

D S Kothari Centre for Research and Innovation in Science Education

Miranda House

University of Delhi

Presents



DST INSPIRE Scholars



Department of Science & Technology
Government of India

Science Conclave 2019: Research on the Frontiers

Wednesday 16 January to Friday 18 January 2019

Venue: Auditorium, Miranda House

Time: 9.00 am to 5.00 pm

Preamble

These are exciting times. India today is a front ranking country in the field of research in basic science. Indian scientists are respected internationally and are making major contributions to the frontiers of science, participating as equal partners in several multi-nation international projects. The Government recognizes that science is the engine that will drive growth and development, especially in the emerging scenario of competing economies. On one hand the focus is on applying S&T to address national needs; the grand challenges facing communities; and meeting the goals of sustainable development. On the other hand, the thrust is also on pursuit of knowledge and blue sky research on the frontiers that will lead to greater understanding and create transformative technologies of the future.

DST INSPIRE Scholars Science Conclave 2019: Research on the Frontiers

This three day programme has been carefully crafted to give an opportunity to young students to interact with scientists who are with great passion and dedication working in areas of contemporary interest and are reputed for path breaking research. It includes expositions on areas of research that have been awarded the Nobel Prize in recent times. Path breaking research presented will include areas of contemporary interest such as Laser Physics, Soft Matter, Nano Bioscience, Human Genetics, Drug Discovery, Medical Imaging, Cancer Therapy, Neuroscience, Cognitive Science, Artificial Intelligence, Machine Learning, Quantum Computers. The touchstone of the programme will be talks by the DST Secretary, Principal Scientific Advisor to Govt. of India, Secretary DBT, Director IIT Delhi and Director IGIB. The talks will unravell the complex beauty of the process of science, scientific research, knowledge generation and product development, emphasizing the breaking of boundaries between disciplines, multidisciplinary synergy and intersectionality of ideas.

Sufficient time has been allocated for interaction after each talk to promote deep thinking. The interaction with the distinguished speakers will give not just a panoramic view of the changing landscape of Indian Science but also trigger greater interest and spirit of enquiry for the questioning mind.

Target

The Science Conclave aims to bring together for the first time the INSPIRE Scholars pursuing science degree programmes at various college of University of Delhi. It will provide the INSPIRE Scholars an opportunity to establish a network with likeminded peers and begin collaborations to learn together and work together. Other motivated science students and faculty members of various colleges are also welcome. Pre-registration is necessary.

Highlights

The Science Conclave aims to

- bring together the INSPIRE Scholars pursuing science degree programmes at various college of University of Delhi;
- provide a panoramic view of the changing landscape of Indian science and research on the frontiers through interactive talks by distinguished scientists cutting across disciplinary domains and covering diverse research areas of contemporary interest;
- promote interaction with eminent scientists to trigger greater interest and spirit of enquiry for the questioning mind;
- provide an opportunity to INSPIRE Scholars to present their own research carried out during Summer Internship and otherwise at a Scientific Poster Session;
provide an opportunity to INSPIRE Scholars to establish a network with likeminded peers, encouraging learning and working together.

Mentors

The galaxy of eminent scientists are also very distinguished speakers. They are the very best in the field, from the best institutes and research facilities in the country. The mentors are listed herein:

Dr. Ashutosh Sharma, Secretary, Department of Science and Technology

Dr. Renu Swarup, Secretary, Department of Biotechnology

Dr. Trilochan Mohapatra, Director General, Indian Agricultural Research Institute, Delhi

Dr. Balram Bhargava, Director General, Indian Council of Medical Research, Delhi

Dr. Mylswamy Annadurai, Vice President, Tamil Nadu State Council for Science and Technology

Dr. Partha Pratim Majumder, National Institute of Biomedical Genomics, ISI, Kolkata

Dr. G Ravindra Kumar, Department of Nuclear and Atomic Physics, TIFR, Mumbai

Dr. Dalip Singh Mehta, Department of Physics, Indian Institute of Technology, Delhi

Dr. Venkat N. Ramani, Entrepreneur, Plasma and Vacuum Technologies, Ahmedabad

Dr. Dipankar Bhattacharya, Inter-University Centre for Astronomy and Astrophysics, Pune

Dr. Swati Patankar, Dean, Biosciences and Bioengineering, IIT, Mumbai

Dr. Nandini Chatterjee Singh, Programme Specialist – Science of Learning UNESCO MGIEP

Dr. Tuhin Bhowmick, Cofounder Pandorum Technologies Pvt. Ltd.



