

**FELLOWS ELECTED 2022**  
**(Effective from January 1, 2023)**

**1. Achanta, Venu Gopal** (b 15.01.1972), PhD, Professor, Department of Condensed Matter Physics and Material Science, Tata Institute of Fundamental Research, Mumbai.

Prof. Achanta has demonstrated truly broadband, dispersionless and polarization independent plasmonic and all-dielectric metamaterials. He has also a world class group engaged in the design, nanofabrication and spectroscopy in the far- and near-fields of single nanoparticle to study plasmon mediated optical, electrical and magneto-optical properties of materials.

**2. Aggarwal, Amita** (b 31.12.1960), MBBS, MD, DM, Professor and Head, Department of Clinical Immunology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow.

Prof. A. Aggarwal is a clinician scientist, who works in the field of rheumatic diseases and has made substantial contributions to understanding the pathogenesis of Enthesitis related arthritis (ERA), a form of juvenile arthritis seen more often in India than developed countries. She is a global leader in the discipline of pediatric Rheumatology, who has also trained a whole cadre of younger colleagues.

**3. Agrawal, Amit** (b 07.10.1974), PhD, Professor, Department of Mechanical Engineering, Indian Institute of Technology Bombay, Mumbai.

For his significant contributions to the fundamental understanding of specific aspects of Fluid Mechanics and Heat Transfer. He has developed micro devices for blood-plasma separation; for three-dimensional hydrodynamic focusing, and for maintaining constant device wall temperature. He provided analytical solution of the Burnett equation (a higher-order continuum transport equation).

**4. Anupama, Gadiyara Chakrapani** (b 04.08.1961), PhD, Senior Professor and Dean, II A, Indian Institute of Astrophysics, Bengaluru.

Prof. Anupama is among India's leading observational astronomers, with an exemplary emphasis on using Indian telescopes, and facility development. Her work on recurrent novae clearly established the presence of a white dwarf primary, a result of great importance for progenitors of type Ia supernovae, the distance markers of the universe.

**5. Ashraf, Mohammad Zahid** (b 02.02.1973), PhD, Professor and Head, Department of Biotechnology, Jamia Millia Islamia, New Delhi.

Prof. MZ Ashraf's research is central to understanding the role of high-altitude hypoxia in the development of cardiovascular and blood clotting disorders. His work has directly impacted the well-being of armed forces that protect India's northern borders. His exceptional efforts have increased our understanding on prevalence, mechanism, genetic, diagnostic, and development of treatment against hypoxia-induced thromboembolic disorders.

**6. Bandyopadhyay, Arun** (b 25.09.1963), PhD, Director, CSIR-Indian Institute of Chemical Biology, Kolkata.

Arun Bandyopadhyay has made significant contributions in the area of cardiovascular diseases. He demonstrated the molecular basis of mitochondrial adaptation in cardiomyocytes and the mechanism of dysregulation of cholesterol transport in the pathogenesis of atherosclerosis. He established that the SUMOylation of PARIS, a zinc finger binding protein, represses transcription of PGC1-alpha thereby playing a crucial role in mitochondrial biogenesis. He has developed a few lead molecules related to the therapeutic management of respiratory diseases.

**7. Banga, Surinder Singh** (b 06.08.1955), PhD, Professor (Honorary Adjunct), Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana.

Dr. S.S. Banga is an accomplished plant breeder and a geneticist who has made immense contributions in areas of basic as well as applied research, leading to development of 16 improved varieties/hybrids of rapeseed mustard. Some of these varieties are high yielding and resistant to biotic and abiotic stresses and have determinate growth habit for uniform maturity. His contribution to understanding the Brassica genetics is noteworthy.

**8. Bhujanga Rao, Vepakomma** (b 10.10.1951), PhD, DSc, ISRO Chair Professor, National Institute of Advanced Technologies (NIAS), Bengaluru.

Dr V Bhujanga Rao has had a distinguished career in DRDO for over forty years and superannuated in 2015 as Distinguished Scientist & Director General for Naval Systems and Materials. He has stellar accomplishments to his name in acoustic science and engineering and its underwater applications by the Indian Navy. Equally important are his continuing efforts to discharge his social responsibility by using his competence in the area to fill an important unmet need of India, of giving hopes to millions of children who are born deaf. These achievements make him singularly suited for election under this special category.

