



# SCIENCE AND ENGINEERING RESEARCH BOARD

Established through an Act of Parliament: SERB Act 2008 Department of Science & Technology, Government of India

# MEMBERS



#### Chairman

# Dr. Srivari Chandrasekhar

Secretary, Department of Science and Technology, Govt. of India

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Dr. Srivari Chandrasekhar, was formerly the Director of the Indian Institute of Chemical Technology (IICT). He is a renowned synthetic organic chemist and has made significant contributions in diverse areas of organic chemistry with special emphasis on chiral chemistry, total synthesis of biologically active natural products and pharmaceutical products. He introduced polyethylene glycol (PEG) as a novel, environmentally benign solvent medium. He has developed technologies for the synthesis of latest anti-tuberculosis drug, bedaquiline; anti-tumor and abortive drug, misoprostol; anti-platelet molecule, beraprost; antidepressive compound, sertralin and drug for treatment of schizophrenia, asenapine.

His passion and commitment to topical health-related problems is evident in his provisioning for better and affordable access to important drugs. His research efforts, with an impressive degree of innovation and enterprise, have led to the synthesis of complex and scarcely available natural products and new molecular entities for affordable healthcare. His endeavours have provided cost-effective technologies to the chemical industry through the identification of new reagents / solvents for specific transformations.

Dr Chandrasekhar completed his primary and higher education in Hyderabad and joined CSIR, IICT for a Ph.D programme. After completing his Ph. D (1991) with the then director Dr. A. V. Rama Rao, he moved to USA for a post-doctoral position with Prof. J. R. Falck (1991-94). He joined CSIR-IICT as Scientist C in 1994 and grew upto the level of director in 2015. He is a fellow of all the three Indian Science academies, National Academy of Sciences, Indian Academy of Sciences and Indian National Science academy. He is also an Alexander von Humboldt fellow.

He has more than 285 publications with 7600 citations. More than 80 students have been awarded Ph. D. degree under his guidance and 20 post-doctoral associates have worked in his group.

He has received several accolades including Eminent Scientist Award for contributions in the field of Chemistry from Telangana State Government in 2017, CNR Rao National Prize for Chemical Research 2012, CSIR Technology award 2014 and Infosys prize in Chemical sciences 2014 for his contributions in synthetic organic chemistry with special focus on the synthesis of complex molecules from natural sources and innovative, practical approaches to pharmaceuticals of current interest to industry.

#### Member (Ex-officio)

# **Dr. T.V. Somanathan**

Finance Secretary & Secretary (Expenditure) Department of Expenditure, Ministry of Finance, Govt. of India

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Dr. T.V. Somanathan holds a Ph.D in Economics (Calcutta University) as well as MA (Econ.) Bachelor of Commerce (B.Com.) Honours degrees. He has completed the Executive Development Program of Harvard Business School, and is fully qualified chartered / cost accountant and company secretary: ACA (England & Wales) FCCA London, FCMA London, Fellow of the Governance Institute, London, ACMA and ACS (India). He received a number of academic awards.

He joined the Indian Administrative Service in 1987 (ranked 2nd All India) and was awarded the Gold Medal for the Best IAS Probationer of his batch. He is currently Finance Secretary, Department of Expenditure, Ministry of Finance, Government of India. He was previously Joint Secretary, Ministry of Corporate Affairs (2010-11), and Joint Secretary/Additional Secretary to the Prime Minister from 2015 to 2017. He has earlier worked in a variety of senior positions in the Government of Tamil Nadu state, including Deputy Secretary (Budget), Joint Vigilance Commissioner, Executive Director Metrowater, Secretary to Chief Minister, and Additional Chief Secretary & Commissioner of Commercial Taxes. As founder MD of CMRL, he was responsible for achieving financial closure and awarding the initial tenders for implementing the Rs.14,600 crore Chennai Metro Rail Project.

In 1996 he joined the World Bank, Washington through the Young Professionals Program, as Financial Economist in the East Asia & Pacific Regional Vice Presidency. In 2000, he became one of the Bank's youngest Sector Managers when he was appointed Manager of the Budget Policy Group. In 2011 his services were sought by the World Bank and he served as Director from 2011 to 2015.