INSPIRE

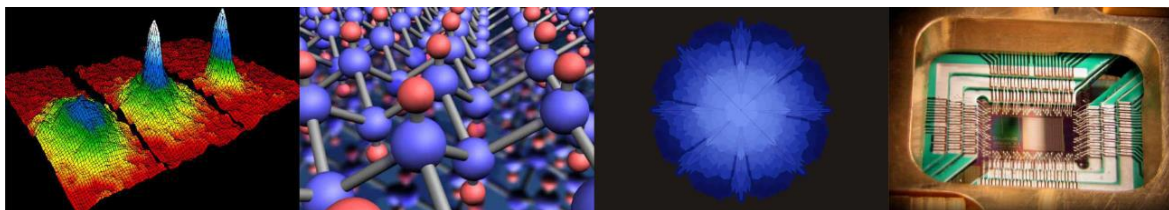
“Innovation in Science pursuit for inspired research (INSPIRE)” is an initiative by the Department of Science & Technology to prepare the nation for a possible leadership in 2020. INSPIRE aims to attract talent to the study of science at an early stage and build a strong foundation for strengthening the science and technology system and R&D base of INDIA. It aims to make India a source of immense knowledge and global power. Major initiatives have been launched to attract the young to careers in science, and physics in particular the presence of speakers from the very best research institutions and national facilities will provide the participants an opportunity to interact personally and explore possible educational goals. INSPIRE Scheme includes three components.

Scheme for Early Attraction of Talent for Science (SEATS) aims to attract talented youth to study science by providing INSPIRE sward of Rs. 5000 to one million young learners of the age group 10 to 15 years during 5 years

Scholarship for Higher Education (SHE) aims to enhance rates of Attachment of talented youth to undertake higher education in Science intensive programmes by providing scholarships and mentoring through summer attachment to performing researchers.

Assured opportunity for Research Careers (AORC) aims to attract, attach, retain and nourish talented young scientific human resource for strengthening the R&D foundation by offering doctoral INSPIRE fellowship in the age group of 22-27 years in the both basic and applied sciences including engineering and medicine

DST INSPIRE Website: www.inspire-dst.gov.in



About Miranda House

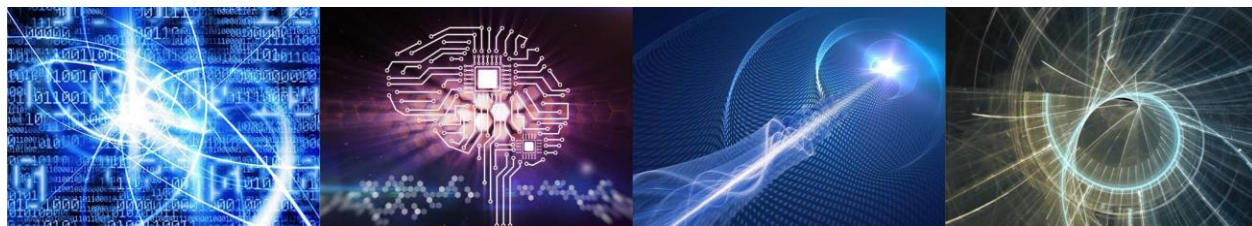
Miranda House, College for Women at University of Delhi, is amongst the premiere institutions of the country. It has been awarded All India Rank One amongst colleges under the National Institutional Ranking Framework (NIRF) for two consecutive years in 2017 and 2018. Department of Biotechnology, Government of India, has given it the Star College status. The National Assessment and Accreditation Council (NAAC) has accredited the college with Grade A+. Established on 07 March 1948 by the then Vice Chancellor of University of Delhi Sir Maurice Gwyer, it chronicles the history of women's education in India. Since its inception it has carved a unique niche for itself as a globally recognized premiere institution of higher learning. Miranda House has a rich legacy. The extremely distinguished list of alumnae imparts a sense of confidence and pride in students.