**9. Das, Samar Kumar** (b 22.01.1963), PhD, Professor, University of Hyderabad, Hyderabad.

Prof. Das has contributed significantly in the area of functional inorganic materials based on polyoxometalates, metal carboxylates, metal organic framework containing compounds, metal coordination complexes including dithiolate ligands, and have applied those for sensing / detection of toxic substances, chiral separation, proton conductivity and electrocatalysis including electrocatalytic water splitting and oxygen reduction reaction.

**10. Ganesh, Subramaniam** (b 23.05.1968), PhD, Deputy Director, Department of Biological Sciences and Bioengineering, Indian Institute of Technology, Kanpur, Kanpur.

Prof. S. Ganesh has made pioneering contributions to the study of Lafora Disease, a monogenic fatal neurodegenerative disorder. His work has delineated pathway defects and tested experimental therapy in animal models. His work explains why neurons do not store glycogen, and why degenerating neurons have glycogen accumulation.

**11. Ghorpade, Sudhir Ramakant** (b 03.08.1963), PhD, Professor, Department of Mathematics, Indian Institute of Technology, Bombay, Mumbai.

Sudhir R. Ghorpade has made significant contributions to several areas straddling across pure and applied mathematics, especially algebraic geometry and coding theory. His most noteworthy works include the following: Definitive answers to several questions of Abhyankar concerning Young tableaux and determinantal varieties, extension of Deligne's inequality for arbitrary complete intersections over finite fields, an effective version of Lang-Weil inequality, proof of a conjecture of Lang and Weil, extensive study of linear codes associated to Grassmann, Schubert and Veronese varieties, settling the Tsfasman-Boguslavsky Conjecture in the negative and then proposing newer conjectures for the maximum number of zeros of systems of homogeneous polynomials of a given degree over a finite field, and proving these conjectures in many cases.

**12. Goswami, Debashish** (b 30.10.1972), PhD, Professor (HAG), Indian Statistical Institute, Kolkata.

Debashish Goswami has made outstanding contributions to the general area of Non-Commutative Mathematics viz. Noncommutative Geometry and Stochastic Processes, with deep applications of Operator algebra and Differential Geometry. His recent work on the the issue of the non-existence of "truly Quantum Isometry" in connected classical manifolds have established Prof. Goswami as a world-leader in this broad area.

**13. Gromiha, M Michael** (b 26.06.1967), PhD, Professor, Department of Biotechnology, Indian Institute of Technology Madras, Chennai.

Dr. Michael M. Gromiha is internationally recognized for his contribution in developing algorithms, software tools and application of artificial intelligence and machine learning in bioinformatics data. His work on long-range order provided an insightful concept in understanding protein folding. He has worked on the elucidation of binding parameters in macromolecular recognition, prediction of aggregation propensity of peptides. His recent work has focused on structure-based drug design.

**14. Guha, Debatosh** (b 26.01.1963), PhD, Professor, Institute of Radio Physics and Electronics, University of Calcutta, Kolkata.

For his original and pioneering research with wide-ranging contributions to microstrip and dielectric resonator antenna technologies and defected ground structures on microstrip antennas.

**15. Gupta, Yashwant** (b 01.11.1962), PhD, Centre Director and Distinguished Professor, National Centre for Radio Astrophysics, Tata Institute of Fundamental Research, Pune.

Prof. Gupta has made outstanding contributions in radio astrophysics, that are recognized worldwide: (i) landmark research in the areas of pulsars and interstellar medium, (ii) stellar role in the original construction and recent upgrade of India's GMRT facility and (iii) leading India's participation in the upcoming international SKA observatory.

**16. Jhala, Yadvendra Dev Vikramsinh** (b 27.02.1962), PhD, Dean & Senior Professor, Wildlife Institute of India, Dehradun.

For his outstanding contribution to and leadership in the field of tiger ecology, conservation and management. Prof. Jhala's research spans an array of topics including ecology, behaviour, genetics, evolution, participatory conservation and policy on tigers, lions and other large carnivores. His pioneering leadership on the science behind large carnivore census is key to tiger conservation globally. Dr. Jhala has emerged as an important figure in the global effort to conserve, study and manage one of the highest profile endangered species in the world. He has been credibly able to succeed at navigating his outstanding scientific works with the conservation and management of flagship carnivore species in the field.

**17. Joshi, Yogesh Moreshwar** (b 29.12.1974), PhD, Pandit Girish & Sushma Rani Pathak Chair Professor and Dean of International Relations, Department of Chemical Engineering, Indian Institute of Technology Kanpur, Kanpur.