He has published over 80 papers and articles in journals and newspapers on economics, finance and public policy, and is the author of two books viz. Derivatives (McGraw Hill Education – 1998, 2nd ed. CUP 2018), The Economics of Derivatives, (Cambridge University Press, 2015, co-authored), and of chapters in The Oxford Handbook of the Indian Constitution (Oxford University Press—2016), Land Reforms in India (Sage–2003), Public Institutions in India (Oxford–2005), Rethinking Public Institutions in India (Oxford — 2017) and On the Trail of the Black (Rupa—2017).

# Sh. Amitabh Kant

Chief Executive Officer NITI Aayog

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#### Member (Ex-officio)



Sh. Amitabh Kant is presently CEO of National Institution for Transforming India (NITI). He is a member of the Indian Administrative Service, IAS (Kerala Cadre: 1980 batch). Sh. Kant has been a key driver of the "Make in India': Startup India, "Incredible India" and God's Own Country" initiatives that positioned India and Kerala State as leading manufacturing and tourism destinations. These campaigns have won several international awards and embraced a host of activities - infrastructure development, product enhancement, private-public partnership and positioning and branding based on extensive market research. Sh. Kant also conceptualized the "Atithi Devo Bhavah" -"Guest is God" campaign to train, taxi drivers, guides, immigration officials and make them stake holders in the tourism development process. Sh. Kant was also the National Project Director of the Rural Tourism Project of UNDP, which made a paradigm shift in spreading tourism to Indian villages which had core-competency in handicrafts, handloom and culture. In his capacity as Secretary (Industries), Govt. of India, he drove the 'Ease of Doing Business initiative' and ranking of states on outcome parameters. He is the Chairman of the Committee to implement Digital Payment in India.

Sh. Kant has been the recipient of Economic Time Policy Change Agent of the Year Award, the Bloomberg TV Personality of the Year Award, the NDTV Administrator of the Year Award and the Distinguished Fellowship of the Institute of Directors. He is the recipient of One Globe Award-2016 for leadership in Transforming Governance for the 21st Century. He is a Member of the Steering Board of "Shaping the Future of Production Systems" of World Economic Forum. He is also the recipient of Sir Edmund Hillary Fellowship award by the Prime Minister of New Zealand. He is also the recipient of Golden Peacock Award for leadership in Economic Transformation - 2017.

Sh. Kant has worked as CMD - ITDC, Joint Secretary - Ministry of Tourism, Government of India, Secretary - Tourism, Government of Kerala, Managing Director, Kerala State Industrial Development Corporation, District Collector, Kozikhode and Managing Director, Matsyafed. During his tenure in Kerala, he structured the Calicut Airport as a private sector project based on User's Fee and developed the BSES Power Project and Mattanchery Bridge under Private Public Partnership. He was also responsible for introducing new technology (fiberglass crafts and outboard motor) in the fisheries sector and launching beach level auctions which substantially enhanced returns to traditional fishermen.

Sh. Kant did his schooling from Modern School, Delhi, graduation in Economics (Hons) from St. Stephen's College, Delhi University and M.A. from Jawaharlal Nehru University. He was also awarded a British Chevening Scholarship to attend Manchester Business School in the U.K.

# Dr. Rajesh S. Gokhale

Secretary, Department of Biotechnology and Director General, Council of Scientific and Industrial Research-cum-Secretary, Department of Scientific & Industrial Research (Additional Charge) Govt. of India

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#### Member (Ex-officio)



Dr. Gokhale joined NII in 1999 and spent a decade implementing a cutting-edge biotechnology research program. Subsequently, he served as the Director of CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB) from 2009-2016, spearheading the prolific growth of the institute. He returned to his parent institute, NII, in 2017. He also briefly acted as the Director-in-charge of NII in 2021 before moving on deputation to the Indian Institute of Science Education and Research, Pune (IISER Pune) as a Professor.

Dr. Gokhale is one of the world leaders in Tuberculosis research. His research has provided novel insights into metabolic pathways that operate in Mycobacterium Tuberculosis and are critical for disease pathogenesis. He has also made critical contributions towards the understanding of the interplay between metabolic reprogramming and immunity autoimmune skin disorder Vitiligo.