D S Kothari Centre for Research & Innovation in Science Education

The D S Kothari Centre for Research and Innovation in Science Education is devoted to promoting creativity and excellence in science with special focus on attracting young students to careers in science and nurturing their innate talent. It provides easy access to resources for undertaking innovative and inspiring science activities designed to give an early exposure to the scientific process and the joys of discovery. The programs are informed by rigorous science education research, results of cognitive studies on students learning and pedagogic tools established to be effective. Special emphasis is on adopting multi-representational and multidisciplinary approach to science learning in contemporary contexts and integrating the use of cutting-edge educational tools and technologies to provide the best possible environment for exploratory work. The Centre promotes undergraduate research and project based learning in a big way. The six-week summer camp *Flavours of Research* is an immensely popular programme that draws nearly 150 undergraduate students each year, several from outside Delhi. Large number of undergraduate volunteer to mentor school students at the five-day INSPIRE Internship camp held annually, assisting in nearly twenty innovative workshops that have been specially designed to engage the participants in hands-on activities.

While providing a facility outside of the formal classroom to engage creatively in scientific pursuits, the focus of DSKC is on developing educational resources, innovative curricular materials and pedagogic instruments which can be introduced into the formal system. For large scale adoption of best practices, the Centre frequently organizes research-based programs for providing the highest quality Continuing Professional Development opportunities to those involved in science education, at all levels. These programs aim to alter the perception of the process of teaching-learning per se, develop crucial skills for effective communication by imparting pedagogical knowledge in addition to domain knowledge; and train teachers to be action researchers in their own classroom and contribute to the process of large-scale educational change.

Activities engage undergraduate science teachers and the undergraduate student population of the University of Delhi. Although Miranda House is a college for women, the Centre is open to all. Working towards the fulfilment of its stated objectives, the Centre has established linkages with stakeholders of education at all levels.



Programme Schedule Day 1

| | |
|----------------------|--|
| DAY 1 | Wednesday, 16 January 2019 |
| 09.00 am to 09.30 am | Registration |
| 09.30 am to 09.45 am | Welcome and Introduction: Dr. Pratibha Jolly Principal, Miranda House and PI, D S Kothari Centre |
| 09.45 am to 11.00 am | Inaugural Interactive Talk 1 <i>Future of Science, Technology and Innovation</i> Dr. Ashutosh Sharma Secretary to Govt. of India, Department of Science and Technology |
| 11.00 am to 11.30 am | Tea Break |
| 11.30 am to 12.45 pm | Interactive Talk 2 <i>How music and emotion shape the learning brain</i> Dr. Nandini Chatterjee Singh Programme Specialist – Science of Learning UNESCO MGIEP |
| 12.45 pm to 01.15 pm | Interactive Poster Session 1 |
| 01.15 pm to 02.00 pm | Lunch |
| 02.00 pm to 03.15 pm | Interactive Talk 3 <i>Plasma Science and Technology for Societal Benefits: Applications and Potential through Nanotechnology Route</i> Dr. Venkat N. Ramani Entrepreneur, Plasma and Vacuum Technologies, Ahmedabad |
| 03.15 pm to 04.30 pm | Interactive Talk 4 <i>Indian Space Programme: Innovation re-defined</i> Dr. Mylswamy Annadurai Vice President, Tami Nadu State Council for Science and Technology |
| 04.30 pm to 04.45 pm | Refreshment |
| 04.45 pm to 05.15 pm | Interactive Poster Session 2 |



