

भारतीय प्रौद्योगिकी संस्थान कानपुर  
Indian Institute of Technology Kanpur



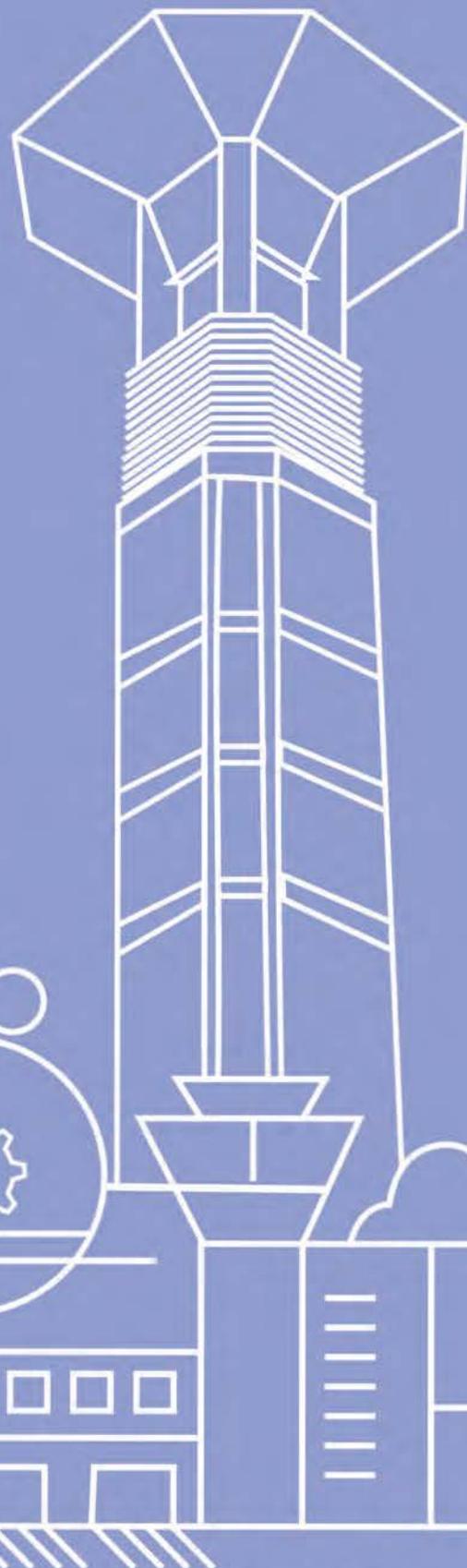
## Institute Foundation Day



### Diamond Jubilee

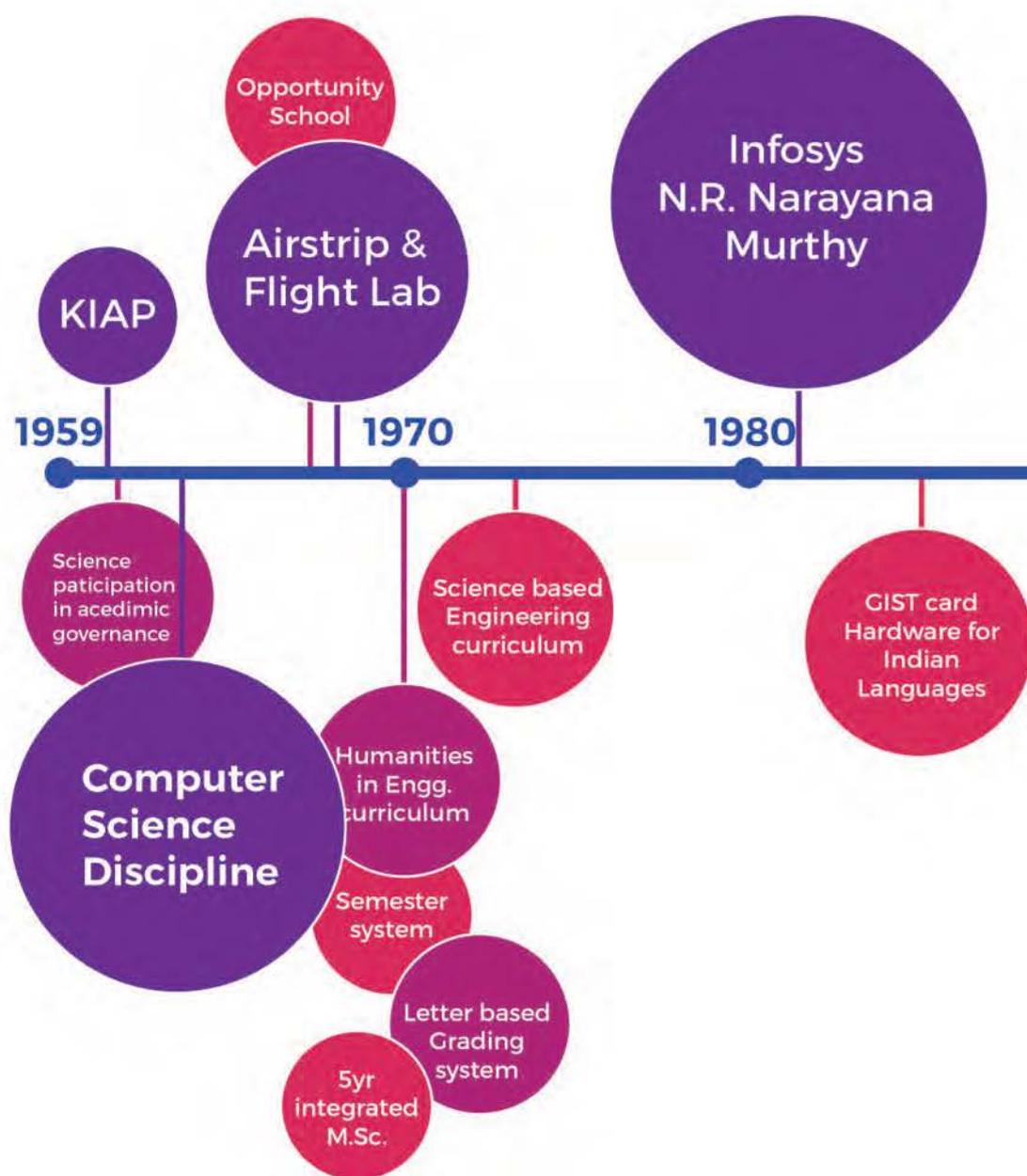
Celebrating 60 years of excellence

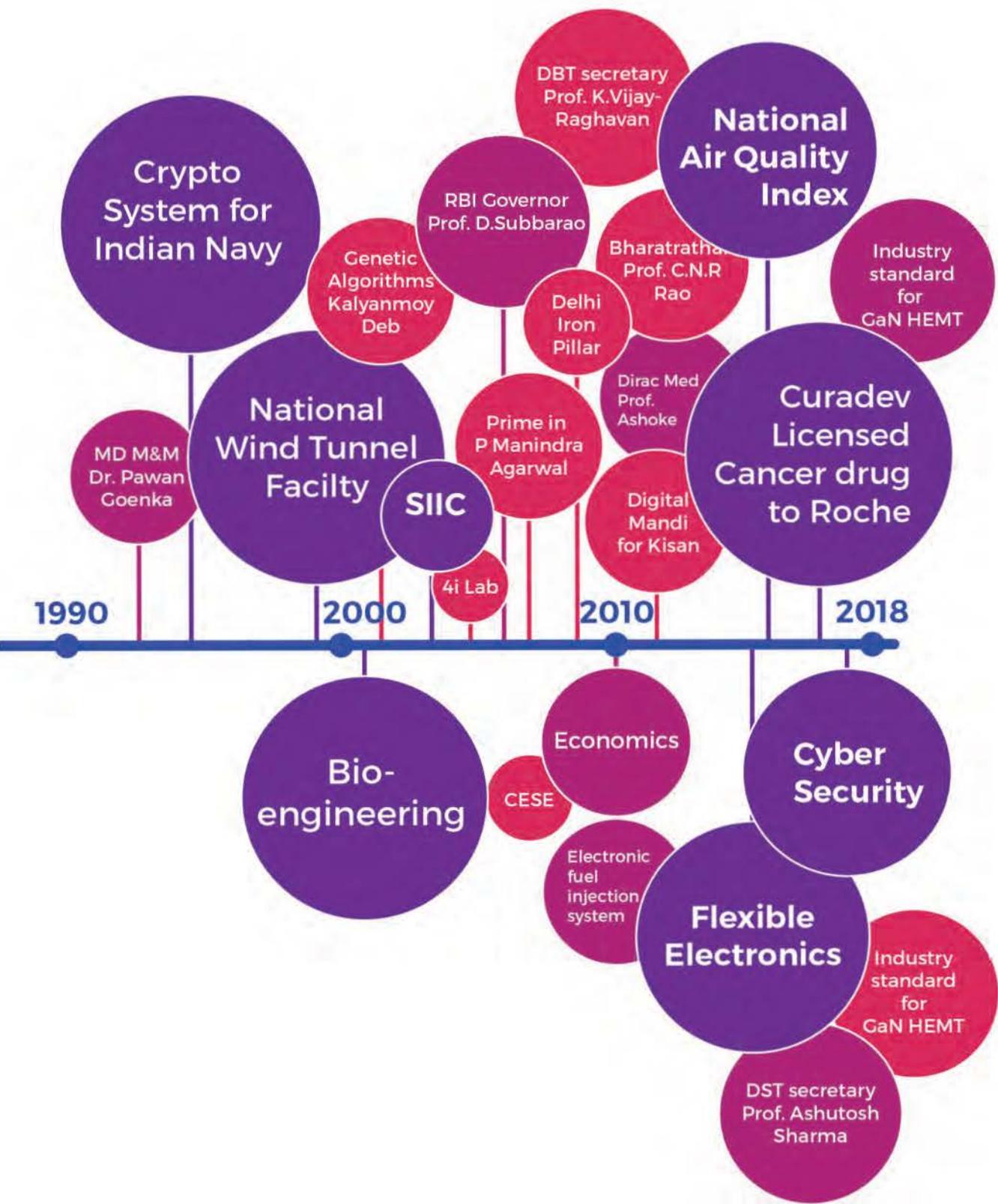
Friday, 2nd November 2018  
L-19, Lecture Hall Complex



**Institute Fellows**

# History and Journey





# Our History



N.C. Dahl (MIT) Prog.Leader and P.K. Kelkar, Director



Former President, S. Radhakrishnan at IIT Kanpur Convocation



Laying down the Institute foundation



Mrs. Indira Gandhi's visit at IIT Kanpur, 1966



PM Nehru discussing about IIT Kanpur at parliament building, 1961



First computer set up at computer center, IIT Kanpur



PK Kelkar Library, 1962  
(under construction)



PK Kelkar Library

# Director's Message

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Our Institute was registered under the Societies Registration Act on 2nd November 1959, and 2nd November is commemorated as the Foundation day. This year's foundation day celebration marks the beginning of the Diamond Jubilee (60th) year of the Institute. It serves to contemplate on our journey thus far, celebrate successes, identify weaknesses and create a comprehensive strategy for the future.



Values expounded by the founding director, Dr. P.K. Kelkar have greatly impacted the institute and continue to be held in high esteem. The institute has been nurtured over the years by eminent faculty while the alumni have garnered fame for their alma mater, around the globe. The continued commitment towards excellence by our faculty colleagues, research scholars, and students – past and present, have brought laurels to the Institute both nationally and internationally. Their work has made a mark through high impact publications and successful patents. The Institute remains committed to imparting quality education, developing viable technology solutions and pursuing cutting edge research and innovation in all disciplines through individual and collective efforts. For the future, we have taken proactive steps of massive expansion to substantially enhance the infrastructure of the Institute, and add promising young faculty talent in its rolls. We are also committed to creating a vibrant research atmosphere and in this regard, we have opened up hiring of postdoctoral fellows across departments. Furthermore, we are working on strengthening the PhD program by introducing financial support for conference travel.