Dr. Gokhale has received several prestigious awards, including the Wellcome Trust (UK) Senior research fellowship (2001-2006), Howard Hughes Medical Institute (HHMI) International Research Scholarship, USA (2005 – 2010), Swarnajayanti Fellowship, Department of Science and Technology, India (2006-2011), Shanti Swaroop Bhatnagar Prize in Biological Sciences, India (2006), National Bioscience Award for Career Development, India (2009), Infosys Prize in Life Sciences (2013), IIT Bombay Distinguished Alumnus Award (2014), Sun Pharma Research Award (2014) – Medical Sciences, Basic Research Award, JC Bose National Fellowship (2018-Present).

Dr. Gokhale has been a member of many professional and academic bodies and societies. He is a Fellow of the Indian National Science Academy, New Delhi (2014), the National Academy of Sciences India, Allahabad (2012) as well the India Academy of Sciences (2007). He was elected as a member of the prestigious Guha Research Conference (2005). He also served as a member of the editorial board, The Journal of Biological Chemistry (2014 to 2017), section editor of Journal "Tuberculosis", Elsevier (2007 to 2017), the Indian Journal of Biochemistry & Biophysics (2013 onwards)

#### Member (Ex-officio)

# Dr. M. Ravichandran

Secretary, Ministry of Earth Sciences, Govt. of India

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Dr. M. Ravichandran is the Secretary to the Government of India, Ministry of Earth Sciences, since Oct 2021. He was Director, National Centre for Polar and Ocean Research (NCPOR), Goa during 2016-2021. He obtained his Ph.D degree in Physics from University of Pune. He worked as an Atmospheric Scientist in Indian Institute of Tropical Meteorology (ESSO-IITM), Pune (1988 to 1997), Ocean Technologist at National Institute of Ocean Technology (ESSO-NIOT), Chennai (1997-2001) and a Physical Oceanographer at Indian National Centre for Ocean Information Services (ESSO-INCOIS), Hyderabad (2001-2016), before joining at NCPOR.

His research interest includes Atmospheric and Ocean dynamics, Ocean Observations & Modeling. He is Vice-President of Scientific Committee on Antarctic Research (SCAR), Member of Scientific Steering Group of World Climate Research Program of WMO, Indian delegate to represent Antarctic Treaty system, Member of International Arctic Science council, and also member of various other National and International committees.

He is a Fellow of National Academy of Sciences India (NASI) and Fellow of India Meteorological Society. He has received many awards including National Award in the field of Ocean Science by Ministry of Earth Sciences, Dr. Srinivasan Endowment Award by Ocean Society of India, Dr. S Z Qazim Award for Excellence in Marine Sciences, etc.

He is editor for Pure and Applied Geophysics (Atmosphere and Ocean Sciences) since 2015 and has spent more than 500 days at sea on-board research vessels for various ocean related research and published more than 150 publications in referred Journals.

#### Member (Ex-officio)

# **Prof. Balram Bhargava**

Secretary, DHR, Govt. of India & Director General ICMR

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Professor Balram Bhargava, is the Secretary, Department of Health Research, (Ministry of Health & Family Welfare), Government of India and Director General, Indian Council of Medical Research (ICMR) since 2018. Prof. Bhargava is Professor of Cardiology at All India Institute of Medical Sciences (AIIMS), New Delhi and also serves as the Executive Director for Stanford India Biodesign Centre, School of International Biodesign (SiB).

Professor (Dr) Balram Bhargava is an outstanding cardiologist, one of the foremost leaders in biomedical innovation, public health, medical education and medical research. Professor Bhargava has established the India-Stanford Biodesign programme, a unique interdisciplinary fellowship programme to foster innovation, design in low cost implants/devices. He developed the indigenous Platinum Iridium coil coronary stent and has been instrumental in clinically evaluating and establishing the use of two other laser cut medicated Indian stents. These low cost indigenous stents have benefitted several thousand patients.