Programme Schedule Day 2

| DAY 2 | Thursday, 17 January 2019 |
|----------------------|--|
| 09.30 am to 10.45 am | Interactive Talk 5 <i>Indian Agriculture</i> Dr. Trilochan Mohapatra Secretary, Department of Agricultural Research and Education & Director General, Indian Council for Agricultural Research |
| 10.45 am to 11.15 am | Tea Break |
| 11.15 am to 12.30 pm | Interactive Talk 6 <i>Genomics: Enabler of Precision Medicine</i> Dr. Partha Pratim Majumder Distinguished Prof. and Founder National Institute of Biomedical Genomics, Kolkata |
| 12.30 pm to 01.00 pm | Interactive Poster Session 3 |
| 01.00 pm to 02.00 pm | Lunch |
| 02.00 pm to 03.15 pm | Interactive Talk 7 <i>Extreme Optics</i> Dr. G. Ravindra Kumar Department of Nuclear and Atomic Physics Tata Institute of Fundamental Research, Mumbai |
| 03.15 pm to 04.30 pm | Interactive Talk 8 <i>Optical Tweezers and their Biomedical Applications</i> Dr. Dalip Singh Mehta Department of Physics, Indian Institute of Technology, Delhi |
| 04.30 pm to 04.45 pm | Refreshment |
| 04.45 pm to 05.15 pm | Interactive Poster Session 4 |



Programme Schedule Day 3

| | |
|----------------------|--|
| DAY 3 | Friday, 18 January 2019 |
| 09.30 am to 10.45 am | Interactive Talk 9 <i>Science, Technology and Innovation: Key Drivers for Entrepreneurship</i> Dr. Renu Swarup Secretary to Govt. of India, Department of Biotechnology |
| 10.45 am to 11.15 am | Tea Break |
| 11.15 am to 12.30 pm | Interactive Talk 10 <i>Value Conscious Innovations</i> Dr. Balram Bhargava Secretary DHR & Director General, Indian Council Medical Research |
| 12.30 pm to 01.00pm | Entrepreneur Case Study <i>Bio-Inspired Engineering of Liver and Cornea – Pandorum: Building Life by Blocks</i> Dr. Tuhin Bhowmick Cofounder, Pandorum Technologies Pvt. Ltd. |
| 01.00 pm to 01.45 pm | Lunch |
| 01.45 pm to 03.00 pm | Interactive Talk 11 <i>Malaria Diagnosis from the Time of Ronald Ross to Today: Using Proteomics for Antigen Discovery</i> Dr. Swati Patankar Department Biosciences and Bioengineering, IIT, Mumbai |
| 03.00 pm to 04.15 pm | Interactive Talk 12 <i>AstroSat: India's Observatory in Space</i> Dr. Dipankar Bhattacharya Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune |
| 04.15 pm to 04.45 pm | Valedictory Address Dr. Amlesh K Mukhopadhyay Adviser, SERC Department of Science and Technology Presentation of Awards for Scientific Posters Presentation of Certificates to Participants |
| 04.45 pm to 05.00 pm | Refreshment |





Dr. Ashutosh Sharma is the Secretary, Department of Science and Technology, Government of India. He has been a Professor since 1997, an Institute Chair Professor; the Head of Chemical Engineering, and the Founding Coordinator of Nanosciences Center and Advanced Imaging Center at the Indian Institute of Technology, Kanpur. Prof. Sharma received his B.Tech. from IIT Kanpur; MS from the Pennsylvania State University, USA and his PhD from the State University of New York at Buffalo (SUNYAB). Prof. Sharma has served on the Governing Boards of over 15 prominent scientific institutions in India and has had a broad international experience as a research

faculty at SUNY Buffalo School of Medicine (1988-90), visiting faculty at University of Texas at Austin, University of Western Ontario, University of Erlangen-Nuremberg; the World Class University Program of South Korea and as a Member of the European Research Commission. A Fellow of many learned Societies, Prof. Sharma has received numerous honors including the inaugural Infosys Prize in Engineering and Computer Science, TWAS Science Prize of the World Academy of Sciences, Bessel Research Award of the Humboldt Foundation, J. C. Bose Fellowship, Bhatnagar Prize, Homi J. Bhabha Award of UGC, The Syed Husain Zaheer Medal of INSA, Distinguished Alumnus Awards of IIT Kanpur and SUNY Buffalo and the Life-time Achievement Award of the Indian Science Congress.

