup Bhatnagar Prize for the year 2011 in Engineering Sciences has been awarded to Dr Upadrasta Ramamurty of Indian Institute of Science, Bangalore, for his breakthrough contributions in understanding deformation behavior of complex and novel materials, including amorphous alloys and metallic foams, explaining the phenomena at multiple length scales.

Mathematical Sciences

Dr Mahan Mj

The Shanti Swarup Bhatnagar Prize for the year 2011 in Mathematical Sciences has been awarded to Dr Mahan Mj of Ramakrishna Mission Vivekananda University, Howrah, for his outstanding contributions in low dimensional manifolds and geometric group theory, and in particular for his work on Cannon-Thurston maps leading to a proof of local connectivity of limit sets of Kleinian groups.

Dr Palash Sarkar

The Shanti Swarup Bhatnagar Prize for the year 2011 in Mathematical Sciences has been awarded to Dr Palash Sarkar of Indian Statistical Institute, Kolkata, for his significant contributions to cryptology including fundamental results on Boolean functions, best known constructions of several modes of operation of a block cipher and hierarchical identity based encryption.

MEDICAL SCIENCES

Dr Kithiganahalli Narayanaswamy Balaji

The Shanti Swarup Bhatnagar Prize for the year 2011 in Medical Sciences has been awarded to Dr Kithiganahalli Narayanaswamy Balaji of Indian Institute of Science, Bangalore, for characterization of fundamental principles of plasticity associated with signaling transduction mechanism in immune cells utilizing mycobacteria as a model and demonstrated the cross talk between Notch signaling and nitric oxide.

PHYSICAL SCIENCES

Dr Shiraz Minwalla

The Shanti Swarup Bhatnagar Prize for the year 2011 in Physical Sciences has been awarded to Dr Shiraz Minwalla of Tata Institute of Fundamental Research, Mumbai, for his fundamental contributions in establishing a connection between Einstein's equations of general relativity and equations of hydrodynamics, for discovering new terms in the equations of superfluid dynamics and for providing influential insights into an understanding of relativistic hydrodynamics.

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