He set up the c-GMP Centre for Excellence for Stem Cell Studies, at AIIMS which has initiated treatment of patients with dilated cardiomyopathy which has benefitted number of no-option heart failure patients waiting on the cardiac transplant list. He is an innovator par excellence with innovations touching everyday lives with very huge social impact for which he has started the Society for Less Investigative Medicine (SLIM). He has published several papers on the harmful cardiovascular effects of chewing tobacco and is evaluating the continuous blood pressure of DTC bus drivers in Delhi. He has led two major trials in India funded by the NIH, Bethesda, USA which has changed clinical practice. He has pioneered several techniques in interventional cardiology.

He has been awarded the SN Bose Centenary award by the Indian National Science Congress and National Academy of Sciences Platinum Jubilee Award, Tata Innovation Fellowship and Vasvik Award for Biomedical Technology Innovation, Ranbaxy Award and the OP Bhasin Award in the field of Health and Medical Sciences. He is the Founding, Editor in Chief of the British Medical Journal Innovations (BMJi). He has been awarded the 'Padma Shri' high civilian award by the Honourable President of India and the UNESCO Equatorial Guinea International Prize for research in Life Sciences at Paris.

# Dr. Vijay Bhatkar

Founder Chancellor & Chief Mentor, Multiversity Chancellor, Nalanda University Chairman TAC, C-DAC, Member TAC, NSM Member, SERB, GoI, Chairman, UBA, GoI National President, Vijnana Bharati

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Honoured with Padma Bhushan, Padma Shri, Maharashtra Bhushan and a string of national awards and Honorary Doctorates, Dr. Vijay Bhatkar is best known as an architect of India's first Supercomputer 'PARAM' and several pioneering contributions to Information Technology in India. He did his Ph.D. from IIT Delhi in 1972 where he was acclaimed as its Distinguished Alumni and went on to become its Chairman of Governing Council. Currently he is the National President, VIBHA, Chancellor, Nalanda University and guiding India's notable national initiatives in Science and Technology as well as in Arts and Humanities. www.vijaybhatkar.org

# **Prof. Indranil Manna**

JC Bose Fellow FTWAS, FNA, FNAE, FNASc, FASc, MAPAM, FIE(I), FIIM, FEMSI, FAScT, PRS, DSc (hc), PhD Vice Chancellor Birla Institute of Technology, Mesra

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#### Member



Professor Manna is a renowned academician and prolific researcher with wide ranging research interests concerning microstructure-property-parameter correlation in nanometric and amorphous solids, laser and plasma assisted surface engineered components, bainitic and ODS steel and nano-fluid. His significant contribution in the study of amorphous/nanocrystalline Alalloys, nano-fluid and laser/plasma assisted surface engineering received intense attention from the scientific community and is highly lauded. His early contributions in moving boundary phase transformation are still widely cited.

Professor Manna has over 300 publications in peer reviewed journals and proceedings. He has supervised over 20 PhD theses. While serving in the Metallurgical and Materials Engineering Department at IIT Kharagpur, Professor Manna developed several new research laboratories and facilities like plasma ion implantation and coating unit (DST, Tata Steel), Mechanical Alloying laboratory (DST, CSIR), Wear and erosion testing laboratory (CSIR, Tata Steel, DST), Electron bean joining facility (BRNS), Pulsed laser deposition and FE-SEM laboratory (DST), Nanofluid synthesis and characterization laboratory (ISRO), etc. Professor Manna has made seminal and outstanding contributions in synthesizing several nanostructured materials in different form/architecture and establishing correlation between length, size, volume or type of the smallt crystallite and engineering properties of interest in nanostructured particles/aggregates synthesized by various advanced material processing techniques.

Prof. Manna is a Fellow of The World Academy of Sciences (TWAS), Indian National Science Academy, (INSA), Indian Academy of Sciences (IAS), The National Academy of Sciences, India (NASI) and is the current president of Indian National Academy of Engineering (INAE).

# Dr. Virendra M. Tiwari, Ph.D., FASc, FNA, FNASc, FTAS

Director CSIR-National Geophysical Research Institute & Outstanding Professor, AcSIR, Hyderabad

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Dr. Virendra M. Tiwari obtained his post-graduate degree in Geophysics from Banaras Hindu University (BHU), Varanasi. He took up a scientific career at CSIR-National Geophysical Research Institute (CSIR-NGRI), after receiving a PhD in Geophysics from NGRI-BHU. He has worked as Post-Doctoral Researcher at the IPGP, Paris, France and LAGOS-CNES, Toulouse, France and as Visiting Scientist at the GEOMAR/CU Kiel, Germany and CU, Boulder, USA.

