

**Dr Subramaniam Anantha Ramakrishna** (b.30.11.1972), PhD, Assistant Professor, Department of Physics, Indian Institute of Technology, Kanpur-208016.

Dr Ramakrishna has made notable contribution in the design of negative magnetic permeability and negative refractive materials at optical frequencies, studies on the photonic properties and propagation aspects in these meta-materials.



**Dr Anand Ranganathan** (b.04.12.1972), PhD, Research Scientist, Recombinant Gene Products Group, International Centre for Genetic Engineering and Biotechnology, Aruna Asaf Ali Marg, New Delhi-110067.

Dr Ranganathan has developed a very original and novel procedure for *in vitro* protein evolution which will have an impact in the areas of protein engineering and protein therapeutics.



**Dr Majeti Naga Venkata Ravi Kumar** (b.26.06.1972), PhD, Assistant Professor, Department of Pharmaceutics and Center for Pharmaceutical Nanotechnology, National Institute of Pharmaceutical Education & Research, Sector 67, SAS Nagar-160062, Punjab.

Dr Ravi Kumar has generated proof of principle for several nano based novel drug delivery systems related to cyclosporine and anti-cancer drugs.



**Dr Arvinder Singh Sandhu**

(b.19.07.1975), PhD, Sr Research Associate, JILA, 440 UCB, University of Colorado, Boulder CO 80309, USA.



Dr Sandhu has made notable contributions to experimental studies of laser-matter interactions which has helped to unveil many hitherto little understood facets of strong field physics.

**Dr PS Satheshkumar** (b.24.01.1977), PhD, Postdoctoral Fellow, Laboratory of Viral Diseases, NIAID, National Institute of Health, Building 33, Room 1E13C, 33, North Drive, MSC 3210, Bethesda, MD 20892, USA.



Dr Satheshkumar has worked out the mechanism of polyprotein processing and the functions of VPg as activator of the protease in *Sesbania* mosaic virus. He also established the assembly pathway of the virus by structure based mutational analysis.

**Dr Dhruv Kam Sethi** (b.07.04.1976), PhD, Research Fellow, Dana-Farber Cancer Institute, 44 Binney Street, D 1410, Boston, MA 02115, USA.



Dr Sethi has investigated the structural basis of generating antibody diversity and provided a novel mechanism for generating multiple specificity which involves varied antigen juxtaposition on the antibody.

**Dr Navdeep Singh Sodhi** (b.24.01.1972), PhD, Reader, Department of Food Science & Technology, Guru Nanak Dev University, Amritsar-143005.



Dr Sodhi mainly worked on starches of rice which could replace corn based materials.

**Dr Vishwanath Sriram** (b.17.03.1977), PhD, Young Investigator (Fellow-E), National Centre for Biological Sciences, UAS-GKVK Campus, Bellary Road, Bangalore-560065.



Dr Sriram's main contributions are in the studies on membrane dynamics in a genetic system of *Drosophila*.

**Dr Parinda Vasa** (b.06.05.1977), PhD, Postdoctoral Fellow (Alexander von Humboldt Fellowship), Theoretische Physik I, Technische Universitaet Ilmenau, C-311, Weimarer Str 25, Ilmenau-98693, Germany.



Dr Vasa has contributed by understanding the optical properties of semiconductor and metal nano-structures and successfully designing and implementing a novel interferometric approach to study non-linear optical prospectus of nanostructures with unprecedented sensitivity.

**Dr TNC Vidya** (b.05.08.1976), PhD, Postdoctoral Student, Department of Botany & Zoology, Stellenbosch University, Stellenbosch, South Africa.



Dr Vidya has mainly worked on her pioneering application, in India, of molecular techniques to the study of social organization, conservation biology, and phylogeography of endangered species, especially the Asian elephant.

**ANIL KUMAR BOSE MEMORIAL MEDAL - 2007**

**Dr Suman Chakraborty** (b.1973), Associate Professor, Department of Mechanical Engineering, Indian Institute of Technology, Kharagpur-721302.



For his paper on "Transport mechanisms of falling crystals detached from the freezing front during solidification of a hypereutectic binary mixture" published in *Physical Review Letters*, 2005, Vol **95**, pp 024504 (1-4).

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INSA Medal for Young Scientist Awardees - 2007

## Young Scientist Medal Awardees 2007



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## INSA Medal for Young Scientists

The INSA Medals for Young Scientists, instituted in 1974, considered to be the highest recognition of promise, creativity and excellence in a young scientist, is given annually to those distinguished for these attributes as evidenced by their research work carried out in India. Any citizen of India who has not attained the age of 35 years on December 31, of the year preceding the year of award, shall be eligible. The maximum number of awards in any year should not be exceeding 30. Any research institution or individual scientist may make nominations. Award will consist of a Medal, a Certificate and cash prize of Rs. 25,000/- along with a start-up research support. The awardees are also entitled for a visit abroad with full support for presenting research work at conferences, and/or participating in collaborative research projects within first five years of receipt of award. The awardees who are not affiliated to any research institution are also considered for an interim Fellowship with a small amount of contingency per year for a period of three years provided they have assurance from the institution for availing the working facilities. For details, please see [www.insaindia.org](http://www.insaindia.org) or INSA Year Book.

**Dr Avinash Kumar Agarwal** (b.22.08.1972), PhD, Assistant Professor, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016.



Dr Agarwal has contributed to the development, utilization, lubricating oil tribology and impact assessment of biodiesel and its usage in compression ignition engines.