For his outstanding contributions in understanding rheology of soft glassy materials utilizing the effective time domain theory or effective time theory supported by rigorous experimental validation to explain linear viscoelasticity and thermo-rheological response. His contributions related to the sol-gel transition, experimental validation of scaling relations and distinction between thixotropy and viscoelasticity are rated very highly.

**18. Kaur, Rupinder** (b 14.09.1971), PhD, Staff Scientist - VII, Centre for DNA Fingerprinting and Diagnostics, Hyderabad.

Rupinder Kaur made significant contributions to our understanding of fungal virulence mechanisms of *Candida glabrata*, an opportunistic human fungal pathogen. She demonstrated that *C. glabrata* suppressed the pro-inflammatory host immune responses through its cell surface-associated aspartyl proteases. She discovered that *C. glabrata* infection mechanisms include remodelling chromatin, actin cytoskeletal networks, and regulating the trafficking of plasma membrane nutrient transporters in fungal cells. The pioneering work of Dr. Kaur led to the identification of new antifungal targets.

**19. Kumar, Sanjay** (b 14.02.1963), PhD, Director, CSIR-Institute of Himalayan Bioresource Technology, Palampur.

Dr. Sanjay Kumar has identified a novel carbon fixation pathway coupled to nitrogen assimilation that is operative in plants growing at higher altitudes. Several key genes of the pathway were used to generate transgenic plants that exhibited re-fixation of carbon and nitrogen emitted during photorespiration. This led to improved biomass and yield of the transgenic plants. He has also discovered a very unique superoxide dismutase enzyme that is autoclavable and possesses functionality at sub-zero temperature. He has also pioneered the introduction of Heeng and Monk fruit in the country and empowered farmers for their cultivation through development of agrobiotechnology.

**20. Kundu, Gopal Chandra** (b 02.11.1959), PhD, Director R&D, KIIT University, Bhubaneswar.

Dr. Gopal Kundu has contributed significantly to the understanding tumor microenvironment heterogeneity and the molecular mechanism by which both tumor and stromal derived osteopontin (OPN) regulates tumor growth and metastatic potential of breast and other cancers. Dr. Kundu has been prolific over the past two decades, publishing in leading cancer journals. He is recognized internationally as evidenced from his high citations and being in the editorial board of a number of front-ranking journals.

**21. Maji, Samir K** (b 06.03.1974), PhD, Professor, Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay, Mumbai.

Dr. Samir K Maji has made incisive contributions to our understanding of the molecular mechanisms of amyloid formation, in particular involving  $\alpha$ -synuclein, and inhibition, and application to design of drugs and functional amyloids.

**22. Malik, Javed Husain Nurmohmed** (b 24.11.1968), PhD, Professor, Department of Earth Sciences, Indian Institute of Technology Kanpur, Kanpur.

Prof. Malik has made significant contributions to the field of paleo seismology to identify paleo-tsunami and paleo-earthquake signatures. He has made substantive contributions to active fault mapping and paleo seismic investigation in NW-Central Himalaya, Kachchh, and Andaman & Nicobar Islands, has identified several new active faults, and the signatures of transoceanic-tsunamis and subduction zone earthquakes to inform seismic hazards assessment.

**23. Misra, Hari Sharan** (b 22.07.1962), PhD, Head, Molecular Biology Division, Bhabha Atomic Research Centre, Mumbai.

Dr. Hari Sharan Misra has made outstanding contributions in bacterial response to DNA damage repair and multipartite genome biology in bacteria. He has characterized DNA damage and oxidative stress responsive Ser/Thr quinoprotein kinase mediated DNA damage response/cell cycle regulation that seems to be an alternate to LexA/RecA type canonical SOS response. His group has characterized multiprotein complexes and demonstrated their involvements in DNA repair, cell pole determination and maintenance of the multipartite genome system.

**24. Nagendra, Harini** (b 15.05.1972), PhD, Director, Research Centre and Professor, School of Development, Azim Premji University, Bengaluru.

For her seminal works related to the role of socioecological factors in shaping environmental change by using geospatial technologies to assess this change. Prof. Harini's papers form a powerful exploration of issues of human society and climate change, land-use changes, and the loss of biodiversity, as well as the factors needed to mitigate them. An effective scientist and science communicator, Dr. Harini is internationally recognized for her published works in the world's leading journals. Because of her impactful writings, Dr. Nagendra is one of the best-known sustainability and urban ecology experts in India.