The Institute is focussed on space generation and continues to add new research equipment and facilities. We will soon establish a research park with a focus on improving interaction with the industry. In the rejuvenated eco-system, the alumni will have an important role to play and we look forward to their suggestions and participation.

In particular, the Institute will continue to pursue areas where it has established credentials and core strengths. It will create new avenues of knowledge but also translate them into practicable technology to meet the societal needs of the country. Close linkages with R&D establishments, industry, and the international community is absolutely essential. In this regard, the Institute has setup the FIRST initiative to promote technology entrepreneurship. Given the global reputation and dynamic environment at IIT Kanpur, it is an earnest hope that our Institute will emerge as an attractive center for the generation of ideas, concepts, and technologies.

I am confident that the Diamond Jubilee year will herald a new era of lofty aspirations and accomplishments.

Best wishes and Jai Hind!

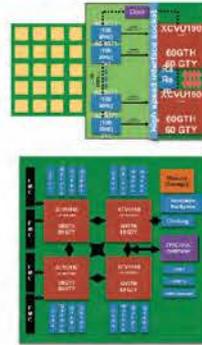
A handwritten signature in black ink, appearing to read 'Abhay Karandikar'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Abhay Karandikar

# Major Projects and Initiatives



Centre for Energy Regulation (CER),



Indigenous 5G Test Bed Design



Development of National Blockchain & demonstrate two strategic applications



Vigyan Bus



Vigyan Jyoti Programme

# Institute Fellow 2018

## Professor H. S. Mani

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Professor H. S. Mani obtained his Bachelor of Science (Hons) and Master of Science in Physics from Delhi University in 1957 and 1959 respectively. He obtained his doctoral degree in Physics from Columbia University in 1964. He served as a senior scientific officer in the National Physical Laboratory from 1965 to 1966 and as an



assistant professor at the University of Michigan from 1966 to 1969. He joined the Physics Department of IIT Kanpur as an assistant professor in 1969 and became full professor in 1976.

The primary focus of Professor Mani's research work has been in high energy phenomenology. His significant contributions spread over diverse areas of high energy physics, like, electroweak interactions, Quantum Chromodynamics and Physics beyond the Standard Model. Besides research, Professor Mani is known to be a passionate teacher. His teaching contributions at IIT Kanpur are legendary and have contributed significantly to the academic reputation of this institute. Many of his students fondly remember his teaching well after graduating from IIT Kanpur. Professor Mani with Professor G. K. Mehta has written a popular book titled "Introduction to Modern Physics". In addition, he took deep interest in mentoring young faculty members from different disciplines, and he served as a sounding board for critical reviews of a wide variety of courses. During his tenure at IIT Kanpur, Professor Mani also served as the Dean of Faculty Affairs.

Professor Mani became the director of the Mehta Research Institute in Allahabad in 1992. Professor Mani made a significant impact in the development of the (later re-named) Harish-Chandra Research Institute where he was instrumental in bringing about a metamorphosis of the Institute both in terms of its size and reputation. Professor Mani superannuated from IIT Kanpur in 1996. After completing his tenure as the director of Harish-Chandra Research Institute in 2001, he has held several positions, such as, visiting scientist at the S. N. Bose National Centre for Basic Sciences, Raja Ramanna fellow at the Institute of Mathematical Sciences, Jawaharlal Nehru Chair Professor at the University of Hyderabad and visiting Professor at IISER, Mohali. Since 2009 he has been an Adjunct Professor at the Chennai Mathematical Institute.

