

## INSA MEDAL FOR YOUNG SCIENTISTS (2011)

1. **Dr Sudarshan Ananth** (b.29.09.1978), PhD, Indian Institute of Science Education and Research-Pune, Pune.

For his demonstration of interesting perturbative ties between gravity and Yang-Mills theory in four dimensions.

2. **Dr KP Arunkumar** (b.13.07.1978), PhD, Scientist, Lab of Molecular Genetics, Centre for DNA Fingerprinting & Diagnostics (CDFD), Lab Block, Tuljaguda, Nampally, Hyderabad.

For his original researches on Z-linked genes in *Bombyx mori*.

3. **Dr Kingshook Biswas** (b.17.02.1980), PhD, Department of Mathematics, Ramakrishna Mission, Vivekananda University, P.O. Belur Math, Distt. Howrah (West Bengal).

Kingshook Biswas has a long list of impressive results to his credit. A new renormalisation technique developed by him leads to a theorem which includes Mostow's Rigidity Theorem as a corollary. His constructions of a hedgehog with positive area as well as that of Hausdorff dimension one are very striking.

4. **Dr Somdeb Bose Dasgupta** (b.), PhD, Post Doctoral Fellow, Department of Biochemistry, University of Basel, Switzerland.

For comprehensive study on topoisomerases of leishmania donovani.

5. **Dr Moumita Chaki** (b. 29.09.1977), PhD, University of Michigan, Pediatric Nephrology, 1150 West Medical Centre Drive, Ann Arbor, Michigan-48109, USA.

OCA genetics influenced by mutation in Tyrosinase.

6. **Dr Sharmistha Dutta Choudhury**, (b.30.03.1977), PhD, Scientific Officer-D, Radiation & Photochemistry Division, Bhabha Atomic Research Centre, Mumbai.

Dr Choudhury has carried out original experimental work on Supramolecular Interactions in Controlling Molecular Properties that is novel and significant to the field.

7. **Dr Basudeb Dasgupta** (b.30.09.1982), PhD, CCAPP. Ohio State University, 191 W. Woodruff Avenue, Columbus 43210 Ohio, USA.

For his discovery of unusual and interesting effects of large neutrino densities in supernova cores.

8. **Dr Pawan Dewangan** (b.03.02.1977), PhD, Scientist, National Institute of Oceanography, Dona Paula, Goa.

For significant contribution to the analysis and modeling of geophysical and geological observations in search for gas hydrates and evolution of the KG basin.

9. **Dr Lekha Divya** (b.11.10.1977), PhD, CSIR-RA, Department of Zoology, University of Kerala, Kariavattom, Thiruvananthapuram.

For her original observations on the mechanism of action of a Gallic acid derivative simulating T<sub>3</sub> action in amphibian metamorphosis.

10. **Dr Nishter Nishad Fathima** (b.24.01.1978), PhD, Chemical Laboratory, Central Leather Research Institute, Adyar, Chennai.

Dr Fathima has made outstanding contributions to the understanding of tanning & shrinkage phenomena, development of green and clean tanning technology & solid waste management.

11. **Dr Ananda Kumar Ghosh** (10.10.1979), PhD, Joan & Sanford Weill Medical College of Cornell University, Pharmacology, New York, USA.

Dr Ananda Kumar Ghosh made excellent contributions to the identification and biochemical characterization of a novel non-Membrane bound lysophosphatidic acyl transferase from plants. Functional analysis of this enzyme has shown its conserved role in lipid metabolism across three kingdoms.

12. **Dr T Govindraju** (b.20.06.1976), PhD, Faculty Fellow (Assistant Professor), New Chemistry Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore.

Dr Govindraju has carried novel experimental work on Nature Inspired Biomimetics including silk, collagen and other related materials. The work has made a significant impact.

13. **Dr Mainak Guha Roy** (b. 26.10.1979), PhD, Laboratoire de Biochimie Theorique CNRS-UPR 9080, Bureau 330, 3 eme etage, Institut de Biologie Physico-Chimique (IBPC), 13 rue Pierre et Marie Curie, 75005 Paris, France.

For comprehensive analysis of protein – protein interfaces.

14. **Dr Tarun Gupta** (b.14.06.1976), PhD, Department of Civil Engineering, Indian Institute of Technology, Kanpur.

For significant contributions to the study of extremely small aerosols and their effect on human health using instruments designed and built by him.

15. **Dr Sanyog Jain** (b. 07.06.1977), PhD, Assistant Professor, Centre for Pharmaceutical Nanotechnology, Department of Pharmaceutics, National Institute of Pharmaceutical Education & Research (NIPER), Sector 67, Phase 10, SAS Nagar (Mohali), Punjab.

Carbon tube/nenoparticles for effective drug delivery.

16. **Dr Amit Kumar** (b.29.01.1976), PhD, Associate Professor, Department of Computer Science & Engineering, Bharti Building, Block IIA, Indian Institute of Technology, Hauz Khas, New Delhi.