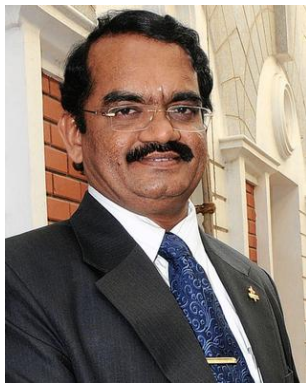


Dr. Nandini Chatterjee Singh is Programme Specialist 'Science of Learning' at the UNESCO-Mahatma Gandhi Institute of Education for Peace and Sustainable Development and is on deputation from the National Brain Research Centre in Haryana, India. She is a cognitive neuroscientist and her work is focused on literacy, music and education. She received her PhD in Physics from the University of Pune. For her post doctoral work she moved to study the cognitive and computational mechanisms underlying birdsong learning at the Department of Psychology at University of California Berkeley. Her research uses behavior and

functional neuroimaging experiments, to understand how the brain learns to read multiple languages and how it processes emotion in music. Dr. Singh recently led a large project funded by the Department of Science and Technology, Govt. of India to develop culturally relevant, standardized tools to screen and assess for dyslexia in Indian languages and led to the creation of DALI (Dyslexia Assessment for Languages of India). At MGIEP, she leads the Rethinking Learning Programme which is focused on building Socio-Emotional Learning in education. Under this programme, a new neuroscience based digital interactive curriculum on Global Citizenship is being created that will teach skills of critical inquiry, mindfulness, empathy and compassion in the classroom.



Dr. Venkat N. Ramani, Plasma Physicist turned Entrepreneur, is MD Aditya High Vacuum Pvt. Ltd and Director, Plasma Vacuum Technologies, Ahmedabad. He has set up fabrication facilities for custom-built and special purpose Vacuum Systems and components that he has been providing to various universities and Research and Development laboratories such as ISRO, BARC, IPR, PRL etc. He has been actively involved in the Vacuum and Leak Testing of various systems and components of Nuclear Power Corporation of India, Reliance Industries, BOC India Limited, Larsen and Toubro etc. He conducts Training Courses for professionals from industries. He is a recipient of many awards including Young Scientist medal of Indian national Science Academy and has over 100 publications. He is an International Member of the Leak Testing Committee of American Society for Non-destructive Testing since 2015.



Dr. Mylswamy Annadurai is a Distinguished Scientist with the Indian Space Research Organisation and served as Director, ISRO Satellite Centre, Bangalore. Annadurai was listed among 100 Global thinkers of 2014 and topped the innovators list. Annadurai writes a regular column, "Kaiyaru Sevvai" ("Mars is at our Reach") in the Tamil Daily Dina Thanthi. During the period 2004-2008, as the Project Director for Chandrayaan I, India's first Moon Mission, he led a team of engineers and scientists that designed and developed the project to carry instrumentation from ISRO and from NASA, ESA, and Bulgaria to accomplish simultaneous chemical, mineralogical, resource and topographic mapping of the entire lunar surface at high spatial and spectral resolutions. The project was realized within the time frame stipulated and the budget granted. He has paved the way for the future of Indian planetary missions and set an example for the international co-operation bringing the reputed international organisations like NASA, ESA, JAXA to work under the leadership of ISRO. Chandrayaan I has received many national and international awards including, the coveted Space Pioneers award for science and engineering at 28th International conference on Space development, in Florida USA in 2009.