Besides teaching at IIT Kanpur, Professor Mani has been contributing to science education throughout the country at various platforms. These include, training high school students, giving lectures to high school teachers, giving lectures in SERC schools etc. Professor Mani has also contributed immensely to the Olympiad programme in Physics and Astronomy by giving lectures to the selected students and serving as the co-chairman of the Asiad Olympiad programme in 2012. Professor Mani has received many honours during his illustrious career. He was appointed as the fellow of the Indian Academy of Sciences, Bangalore, and the National Academy of Sciences, Allahabad in 1984. He received the DAE C. V. Raman lectureship by the Indian Physics Association in 1998 and the M. N. Saha award by the UGC Hari Om Ashram Trust in 1999. He was also awarded the Distinguished Teacher award by IIT Kanpur in 2007 and the INSA teacher's award in 2013.

In recognition of his significant and valued contributions to the institute and the society at large, IIT Kanpur on its Foundation Day takes pride and pleasure in conferring upon Professor H. S. Mani the award of INSTITUTE FELLOW for the year 2017.

# Institute Fellow 2018

## Professor Somenath Biswas

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Professor Somenath Biswas was born in Chittaranjan, West Bengal and did his BTech (Electronics and Electrical Communication Engineering) from IIT Kharagpur in 1973. He then came to IIT Kanpur and completed his MTech and PhD in Computer Science in 1976 and 1980 respectively.

Immediately after completing his PhD, he joined as Lecturer in the department of Computer Science & Engineering from where he superannuated in 2017. During 2014-16, he served as Director of IIIT Allahabad. At present, he is Visiting Professor in IIT Goa.

He is a Fellow of the National Academy of Sciences, India (2013) and was occupant of Sanjay and Rachna Pradhan Chair in CSE, IIT Kanpur. He has been the Department Head (1984-87, 1995-97), and the Dean of Faculty Affairs (2005-07). He was the President of the Indian Association for Research in Computing Science (2000-2002) and Program Committee Chair of the 11th FSTTCS Conference (1991). He has supervised five PhD and more than forty MTech theses.

Professor Biswas joined the department of Computer Science at a time when all the celebrated senior faculty had left, or were about to leave. During 1980s, for several years, the department had only five faculty and Professor Biswas being the senior most, became the Head of Department. Effectively, it was a new department and Professor Biswas played a key role in laying the strong foundations on which the department could be rebuilt.

Professor Biswas started his research work in Logic. Later he moved to the areas of Structural Complexity, Randomized Algorithms & Derandomization, Computational Biology, and more recently into analyzing Stochastic Processes. Along the way he trained an impressive number of researchers to pursue different directions in Theory. He was one of the founders of research in Theoretical Computer Science in India and continues to nurture it even today. He is also an outstanding teacher. Generations of students owe their love for theory of computation to the wonderful courses taught by him. Many of them were inspired enough to pursue an academic career and are spread all over the world, including at IIT Kanpur.

In recognition of his significant and valued contributions to the institute and society at large, IIT Kanpur on its Foundation Day takes pride and pleasure in conferring upon Professor Somenath Biswas the award of INSTITUTE FELLOW for the year 2017.

# Institute Fellow 2018

## Professor S. P. Mehrotra

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Prof. Surya Pratap Mehrotra has the unique distinction of being associated with IIT Kanpur for almost five decades, starting as B. Tech student in 1963 and ending with superannuation in 2012. At IIT K he completed his B. Tech in 1968, M. Tech in 1970 and Ph. D in 1973. His association with the Department of Metallurgical Engineering continued seamlessly with his joining as lecturer in 1973, after obtaining the Ph.D degree.

Prof. Mehrotra became Assistant Professor, Professor and Head of Metallurgical Engineering Department in the years 1975, 1984 and 1990, respectively. He was a Visiting Professor at University of British Columbia, Canada in 1979-81. After superannuation at IIT Kanpur in 2012, Prof. Mehrotra joined IIT Gandhinagar and continues to contribute as a teacher, researcher and academic administrator, till date.