His academic excellence has been recognized by National Merit Scholarship; ONGC-AEG Best Thesis Award; Young Scientist Awards from INSA, CSIR, UP S&T; Krishnan Gold Medal by IGU, National Mineral Award by Ministry of Mines, GoI, to name a few. With well recognized scientific contributions, Dr Tiwari is an elected Fellow of the Indian National Science Academy, National Academy of Sciences India, Indian Academy of Sciences and Telangana Academy of Sciences. He is a recipient of the SERB J C Bose Fellowship. He is also a member of several national and international committees.

His research focuses on deciphering the mass distribution and mass transport related to the geophysical phenomenon on surface and at depth in the Earth. Besides well cited research papers in leading journals; he has contributed significantly to the important R&D projects for the groundwater and the Oil and Mineral Industries in India.

# Prof. (Dr.) Annapurni Subramaniam, FASc., FNASc.

Director & Senior Professor Indian Institute of Astrophysics, Bengaluru

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Prof. Annapurni Subramaniam is the Director of the Indian Institute of Astrophysics, Bangalore. She has about three decades of research experience and has published about 150 research publications in topics such as, star clusters, stellar populations, galaxies, and ultra-violet astronomy. She has guided a number of students for PhD and projects. She currently holds the following positions:

- i. The Chief Editor of the Journal of Astrophysics and Astronomy, jointly published by the Indian Academy of Sciences and Astronomical Society of India.
- ii. Scientific Editor of Research in Astronomy and Astrophysics, published by the Chinese Academy of Sciences.
- iii. Co-Chair of the Science Education Panel (SEP) of the Academies.
- iv. Chair of the membership committee of the International Astronomical Union, at the international level.
- v. Member of the advisory committee, Macquarie University Astronomy, Astrophysics and Astrophotonics Research Centre, Macquarie University, Australia
- vi. Chair, Program Advisory committee (Physics-II), SERB

She was involved in two major projects.

- I. She is the calibration scientist for the UV Imaging Telescope (UVIT) on board India's first space observatory, ASTROSAT.
- II. She was heading the Indian team of the Observatory software, completed the delivery of Common software in 2019 for the Thirty Meter Telescope (TMT), which is being built by an international consortium with India as a partner. She continues to play an important role in the project, as the director of the Institute that leads the project from India.

She is the Principal Investigator of the proposed next generation UV-Optical space telescope (INSIST), leveraging on the experience gained from AstroSat and UVIT.

- Fellow of Indian Academy of Sciences (since 2014)
- Fellow of the National Academy of Sciences (since 2013)
- Life member of International Astronomical Union and Astronomical Society of India.
- Kavli Frontiers of Science Alumni, instituted by Kavli foundation and National Academy of Sciences, USA (2009, 2013)
- Recipient of C.V. Raman Young scientist award for physical sciences, from the Karnataka Government for the year 2018.
- Recipient of SERB-POWER fellowship (2021)
- Recipient of NASI-BUTI foundation lecture award (2021)

Her research interests include Star clusters, Classical Be stars, Young stellar Objects, Blue straggler stars, Magellanic Clouds, nearby galaxies, UV and space astronomy