**Dr Santanu Banerjee** (b.09.01.1976), PhD, Postdoctoral Research Fellow, Michael Granato's Laboratory, Department of Cell & Developmental Biology, University of Pennsylvania, School of Medicine, 1236 BRB II/III Building, 421 Curie Blvd, Philadelphia, PA-19104-6058, USA.



For his significant contributions in elucidating the role of intracellular calcium signaling in insect flight.

**Dr Naveen Chandra Bisht** (b.01.02.1978), PhD, Staff Scientist II, National Institute for Plant Genome Research, Aruna Asaf Ali Marg, JNU Campus, New Delhi-110067.



Dr Bisht has developed improved molecular methods for pollination control used in heterosis breeding programme. He was also involved in understanding the genetic mechanism and tagging of the loci involved in glucosinolates biosynthesis in *Brassica juncea*.

**Dr L Sunil Chandran** (b.22.04.1974), PhD, Assistant Professor, Computer Science & Automation Department, Indian Institute of Science, Bangalore-560012.



Dr Chandran mainly contributed to fundamental insights in graph theory and application to algorithms.

**Dr Sangeeta Dhawan** (b.20.10.1975), PhD, Postdoctoral Fellow, 900A Weyburn Place North, Larry L Hillblom Islet Research Center, University of California at Los Angeles, CA-90095, USA



Dr Dhawan contributed to the understanding of the molecular mechanics of gene expression leading to silk gland development and differentiation in *Bombyx mori*.

**Dr Subhash Ghosh** (b.23.10.1972), PhD, Scientist C, Bioorganic Laboratory, Indian Institute of Chemical Technology, Hyderabad-500007.



Dr Ghosh has excellent contributions in the total synthesis of biologically active natural products, comprising macrocyclic lactones, employing modern synthetic methods.

**Dr Amita Gupta** (b.09.07.1972), PhD, Lecturer, Department of Microbiology, University of Delhi South Campus, Benito Juarez Road, New Delhi-110021.



Dr Amita Gupta has contributed the antibody engineering to develop a novel diagnostic kit for HIV, which she has further modified for single point detection of both HIV serotypes. She has also begun interesting work on biology of *Mycobacterium tuberculosis* focusing on toxin-antitoxin interaction.

**Dr Mukesh Jain** (b.27.08.1978), PhD, Research Scientist, Department of Plant Molecular Biology, University of Delhi South Campus Benito Juarez Road, New Delhi-110021.



Dr Jain has characterized a large family of F-box protein encoding genes from rice with ramifications in engineering flowering time and abiotic stress tolerance in crop plants. He has also functionally validated a unique class of topoisomerase genes in rice, providing evidence for their role in conferring stress tolerance. He is also recipient of LSS Kumar Medal.

**Dr Tushar Jana** (b.06.01.1975), PhD, Reader, School of Chemistry, University of Hyderabad, Hyderabad-500046.



Dr Jana contributed to the development of novel polymer materials for various applications such as polymer electrolyte membrane fuel cell, polymer hydrogel based sensors, thermally stable energetic polymer binders for propellant.

**Dr Pawan Laxminarayan Kulwal** (b.10.04.1977), PhD, Assistant Professor, Biotechnology Centre, Department of Agricultural Botany, Dr Panjabrao Deshmukh Krishi Vidyapeeth, Akola-444104.



Dr Kulwal has mainly worked on Wheat Quantitative Trait Loci.

**Dr Anish Kumar** (b.15.09.1975), PhD, Scientific Officer-E, Non Destructive Evaluation Division, Indira Gandhi Centre for Atomic Research, Kalpakkam-603102.



Dr Kumar mainly contributed to elastic constants to ultrasonic velocity and engineering application of ultrasonic parameters for characterization of microstructure and mechanical properties in metallic materials.

**Dr Ramaswamy Manimekalai** (b.17.02.1973), PhD, C/o Dr Shoshi Kikuchi, Plant Genome Research Unit, Division of Genome and Diversity Research, National Institute of Agrobiological Sciences (NIAS), Kan'on dai 2-1-2, Tsukuba Ibaraki 305-8602, Japan.



Dr Manimekalai worked on molecular markers in coconut and arecanut.

**Dr Mohan Mondal** (b.03.11.1973), PhD, Scientist, National Research Centre on Mithun (ICAR), Jharnapani, Medziphema, Via Dimapur, Nagaland-797106.



Dr Mondal has contributed to the development of highly sensitive, rapid and economic ELISA for various protein and steroid hormones. He further extensively worked on endocrinology of growth, reproduction and lactation in Mithun, an animal of North-east India.

**Dr Sunil Nair** (b.11.03.1974), PhD, Alexander von Humboldt Fellow, Max Planck Institute for Chemical Physics of Solids, Nothnitzer Str 40 01187, Dresden, Germany.



Dr Nair has built a state-of-the-art high field Vibrating Sample Magnetometer and low field AC Susceptometers working at low temperatures. Using these systems, he has obtained valuable insights into phase transitions and glassy behaviour in manganites.

**Dr Priya Panjabi** (b.15.12.1974), PhD, Research Scientist, Department of Genetics, Centre for Genetic Manipulation of Crop Plants, University of Delhi South Campus, New Delhi-110021.



Dr Panjabi has developed a novel transposon mutagenesis system in plants as a powerful technique to decipher gene functions and its successful testing in *Arabidopsis*. She has also contributed in the development of a comparative map between *Arabidopsis thaliana* and *Brassica juncea* by generating a large number of PCR-based markers from linkage groups of *Arabidopsis*.