Prof. S. P. Mehrotra's area of specialization and expertise encompasses highly applied, metallurgical industrial related topics, viz., Mineral processing and Process metallurgy; Transport phenomena; Mathematical modeling & simulation; Process design and development; Process control in mineral processing and Extractive metallurgy. He is an excellent, highly motivating teacher. He has guided a large number of students' thesis research, and mentored many faculty colleagues of the department. He has more than 150 research publications to his credit. Prof. Mehrotra's co-authored book 'The Fourth IIT-the Saga of IIT Kanpur (1960-2010)' is the most authentic documentation of growth and evolution of IITK.

In recognition of the merit and quality of academics and research activity Prof. Mehrotra has received a number of awards from different professional bodies and government agencies. He was awarded the Best Undergraduate Project Award, I.I.T., Kanpur (1968) then National Metallurgists' Day Best Metallurgist Award, Ministry of Steel, Govt. of India, (1992), Maharashtra Govt. Award for Outstanding Research Contributions, Indian Society for Technical Education (1994); Distinguished Metallurgist Award of The Institution of Engineers, India, (2002); Mineral Beneficiation Award of Indian Inst. of Mineral Engineers (2002); SAIL Gold Medal of Indian Institute of Metals (2002); IIME Mineral Beneficiation Award (2002); Tata Gold Medal of Indian Institute of Metals (2007) and National Metallurgist Award, Ministry of Steel, Govt of India (2014).

Prof. Mehrotra has a natural talent of leadership and administration. After completing his tenure as Head of the Department of Metallurgical Engineering, he served as Head of Advanced Center for Materials Science at IIT Kanpur (1992-1993). He was Dean of Faculty Affairs at IIT Kanpur from 1998-2001. Prof. Mehrotra was called on to lead the CSIR lab 'National Metallurgical Laboratory (NML)', Jamshedpur. His excellent performance in the first term got further extended and he was Director of NML between 2003 to 2009. Under Prof. Mehrotra's leadership there was commendable progress in research and development at NML. Prof. Mehrotra is presently also associated with the Institute of Infrastructure Technology Research and Management (IITRAM), Ahmedabad, a Government of Gujrat established Institute, as IIT Gandhinagar Nominee, and is spearheading the implementation of vision of this Institute to impart quality technical education.

The 'Mehrotra family' has been a part of IIT Kanpur campus community and its social fabric. Prof. Mehrotra's wife, Mrs. Archana Mehrotra was part of the founding members of the first school on campus for campus children, 'Kishlaya'.

In recognition of his significant and valued contributions to the institute and society at large, IIT Kanpur on its Foundation Day takes pride and pleasure in conferring upon Professor S. P. Mehrotra the award of INSTITUTE FELLOW for the year 2017.

# Successfully Incubated Companies

HelpUsGreen  
has received the  
2018 UN Climate Change  
'Momentum for Change' Award



United Nations  
Framework Convention on  
Climate Change

HelpUsGreen is an award winning social enterprise which has pioneered the 'Flower cycling' technology



Real time monitoring of hydrological, geological and environmental Phenomena.



Analytical web based solution aiming to redefine the ways educational institutions.



Oxen offers innovative enabling technology solutions to farmers.



Incredible Health care Devices.



PROSOC stands for PROducts for SOCIety.



Dedicated program for supporting and nurturing AI startups across globe.



Smart and portable bio-toilet solutions in the urban, peri-urban areas.



Real time monitoring of hydrological, geological and environmental Phenomena.