#### **Prof. T. G. Sitharam**

Director, Indian Institute of Technology, Guwahati

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Prof. T. G. Sitharam Obtained his B E (Civil Engineering) from University of Mysore; Master's from Indian Institute of Science, Bangalore in 1986 and Ph.D. from University of Waterloo, Ontario, Canada in 1991. He has served University of Texas at Austin, Austin, Texas, USA from 1991-94. Presently. He is the Director of Indian Institute of Technology, Guwahati, Assam since July 2019. He also holds position of Director (additional charge) at Central Institute of Technology Kokrajhar, Assam. He is a Senior Professor, Department of Civil Engineering, Indian Institute of Science, Bangalore and he has served IISc for last 27 years. As the Director of IIT Guwahati, he was responsible for creating 5 new schools and five new academic centres at IITG during 2020-22 During his tenure, IITG has taken a position of Rank No 2 institute in citation per faculty in India (Rank 37 globally) in the recent QS world ranking 2023. IITG jumped 95 ranks from 2019 to 395th rank globally in 2022. Further, it jumped by 11 ranks in QS world ranking in 2023. In NIRF ranking, IITG ranked 8th rank in engineering in 2021 and earlier positioned at 7th rank in 2020. Prof. Sitharam has created a new Industry Interaction and special Initiative (II&SI) group at IITG and has attracted 22 number of companies at Research park and incubated large number of start-ups in Technology Incubation Centre of IITG. In 2020 -2021, IITG has transferred about 20 Technologies to industries and filed 200 patents during this pandemic. Presently he is Executive Council member of AICTE and Chairman, Eastern Zonal committee of AICTE.

He was the former Chairman, Research Council, CSIR-Central Building Research Institute (CBRI), Roorkee. Also, a board member of NCSM, CPRI and BIS, Govt of India. Presently, he is the President of Indian Society for earthquake Technology and International Association for Coastal Reservoir Research (IACRR). He has published 500 technical papers, 20 books, with Google scholar H-index of 49 and I-10 index 144 with more than 7873 citations. He was listed in the world's top 2% of scientists for the most-cited research scientists in various disciplines by Stanford University in 2020 and again in 2021. He has guided 40 Ph.D. students; 35 Masters Students, 25 postdoctoral students and several thousand industry professionals and teachers through continuing education workshops. He has filed for 5 patents, executed more than 120 consulting projects and 2 start-up companies to his credit. He is the Fellow of American Society of Civil Engineers (ASCE), Fellow of Institution of Civil Engineers (United Kingdom), Diplomat of Geotechnical Engineering (D.GE.) from Academy of Geo-Professionals, ASCE; Honorary fellow of Indian Geotechnical Society and Council of Vibration Specialists. He is a Fellow of IGS, ISET, ISES and many other Societies in India and abroad. He is also a certified professional engineer and chartered engineer from IE.

# Prof. S. K. Barik

Director CSIR-National Botanical Research Institute, and CSIR-Indian Institute of Toxicology Research, Lucknow

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#### Member



Prof. S. K. Barik is the Director, CSIR-National Botanical Research Institute, Lucknow. He has also been holding the additional charge of Director, CSIR-Indian Institute of Toxicology, Lucknow since 2020. As the Theme Director of Agriculture, Nutrition and Biotechnology theme of CSIR, he manages the R&D programme of 32 CSIR institutions working in this domain. His research specializations are, Plant and microbial resources, Agriculture, Forestry, Ecology & Environment (molecular, chemical and population ecology), and Bio-product development for Biomedical & Healthcare interventions. He has more than 34 years of research experience in the field of plant sciences, and served as Professor and Head, Department of Botany, North-Eastern Hill University (NEHU), Shillong before joining CSIR. As all-India Coordinator, he implemented 10 major R&D projects of DBT and MoEF&CC. As Principal Investigator, he implemented 40 national/international/industry R&D projects. He has filed 12 patents, published several papers in peer reviewed journals and supervised 29 Ph. D. degrees. He is the editor of four international journals. He also commercialized six products/technologies.

He is a Fellow of The National Academy of Sciences, India, National Academy of Agricultural Sciences, Linnean Society of London, LEAD International, Rockefeller Foundation, USA, and International Society for Environmental Botanists. He has been conferred with Prof. R.N. Tandon Memorial Award and Biodiversity Lecture Award by The National Academy of Sciences, India, Dr. Brandis Award by Indian Forester, Prof. Birbal Sahani Medal by Indian Botanical Society, and Dr. Mopuri Brahmam Memorial Award by Orissa Botanical society. He is the Vice-President, The National Academy of Sciences, India, and Member, Governing Body, GB Pant National Institute (MoEF&CC), Govt. of India (GoI), National Institute of Plant Genomic Research, DBT, GoI, Chairman, State level Expert Appraisal Committee, Arunachal Pradesh, MoEF&CC, Chairman, Apex Committee for North East region, Biotechnology Programme, DBT, GoI, Chairman, Integrated Eco-development Research Programme, GBPNIHESD, MoEF&CC, Chairman, Technical Advisory Committee, TDUPW/A2K+), DSIR, GoI, and has served as expert Member of more than 80 Committees of Govt. of India.