Dr. Trilochan Mohapatra is the Secretary of the Department of Agricultural Research and Education (DARE) and the Director General of the Indian Council of Agricultural Research (ICAR). A biotechnologist and geneticist, Dr. Mohapatra is an elected fellow of the National Academy of Sciences, India, the National Academy of Agricultural Sciences, the Indian National Science Academy and the Indian Society of Genetics and Plant Breeding. The Department of Biotechnology, Government of India the National Bioscience Award for Career Development, in 2003. Dr. Mohapatra studied at Ravenshaw College, Cuttack, Odisha before joining Orissa University of Agriculture and Technology (OUAT), where he completed BSc in Agriculture and MSc in Genetics and later secured a PhD. He started his career in 1992 as a senior scientist at the National Research Centre on Plant Biotechnology (NRCPB), a Centre of the Indian Agricultural Research Institute (IARI) for advanced research in crop plants. He also received advanced training in rice genome sequencing at the Arizona Genomics Institute of the University of Arizona. As the head of ICAR, Dr. Mohapatra is in charge of 101 institutes and 71 agricultural universities, spread across India. He is also a member of the executive committee of Borlaug Institute for South Asia.



Dr. Partha Pratim Majumder, the elected Director of National Institute of Bio Medical Genomics (NIBMG) since 2010, and a current director of Indian Statistical Institute, is known for his contributions in the field of genetics and statistics. Better known as the "Gene Guru" across media, one of his major interests is human evolution and he has worked extensively to uncover genetic architecture behind disease susceptibility and drug response. It is Dr. Majumder's staunch belief that Population Genetics will pave the way for a healthier life. Dr. Majumder obtained his B.Sc. Statistics (Hons) degree from the Indian Statistical Institute (ISI), Kolkata. This enabled him to earn his Master's and PhD and provided exposure to the world of statistical methodologies. For him, the transition from a background in statistics to research in genetics came quite naturally. He also completed courses in Biochemistry, Cell Biology and Molecular Biology, and was a post-doc at the Center for Demographic and Population Genetics, University of Texas, USA before he began his research in population genetics. He has also served as a Visiting Professor and a Genetics Consultant at the Department of Biostatistics and Human Genetics, University of Pittsburgh. Dr. Majumder's awards include the New Millennium Science Gold Medal for his contributions in research.



Dr. G. Ravindra Kumar obtained his Ph.D. in 1990 from IIT Kanpur. He has been at TIFR since 1992 and is presently a Senior Professor in the Department of Nuclear and Atomic Physics. His areas of interest are: experimental studies of high intensity laser pulse interaction with matter; creation and understanding of extreme states of matter and nonlinear optics. His area of study has implications for many branches of physics including plasma physics, astrophysics, condensed matter physics and optical sciences. He is an elected Fellow of the Indian Academy of Sciences and the Indian National Science Academy. He received the B.M. Birla Prize for Physical Sciences in 2000,

the S S Bhatnagar Prize for Physical Sciences in 2003, DAE Outstanding Investigator award in 2005, J C Bose Fellowship in 2010 and the Infosys Prize in Physical Sciences in 2015. He is a Distinguished Alumnus of BITS, Pilani and IIT Kanpur. He has been on the International Committee on Ultrahigh Intensity Lasers (ICUIL) since 2008 and is currently the Co-Chair. He is a Life Member of the American Physical Society, the Plasma Science Society of India and the Indian Laser Association. He is a member of the Optical Society of America.