**25. Nagesh Kumar, D** (b 15.07.1963), PhD, Professor Satish Dhawan Chair Professor, Department of Civil Engineering, Indian Institute of Science, Bengaluru.

Prof. Nagesh Kumar has made several important research contributions in developing multi-objective multi-reservoir operations models using evolutionary algorithms, considering different inflow and demand scenarios due to climate change and has developed a new approach to validate microwave satellite soil moisture retrievals using precipitation data.

**26. Nair, Deepak Thankappan** (b 25.10.1973), PhD, Professor, Regional Centre for Biotechnology, National Capital Region Biotech Science Cluster, Faridabad.

Dr. Deepak Nair's work has led to fundamental insights on DNA synthesis. His studies reveal that the proofreading domain of DNA polymerases can remove mis-incorporated damaged nucleotides and ribonucleotides from the primer strand to enhance the fidelity of synthesis. His studies also reveal that pyrophosphate hydrolysis is an intrinsic and critical step in the DNA synthesis reaction catalysed by DNA polymerases.

**27. Pandey, Daya Shankar** (b 04.08.1961), PhD, Professor, Department of Chemistry, Institute of Science, Banaras Hindu University, Varanasi.

Prof. Pandey has made significant contributions in the area of arene ruthenium chemistry, inorganic metallogelators, organometallic chemistry of dipyrrins, BODIPYs, fluorescent azo-BODIPYs, AIE active PAN-BODIPYs, BODIHYs, luminescent D-A systems, theranostic agents involving arene ruthenium and BODIPY moieties and their applications in diverse areas including live cell imaging, CO<sub>2</sub> detection etc.

**28. Pareek, Ashwani** (b 27.09.1969), PhD, Professor of Plant Molecular Biology and Biotechnology, Stress Physiology and Molecular Biology Laboratory, School of Life Sciences, Jawaharlal Nehru University, New Delhi.

Professor Pareek made seminal efforts to ensure food and nutritional security in the era of climate change by developing both GM and non-GM-based solutions for salinity or drought-hit lands. His group, through mutation breeding, developed unique stress-tolerant, lysine-rich, and high-yielding genotypes of rice. His work unraveled key candidate genes (such as GATA transcription factors and metallothionein) that can be deployed for raising salinity-tolerant crops. His discovery of 'osmosensor' was a breakthrough, now translated and technology transferred to a seed company for commercialization.

**29. Paul, Alope** (b 04.10.1973), PhD, Professor, Department of Materials Engineering, Indian Institute of Science, Bengaluru.

For his seminal work on the development of experimental methodology and theoretical formulation for the determination of diffusion coefficient in a multicomponent alloy system through experiments on pseudo-binary and pseudo-ternary diffusion couples, discovery of bifurcation of Kirkendall markers, and studies correlating the microstructural changes with atomic mobilities in important alloy systems such as super alloys and High Entropy Alloys.

**30. Pradhan, Narayan** (b 12.10.1972), PhD, Professor, Indian Association for the Cultivation of Science, Kolkata.

Prof. Pradhan has demonstrated that Perovskite nanocrystals in solid film can swell horizontally while kept under solvent vapor and connect each other forming single nanocrystal thickness layer film without scarifying their optical properties, and this has been a fundamental development in the area of nanocrystals engineering.

**31. Punniyamurthy, Tharmalingam** (b 03.06.1964), PhD, Dean of Faculty Affairs and Professor of Chemistry, Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati.

Prof. Punniyamurthy has made a significant contribution for the regio- and stereoselective carbon-carbon and carbon-heteroatom bond formation for the construction of medicinally important heterocyclic scaffolds using transition-metal-catalyzed C-H functionalization, cascade and cross-coupling approaches.

**32. Ranga, Udaykumar** (b 03.06.1959), PhD, Professor, HIV-AIDS Laboratory, Molecular Biology and Genetics Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru.

Prof. U. Ranga's research has called attention to several novel and important aspects of HIV-1, Clade C infection, which is responsible for nearly 95% of HIV infections in India (and >50% worldwide). His work includes several seminal academic studies and clinical trials to characterize subtype-associated variations and their impact on HIV-1 pathogenesis, evolution, and fitness.