## Prof. M.V. Padma Srivastava

MD, DM, FRCP (Edin), FAMS, FNASc, FIAN, FNA Professor & Head, Department of Neurology Chief, Neurosciences Center AIIMS, New Delhi

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Her research interest is primarily Stroke, Vascular Dementia and Multiple Sclerosis. She is the National Co-ordinator for the SITS-NEW registry for thrombolysis for stroke data from India, the National Co-ordinator for the SITS-SEARS registry with the Karolinska University and is an active member of the National Stroke Surveillance program for India, the National Stroke Registry, the National Prevention Programs for Noncommunicable Diseases of India, Stroke delivery in India and is the author of Management of Stroke Guidelines and Tele stroke Guidelines for India. She is on board as task force member for several programs including the FIST, under DST, Govt. of India, Neurosciences Task Force of DBT, ICMR and others. She is the recipient of several orations such as Vimla Virmani Oration, Achanta Laxmipathy Oration, Baldev Singh Oration from NAMS, K.L.Wig Oration from API, Mridula Kambhoj Oration, Dr V.P Sharma Oration from NASI, Veera Raghava Reddy Oration from NIMS, Hyderabad, Endowment Oration by Andhra Medical College, Prof. Kuppachhi Krishna Murthy Memorial Oration by APAPICON.

Currently she is serving as the Member, Task Force, SATYAM, DST, Govt. Of India, Member Task Force for NSCRT, DST, Govt. Of India, 2018, Member Task Force for MSU for North-East, under ICMR, Member, PMC, for Indo-Japan, ASHD Project, DBT, Member DST-FIST Subject Expert Committee, Govt of India, Chairperson, PRC -NCD division, ICMR, SEC for Neurology and Mental Health, DCGI, Govt. of India, Member, Governing Body, Ambedkar University, Mohali, Govt. of Punjab, Chairman, Academic Committee, Ambedkar University, Govt. of Punjab, Chairman, Standing Academic Committee, PGIMER, Chandigarh, Member, Standing Selection Committee, PGIMER, Chandigarh, Member of the Governing Body of All India Institute of Ayurveda (AIIA), Govt. of India, 2020, Member SERB, DST, Govt of India, 2021, Member, PAC – International cooperation, Life sciences & Medical Biology, DST, Govt. of India, 2021, Member, IMA Standing Committee for Stroke/Hypertension Control Initiative, 2022, Member, Selection Board for recruitment to the post of Dean in ESIC PGIMERs/Medical Colleges/Dental Colleges.

She has 343 publications in indexed journals and has on going several projects including center of excellence for Stroke Recovery from ICMR, including assistive devices, brain stimulation and stem cells.

The Government of India awarded her the fourth highest civilian honour of the Padma Shri, in 2016.

# Dr. P. M. Kurulkar

Director, Research & Development Establishment (Engrs.)

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Dr. P. M. Kurulkar joined DRDO at CVRDE, Avadi, in 1988 after completing his Bachelor's degree (BE) in Electrical Engineering from COEP Pune in 1985 in first class with Distinction. He further completed his advanced courses in Power Electronics from IIT Kanpur with specialization in Drives and application. His area of specialization is Design and Development of Missile Launchers, Military Engineering Equipment, Advanced Robotics and Mobile Unmanned Systems for Military Applications.

As Project Leader and System Manager for Akash Ground Systems, he has been a key member of Akash team and has played a major role in the design, development and production of Akash Launchers and mission-critical Ground Systems. His efforts have been resulted in the release of production orders to the tune of 1000 crores for the Akash Launchers and other Ground Systems. As a Project Director SF, Agni Project, he steered the design and development of Road & Rail versions of Launchers & Ground systems. He has played key role in its development with users and these efforts have resulted in release of production to orders to the tune of 250 crores for Agni project.