Dr. Dalip Singh Mehta is currently a Professor at the Department of Physics, Indian Institute of Technology (IIT) Delhi. Previously, he worked as Associate Professor and Assistant Professor at IIT Delhi. Before joining IIT Delhi he was JSPS Post-Doctoral Fellow, Japan; Post-Doctoral Fellow National Dong Hwa University, Taiwan; Research Associate, NPL, New Delhi; STA Post-Doctoral Fellow NIRE, Tsukuba, Japan and UNESCO Research Fellow, Tokyo Institute of Technology, Tokyo, Japan. He has contributed more than 110 research papers in International Refereed Journals, and has made numerous presentations in international and national conferences. He has delivered many

Invited Talks in various international and national platforms and universities. He has supervised 13 PhD students, of whom nine are currently working under him. He has also supervised about 40 M.Tech./B. Tech. students' major projects. Many of his PhD students and Master's students have received Best Paper Awards and Best Poster Presentation Awards in international and national conferences. Dr. Dalip Singh Mehta has received Teaching Excellence Award 2013 from the Indian Institute of Technology Delhi, India.



Dr. Renu Swarup is Secretary, Department of Biotechnology, Ministry of Science & Technology, Government of India and Chairperson, Biotechnology Industry Research Assistance Council (BIRAC), a Government of India Enterprise which nurtures and promotes innovation research in the Biotech Enterprises with special focus on Start-ups and SMEs. She has served in Department of Biotechnology for nearly 29 years before being appointed Secretary to Government of India in April, 2018. A PhD in Genetics and Plant Breeding, Dr. Renu Swarup carried out Post-Doctoral research at the John Innes Centre, Norwich UK, under Commonwealth Scholarship and returned to India to take up the assignment of a Science Manager in the Department of Biotechnology, Ministry of Science and Technology, Government of India in 1989. She was actively engaged in formulation of the Biotechnology Vision in 2001, National Biotechnology Development Strategy in 2007 and Strategy II, 2015-20 as the Member Secretary of the Expert Committee.



Dr. Balram Bhargava joined in April 2018 as Secretary, Department of Health Research, (Ministry of Health & Family Welfare), Government of India and Director General, Indian Council of Medical Research (ICMR). Prof. Bhargava is Professor of Cardiology at All India Institute of Medical Sciences (AIIMS), New Delhi. Possessing excellent leadership qualities, Prof. Bhargava has established the India-Stanford Biodesign Programme, a unique interdisciplinary fellowship programme to foster innovation and design in low cost implants/devices. This has further led to the establishment of the School of International Biodesign (SIB) at AIIMS and development of 30 low cost medical devices leading to 10 startups. Four of the low cost devices are in the Indian market and one device has been approved by the USFDA. Professor Bhargava has 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. The philosophy of the programme has been “More for less for more” with a mandate to promote Global Affordable Need-Driven Healthcare Innovation (GANDHI). Professor Bhargava is a recipient of the Padma Shri.



Dr. Tuhin Bhowmick is the Co-Founding Director of Pandorum Technologies Pvt. Ltd., a Biotechnology-Nanotechnology start-up, incubated at the Centre for Cellular and Molecular Platforms, National Centre for Biological Sciences-Tata Institute of Fundamental Research, Bangalore, India. Dr. Bhowmick is currently EIPOD Fellow (EMBL Inter-disciplinary Post Doc jointly funded by the European Molecular Biology Laboratory and Marie Curie Actions) at EMBL, Hamburg, Germany. His field of research is the molecular basis of neuronal wiring; structural and developmental neurobiology. Dr. Bhowmick is a structural biologist. He received his Ph.D. in the field of protein crystallography from the Indian Institute of Science, Bangalore. His work involved investigating the structure of proteins and other biomolecules through biophysical methods. Tuhin Bhowmick, who was working in the Department of Physics and his colleague, Arun Chandru, from the Department of Aerospace Engineering in IISc got together to establish the company Pandorum Technologies in order to design molecules and biomaterials which can perform different kinds of functions. Their focus is tissue engineering and regenerative medicine. They have achieved especial success in engineering 3-D human liver organoids for drug testing and liquid cornea formulations for corneal wound healing.



