

**Recipients of INSA Distinguished Lectures-2  
(for INSA Fellows only except those covered under IDL-1)  
(for the year 2024)**

**(Subject to deliver the lecture during the  
Anniversary General Meeting of the Academy)**

**Sectional Committee - II : Physics**

*Astronomy, Astrophysics, Nuclear and High Energy Physics, Atomic, Molecular and Optical Physics, Statistical Physics, Theoretical Physics, Mathematical and Computational Physics, Condensed Matter including Soft, Liquids and Nano Materials, Cosmic Radiation, Cosmology, Space Physics, Basic Planetary Sciences, Lasers and Optoelectronics, Plasma Physics, Solar Physics, Atmospheric Physics*

**Gopakumar, Rajesh** (b 14-12-1967), PhD, Senior Professor and Centre Director International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru.

Outstanding work on gauge string/gravity duality and quantum field theory

**Sectional Committee - III : Chemistry**

*Analytical Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, Theoretical and Computational Chemistry, Structural Chemistry, Chemistry of Materials, Medicinal and Pharmaceutical Chemistry, Bio-organic, Bio-inorganic and Bio-physical Chemistry*

**Natarajan, Srinivasan** (b 27.05.1960) PhD, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bengaluru.

Recommended for his outstanding and consistent contributions in the area of Inorganic Materials Chemistry, especially on the basic understanding of framework structured compounds, identifying new intermediates and pathways for the synthesis of metal-organic frameworks (MOFs), investigating the role of kinetic and thermodynamic factors in their formation, pioneering the use of MOFs for applications in metal-centered luminescence, solvent-dependent room temperature ferroelectric behavior, heterogeneous catalysis, and as precursors for the synthesis of ceramics, work on Li-cathode battery materials, inorganic pigments, new electrocatalysts, and non-linear optical materials, and stabilization of transition metal ions in tetrahedral environments.

#### **Sectional Committee - IV : Earth & Environmental Sciences**

*Surface and Solid Earth Science, Applied Atmospheric Chemistry and Physics, Climate Sciences, Meteorology, Geo Engineering, Ocean Sciences, Geo Sciences and Applied Planetary Sciences*

**Gupta, Harsh Kumar** (b 28.06.1942), PhD, CSIR- National Geophysical Research Institute, Hyderabad.

Harsh Gupta discovered enormously thick (65-70 km) crust below the Himalaya and Tibetan plateau, and identified common characteristics of water reservoir triggered earthquake sequences, discriminated from the normal earthquake sequences.

#### **Sectional Committee - V : Engineering & Technology**

*Electrical Engineering, Telecommunication Engineering, Electronics and Optoelectronics, Chemical Engineering, Civil Engineering, Environmental Engineering, Mechanical Engineering, Aeronautical Engineering, Metallurgical Engineering, Computer Science and Engineering including Software and Data science, Information Science and Technology, Advanced Materials (such as Bio-materials, Hybrid Materials and Nano Materials), Polymer Science & Engineering*

**Pal, Sankar Kumar** (b 13.09.1950) National Science Chair, Gol Indian Statistical Institute, Kolkata.

The nominee has made fundamental contributions to machine intelligence research by developing various modern and classical approaches. He pioneered the development of fuzzy set theory, and neuro-fuzzy and rough-fuzzy computing and their applications in pattern recognition, image/video processing, machine learning, case-based reasoning, granular computing, data mining, machine-mind development, and knowledge-based systems.

#### **Sectional Committee - VI : General Biology**

*Taxonomy, Structure, Ecology, Environmental Biology, Evolution and Behaviour of Plants, Animals and Microbes including Unicellular Eukaryotes*

**Sharma, Eklabya** (b 11.05.1958), Strategic Advisor and Distinguished Senior Fellow, Ashoka Trust for Research in Ecology and the Environment (ATREE), Bengaluru.

Dr. Sharma has made highly impactful contributions to the biodiversity conservation, natural resource management, bio-geochemical cycling, climate change impact assessment leading to the development of policies for sustainable management of Himalayan ecosystem.

**Sectional Committee - VII : Molecular and Cellular Biology**

*Cell Biology, Physiology, Development, Genetics, Genomics and other Omics of Plants, Animals and Microbes including Unicellular Eukaryotes*

**Vaidya, Vidita Ashok** (b 15.11.1970), Professor (H), Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai.

Dr Vidita Vaidya for her path-breaking work towards understanding molecular, cellular, neurophysiological aspects of biology of anxiety and depression.

**Sectional Committee - VIII : Biomolecular, Structural Biology and Drug Discovery**

*Biochemistry, Biophysics, Molecular Biology, Pharmacology, Structural Biology, Bioinformatics, Computational Biology, System Biology*

**Udgaonkar, JB** (b 22.03.1960) Indian Institute of Science Education & Research, Pune.

Prof. Udgaonkar is an outstanding scientist who has contributed immensely to our knowledge on protein folding using a variety of biophysical approaches. His group has extensively characterized folding, unfolding and aggregation pathways of multiple proteins, including prion proteins and alpha-synuclein, with important implications for understanding protein misfolding-based diseases.

**Sectional Committee - IX : Health Sciences**

*Basic and Clinical Medical Sciences—Communicable and Non-communicable Diseases, Epidemiology, Anthropology, Psychology, Cognitive and Neurosciences, Medical Genetics and Genomics, Public Health, Nutrition, Immunology*

**Somasundaram, Kumaravel** (b 08.10.1962) PhD, Professor and Chair, Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru.

Professor Somasundaram has made outstanding contributions to cancer genetics, particularly in relation to glioblastoma, the most common and aggressive brain tumor in adults, working in collaboration with clinicians. His work has led to identification of certain sub-types of this tumor with distinct characteristics and a better understanding of the genetic and biological mechanisms underlying the occurrence of this tumor.

**Sectional Committee - X : Agricultural Sciences**

*Agriculture, Horticulture, Forestry, Fisheries, Food Science, Veterinary Science,  
Pathogen Biology and Host Pathogen Interaction Both Plant and Veterinary Importance*

**Lal, Rup,** (b 27.09.1953), PhD, INSA Senior Scientist, University of Delhi, New Delhi.

Dr Ruplal explored physiology, genetics & Biochemistry of hexachlorocyclohexane (HCH) degradation (first to discovered associates in genes with IS6100. He is currently developing bioremediation tech for the remediation of HCH residues.