Dr. P. M. Kurulkar has launched a series of new technological initiatives in the emerging technology areas like – High Performance High Power Servo Drive Technology, Platform Stabilization Technology, AFPM based Alternator Technology, VSCF based Power Source Technology, Electric Propulsion Technology, Missile Canister Technology, Autonomous Navigation Technology for small UGVs, Intelligent Robotic Manipulators for hazardous military applications and Linear Electric Motor Technology.

Dr. P. M. Kurulkar is a recipient of the Science Day Award for Best Publication in 2000, the DRDO Agni Award for Excellence in Self-Reliance in 2002, the DRDO Award for Path-breaking Research/Outstanding Technology development in 2008 for AKASH and the DRDO Award for Performance Excellence for MRSAM in 2016 and the Award for Excellence of Technology by DEMA in 2016.

He is a fellow of the Institution of Engineers (India), Life Member of Indian National Society for Aerospace and Related Mechanisms (INSARM), Member of Fluid Power Society of India (FPSI), and Robotics Society of India. Also he is a Life Member of Institute of Smart Structures and Systems (ISSS).

# **Prof. V. K. Vijay**

Centre for Rural Development and Technology, Indian Institute of Technology, Delhi

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Prof. Virendra Kumar Vijay, a former head of the Centre for Rural Development and Technology at IIT Delhi, is a highly acclaimed and reputed scientist working in the area of rural technologies, biogas and biofuel technologies and transforming higher education paradigm to make it inclusive with an experience of about 32 years in the education and research. Prof. Vijay, along with his group, conceptualized and formulated the flagship national programme - Unnat Bharat Abhiyan (UBA) - which was adopted by the Ministry of Education, GOI in Nov 2014, and inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions to help build the architecture of an inclusive India. Under his leadership, as of now, the UBA has a strong network of more than 3100 Participating Institutes (IITs, NITs, AIIMS, IIMs, Universities, AICTE institutions and colleges ) which work closely with nearly 15000 villages spread across all the states/UTs in India using their students and teachers. Prof. Vijay is also a leader in designing and developing small scale biogas purification and bottling technology called CBG for vehicular application in India. Prof. Vijay has been operating a biogas plant in IIT Delhi operated on kitchen waste from Houses and hostels and running a car on upgraded biogas produced at IIT Delhi using his patented technology from kitchen waste since 2011. The launch of Sustainable Alternative towards Affordable Transportation (SATAT) scheme by MoPNG, GoI was another milestone towards promoting compressed biogas in India due to his efforts. Prof. Vijay also founded a technical society – the Biogas Forum India – to promote and popularize biogas and bio-fertilizer in India. He is also the Convener of National Steering Committee for an inter-ministerial programme – Scientific Utilization through Research Augmentation- Prime Products - Panchagavya from Indigenous Cows - SUTRA-PIC India chaired by honourable minister of MoS&T to help in developing a cow-based economy and scientific validation and research of panchgavva products.

Prof. Vijay has around 200 publications, 7 books, and one lab manual to his credit, Fellow & Life member of many societies/ Academies. He has received large number of awards for his outstanding contribution in research, teaching and outreach activities.

# Shri J. Chaddah

Country Manager, Supply Chain, Intel India

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A thought leader with two decades of experience in executive roles across multiple geos – US, India, Mexico & Canada, Shri Jitendra Chaddah (JC) has vast experience in developing and driving robust growth of R&D organizations in intensely competitive global markets. He has held leadership roles in IT, Intel CIO office, marketing, and ramped up two critical R&D organizations for Intel (India & Mexico).

JC is the founding member of India's first fabless startup initiative called SFAL and was instrumental in creating the System startup ecosystem in India and led the formation of Intel India Maker Lab program. JC is on the Board of Invest Karnataka Forum, a non-profit company that has been formed to promote and attract investments and also leads IESA's Core Interest Group (CiG) for Semiconductor Manufacturing Supply Chain.

Previously, JC served as Senior Director, Strategy and Operations at Intel India, Intel's largest design centre outside the US. In his current role as the Country Manager of Intel's Supply Chain organization at Intel India, JC is responsible for growing and strengthening all aspects of the supply chain organization and executing to the long-term plan to build and create value by leveraging and developing India semiconductor supply chain eco-system.



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