**33. Sen De, Aditi** (b 01.10.1974), PhD, Professor H, Physics Division, Harish-Chandra Research Institute, Allahabad.

The most significant works of Prof. Sen De, which have implications in quantum computation, cryptography include the discovery of a quantum communication network and its implementations using quantum optics, computable quantum correlation measures and their robustness under decoherence, a method applicable to large superposed systems, and designing quantum technologies like quantum batteries.

**34. Shukla, Arun Kumar** (b 01.11.1981), PhD, Joy Gill Chair Professor, Department of Biological Sciences and Bioengineering, Indian Institute of Technology Kanpur, Kanpur.

Dr. Arun K. Shukla has made outstanding contributions to our knowledge about the G protein-coupled receptors (GPCRs), the largest class of drug targets in the human genome. His contributions to fundamental mechanisms of ligand recognition, activation, signalling, and regulatory paradigms of GPCRs are remarkably impressive and reflect his overall eminence globally.

**35. Singh, Gyanendra Pratap** (b 17.03.1964), PhD, Director, ICAR- Indian Institute of Wheat & Barley Research, Karnal.

Dr. G. P. Singh is an eminent plant breeder. He has developed more than forty wheat and two barley varieties. Wheat varieties developed by him are grown on about fifty percent of the wheat area in the country. Variety HD 3086 developed by him has received several awards for its popularity with farmers. He has also made a breakthrough in developing terminal heat-tolerant wheat varieties for coping with the climate change.

**36. Srinivas, Mandyam Doddamane** (b 02.10.1950), PhD, Senior Fellow and Chairman, Centre for Policy Studies, Chennai.

Professor MD Srinivas started his research career as a Theoretical Physicist by working on problems pertaining to the foundations of quantum mechanics. Over a period, his research interests got diversified and today he is one of the world class researchers in the domain of History and Philosophy of Science in India. He is one of the authors of important source works such as Ganitayukti-bhasha and Karanapaddhati. He has published several articles that provide an authentic and comprehensive account of Indian astronomers and mathematicians. Professor Srinivas has launched pioneering studies on the topic of proofs (upapattis) in Indian mathematics, and epistemology of Indian sciences as founded in the Nyāya School of Indian philosophy and investigation of the untapped wealth of source-texts in Indian astronomy and mathematics.

**37. Srinivasa Rao, Cherukumalli** (b 04.10.1965), PhD, Director, ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad.

Dr. Srinivasa Rao has identified soil, climate and socio-economic indicators for climate vulnerability assessment, and designed and operationalized district contingency plans across the country. He computed critical carbon inputs for sustaining soil health and food production in the rainfed dryland-ecosystems. He studied potassium dynamics in rainfed crops with reference to drought tolerance and identified high-priority districts for potassium application.

**38. Srivastava, Pradeep** (b 15.03.1971), PhD, Associate Professor, Department of Earth Sciences, Indian Institute of Technology-Roorkee, Roorkee.

Prof. Pradeep Srivastava has contributed to our understanding of the Quaternary evolution of Himalaya and its foreland through unparalleled records of fluvial processes across Himalaya. His work has fundamental implications towards understanding of Himalaya as a critical taper coulomb wedge. Dr Srivastava also developed the first chronologically constrained evolutionary model of Ganga Plain, produced 100 ka history of stratigraphy of Ganga foredeep and identified youngest cycle of peripheral bulge unconformity. His recent work in Himalaya provides geological evidences of gross reorganization of Indian climate system from being glacial bound to ENSO bound and that the solar insolation plays an important role.

**39. Srivastava, Rajesh K** (b 30.06.1961), PhD, Professor, Centre of Advanced Study in Geology, Banaras Hindu University, Varanasi.

Prof. Rajesh K. Srivastava has made substantive contributions to studies on mafic dyke swarms, boninite, alkaline and carbonatite magmatism from the Indian Shield through novel approach involving petrological, geochemical, geochronological and isotope tracers. His contributions have profound global impact on the understanding of sub-continental mantle reservoirs, large igneous provinces, Precambrian tectonics and supercontinent reconstruction

**40. Subramanyam, Rajagopal** (b 14.06.1970), PhD, Professor, Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Hyderabad.

Professor Subramanyam Rajagopal made outstanding contributions to the area of photosynthesis, particularly the structural and functional dynamics of photosystems (PS) and light-harvesting complexes (LHC) in *Chlamydomonas reinhardtii* and *Arabidopsis thaliana*. He discovered that the LHCB2 subunit got phosphorylated under fluctuating light, triggering dissociation of LHCII from PS II and eventual migration to PSI, a phenomenon called state transitions. Based on his studies on the organization of photosynthetic apparatus, under high light and iron deficiency, Prof. Rajagopal proposed a structural model of PSI, accepted by peers.