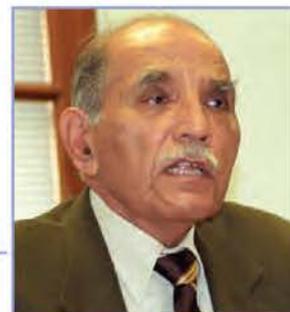
# Past Institute Fellows

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2005



Prof. E. C. Subbarao



Mr. F. C. Kholi

2006



Prof. K. R. Sharma

2007



Prof. A. Vasudev



Prof. G. D. Agarwal

2008



Prof. G. K. Lal

# Past Institute Fellows

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2009



Prof. P. T. Narasimhan



Prof. A. K. Mittal

2010



Prof. S. K. Gupta

2013



Prof. N. Sathyamurthy



Prof. T. V. S. Ramamohan Rao



Prof. S. G. Dhande

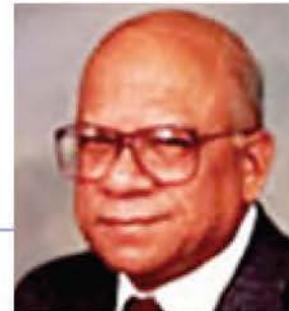
# Past Institute Fellows

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2014



Prof. M. Anandakrishnan



Prof. M. A. Pai



Prof. V. K. Stokes



Prof. A. Ghosh



Prof. D. Chakravorty

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2015



Prof. R. N. Biswas



Prof. A. K. Mallik

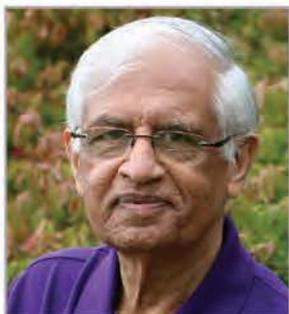
# Past Institute Fellows

2015



Prof. D. Balasubramanian

2016



Prof. A. Kumar



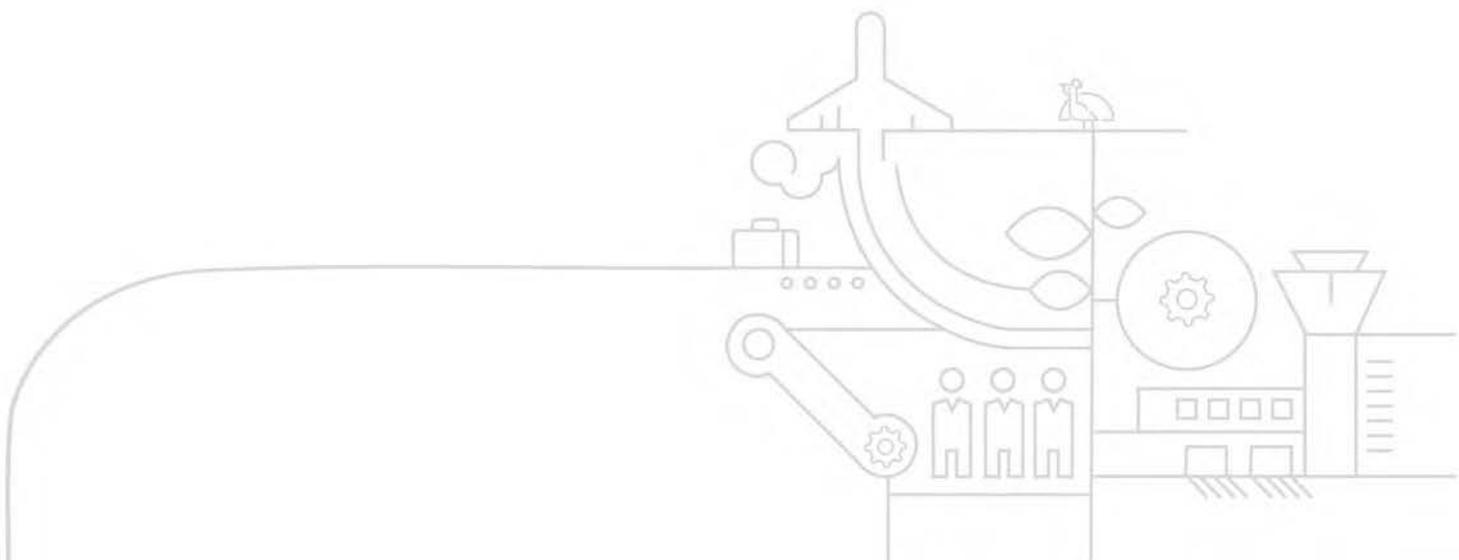
Prof. R. Sharan



# Our Journey into the Fourth Industrial Revolution



IBM 1620 being installed at IIT Kanpur, 1963



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