Dr Amit Kumar has worked on several fundamental problems of developing approximative algorithms for hard combinatorial optimization problems. He uses novel tools for addressing these problems and these approaches have led to important breakthroughs.

17. **Dr Dhiraj Kumar** (b. 01.03.1978), PhD, Immunology Group, International Center for Genetic Engineering and Biotechnology, Aruna Asaf Ali Marg, New Delhi.

For innovative approach to identify host factors responsible for mtb survival.

18. **Dr Ulaganathan Mabalirajan** (b. 04.05.1979), PhD, C/o Dr Balram Ghosh, Lab 608, Molecular Immunogenetics, Institute of Genomics and Integrative Biology (IGIB), Mall Road, Delhi.

Involvement of Mitochondria in Asthma pathogenesis and opening up of new avenues for therapy.

19. **Dr Manoj Majee** (b. 12.07.1976), PhD, National Institute of Plant Genome Research (NIPGR), Aruna Asaf Ali Marg, New Delhi.

Dr. Manoj Majee's study revealed the role of myoinositol phosphate synthase in abiotic stress tolerance in plants. He has functionally established the role of *PcINO1* in salt stress tolerance.

20. **Dr Pradipta Maji** (b.04.11.1976), PhD, Machine Intelligence Unit, Indian Statistical Institute, Kolkata.

Dr Maji has made outstanding contributions in developing methodologies using Rough-Fuzzy computing for pattern recognition & uncertainty analysis. He demonstrated their success in data mining medical imaging and bioinformatics.

21. **Dr Deepankar Misra** (b.18.07.1978), PhD, P-109, Department of Nuclear Physics, Tata Institute of Fundamental Research, Mumbai.

For clear experimental demonstration of electron interference in molecular ionization by first ions.

22. **Dr Md Naimuddin** (b.01.01.1978), PhD, Assistant Professor, Room 162, Multistoreyed Building, Department of Physics & Astrophysics, University of Delhi, Delhi.

For developing a new detection technique for low-energy electrons at hadron collides and thereby improving the precision of Bs-mixing measurement.

23. **Dr Vijaykumar Sivadasan Nair** (b.26.05.1981), PhD, Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, Kerala.

For intelligently synergizing carefully planned exhaustive experimental data over Indian region with regional climate models to fine-tune model physics leading to reducing the uncertainties in regional aerosol climate forcing.

24. **Dr Tapan Kanti Paine** (b.02.01.1976), PhD, Assistant Professor, Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Jadavpur, Kolkata.

Dr Paine has made outstanding contributions to the area of Dioxygen Activation by Nonheme Enzymes that is noteworthy and has made an impact to the field.

25. **Dr U Deva Priyakumar** (b.05.06.1977), PhD, Assistant Professor, International Institute of Information Technology (IIIT), Gachibowli, Hyderabad.

Dr Priyakumar has made a Computational Study on structure function relationships in Bimolecular systems that is original and significant.

26. **Dr Amit Roy** (b.02.08.1979), PhD, Laboratory of Genomic Research, Department of Molecular Biology, Aarhus University, Building 1131, CF Mollers Alle 3, 8000 Aarhus C, Denmark.

For his extensive work on molecular mechanism of action of a novel anti Leishmania drug.

27. **Dr Rajender Singh** (b.15.06.1981), PhD, Scientist Gr. IV (2), Division of Endocrinology, Central Drug Research Institute, Lucknow.

Molecular basis of gonadal dysgenesis/infertility and novel plant based treatment modality.

28. **Dr Nisheeth Kumar Vishnoi** (b. 17.10.1976), PhD, Microsoft Research India, 196/36, 2<sup>nd</sup> Main, Sadashivanagar, Bangalore.

Dr Nisheeth Kumar Vishnoi has done outstanding work on approximability of NP hard problems. His results on linear and semidefinite programming relaxations, extension and simplification of a landmark work of Spielman and Teng, and his work on the Unique Games Conjecture, disproving two related conjectures, are remarkable.

29. **Dr Gitanjali Yadav** (b. 01.09.1976), PhD, Staff Scientist, Plant Computational Biology, Room No. 204, National Institute of Plant Genome Research (NIPGR), Aruna Asaf Ali Marg, New Delhi.

For work on plant stress proteins.

#### **ANIL KUMAR BOSE MEMORIAL MEDAL (2011)**

1. Dr PR Gogate, Assistant Professor, Chemical Engineering Department, Institute of Chemical Technology, Matunga, Mumbai

For his research paper on *Mapping of cavitation activity in high frequency sonochemical reactors at pilot scale operation - Journal : chemical Engineering Journal-2010 (Impact Factor of the journals : 2.816).*

2. Dr Mukesh Jain, Staff Scientist, National Institute of Plant Genome Research (NIPGR), Aruna Asaf Ali Marg, New Delhi

For his research paper on *De novo assembly of chickpea transcriptome using short reads for gene discovery and marker identification. Journal : DNA Research Impact Factor = 4.917 (2011, doi-10.1093/dnares/dsq028 (published on life January 8, 2011)*