**41. Sunil Kumar, Palakurissi Balagopal** (b 30.05.1964), PhD, Professor, Department of Physics, Indian Institute of Technology Madras, Chennai.

Prof. Sunil Kumar has made significant contributions to our understanding of lateral organization and factors that determine shapes of multi-component fluid membranes as well as to the organisation cytoskeletal filaments. He was instrumental in the development of computational models that allow for simulation of membranes with anisotropic inclusions, active fluctuations and hydrodynamic interactions.

**42. Tamang, Jyoti Prakash** (b 16.11.1961), PhD, Professor, Department of Microbiology, Sikkim University (Central University), Gangtok, Sikkim.

Dr. Tamang has conducted pioneering studies towards understanding microbial composition and delineating health benefits of fermented foods and beverages from North east India and the greater eastern Himalayan region. In this work he has combined classical microbiological methods with advanced molecular tools, including microbiome analysis, to characterize microbes that are present in the starter cultures and fermented foods to contribute to their health benefits.

**43. Tandon, Nikhil** (b 28.11.1963), PhD, Professor and Head, Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi.

Prof. Nikhil Tandon is a clinician scientist who has used his clinical expertise to gather data generated from large scale epidemiological and translational intervention studies towards improved delivery of care of non-communicable diseases (NCD). He has made innovative use of a combination of “technology” and “task shifting” to bring about health systems alignment at the community and programme level.

**44. Trivedi, Vijaylaxmi Girijashankar** (b 14.03.1966), PhD, Professor (H), School of Mathematics, Tata Institute of Fundamental Research, Mumbai.

Trivedi's contribution begins with a correction and extension of a result by Flenner on Bertini type Theorems. She has also proved that there are only finitely many Hilbert Functions among local Cohen-Macaulay rings with given multiplicity. She introduced the concept of Hilbert Kunz Density function to study the Hilbert Kunz multiplicity and computed it in a few cases.

**45. Venkatasubramanian, Ganesan** (b 24.01.1975), MD, PhD, Professor of Psychiatry, Head, Department of Clinical Neurosciences, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru.

Dr. G. Venkatasubramanian is a psychiatrist who has made seminal contributions to the neurobiology of schizophrenia and the pathogenesis of hallucinations in schizophrenia. He unveiled the influence of brain-derived neurotrophic factor deficits in the genesis of schizophrenia and showed evidence of neuro-immunological mechanisms. He has also led efforts to optimize treatment of schizophrenia and pioneered the development of transcranial Direct Current Stimulation (tDCS).

**46. Verma, Kaushal Kumar** (b 07.03.1971), PhD, Professor, Department of Mathematics, Indian Institute of Science, Bengaluru.

Kaushal Verma has made outstanding contributions in the area of several complex variables, more precisely, analysis on and geometry of bounded domains of dimension higher than one. He has obtained deep results on the extension of holomorphic and CR maps between domains using techniques from functional analysis, a classification theorem for domains in  $C^2$  having non-compact automorphism groups, including restrictions on which dimensions can occur, complex dynamics and ergodic properties families of holomorphic maps, etc. He has also obtained deep results on invariant distances on pseudoconvex domains. All these constitute a solid body of work in various aspects of several complex variables which are highly regarded for their depth and significance.

**47. Yendluri, Shanthi Pavan** (b 01.06.1973), PhD, NT Alexander Institute Chair Professor and Dean (Academic Research), Department of Electrical Engineering, Indian Institute of Technology Madras, Chennai.

For his fundamental and influential contributions to analog and mixed-signal integrated circuits through innovations in the understanding and design of continuous-time delta-sigma modulators for high precision analog to digital conversion.

**48. Yusuf, Seikh Mohammad** (b 03.03.1965), PhD, Associate Director, Physics Group, Bhabha Atomic Research Centre, Mumbai.

Dr. Yusuf, through his neutron scattering work, has made incisive contributions to the fundamental understanding of magnetic phenomenon/ordering in low dimensional magnetism, magnetization reversal, exchange-bias switching, molecular magnetism, manganites, high magnetocaloric materials, magnetic proximity effect, and multiferroics. He has also built an innovative neutron instrument for magnetic scattering.