Dr. Swati Patankar is Professor, Department of Biosciences and Bioengineering at the Indian Institute of Technology Bombay, Mumbai. She is also Dean, International Relations at IIT Bombay since 2018. After graduating with Life Sciences and Biochemistry from St. Xavier's College, Mumbai, Prof. Patankar proceeded to Tufts University, Boston, USA to do her PhD in Molecular Microbiology. She also did a Postdoctoral Fellowship in Immunology and Infectious Diseases at the Harvard School of Public Health, Boston, where she continues to be a Visiting Scientist. Dr. Patankar also briefly served as Senior Scientist and Lab Head, GeneQuest Laboratory Nicholas Piramal India Ltd., Mumbai and was Visiting Scientist, Advanced Centre for Training, Research and Education in Cancer, Mumbai, India. She joined the Department of Biosciences and Bioengineering at IIT Bombay in 2003. Prof. Patankar has life membership of several learned societies including the Indian Society for Cell Biology and Society for Biological Chemists (India), Mumbai Chapter. She has served as an Invited Member of the World Health Organization (WHO) TDR Working Group on Genomes to Drugs and WHO TDR Steering Committee on Pathogenesis and Applied Genomics. She has research funding of several crores and has guided many M.Sc. and PhD students.



Dr. Dipankar Bhattacharya, currently attached to the Inter-University Centre of Astronomy and Astrophysics (IUCAA), obtained his Bachelors' and Masters' degrees in Physics from Jadavpur University, Kolkata and his PhD in Astrophysics from the Indian Institute of Science, Bengaluru. He did his postdoctoral work at the University of Amsterdam and the University of California, Santa Barbara. He was employed as a Scientist at the Raman Research Institute, Bengaluru for 20 years after which he joined the IUCAA in 2007 where he is at present a Distinguished Professor and the Dean, Core Academic Programmes. His research focuses on High Energy phenomena in the Universe, with particular emphasis on studies from space based detectors. He has been associated with India's space astronomy mission AstroSat from the early stages of conception and currently co-chairs the AstroSat Science Working Group. He has been instrumental in establishing and operating the AstroSat Science Support Cell at IUCAA. Professor Bhattacharya is the recipient of several awards and honours including M.K. Vainu Bappu Gold Medal, Astronomical Society of India, 1990 and C.V. Raman Award for Space Science, Govt. of Karnataka, 1998.



Dr. A. K. Mukhopadhyay did his PhD in Fibre Science and Technology from Indian Institute of Technology, Delhi. He has worked in the Petroleum Industry for 4 years prior to joining DST, New Delhi. During the last 18 years at DST, he has handled various programs such as, National Superconductivity Program, Technology Development Program and several other scientific programs for promotion of scientific and technological advancements. Currently, he's looking after Science and Technology Infrastructure Programs; INSPIRE program and other related programs at DST.



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Time: 9.00 am to 5.00 pm

Scientific Poster Presentation Session

- Posters on any scientific topic, based on own research project or a scientific concept or theme can be presented.
- The poster should be in Portrait layout with 80 cm width and 100 cm height.
- The poster should have the title, author's names and affiliation; abstract, illustrations with photo credits, and a few references.
- The poster should be readable from a distance of 2 feet.
- The poster must be put on display at the designated boards on Day 1, 16 January, between 9.00 to 9.30 am.
- Students presenting posters should be available at the venue during the interactive poster session at 12.30 to 01.00 pm on all days.
- The posters would be adjudged on Day 2, 17 January, under the categories Physical, Chemical and Biological Sciences.
- Top three posters in each stream will be given cash awards of Rs. 5000, Rs. 3000 and Rs. 2000, respectively in addition to Certificates.

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Pre-Registration Form for INSPIRE Scholars

| | |
|-----------------------------|--|
| Name | |
| Course | |
| Department | |
| College/ Institution | |
| Period of INSPIRE Award | |
| E-mail | |
| Mobile | |
| Poster Title, if presenting | |

Note:

- Poster Presentation will be adjudged in three broad categories, namely, the Physical, Chemical and Biological Sciences.
- Top three posters in each stream will be given cash awards of Rs. 5000, Rs. 3000 and Rs. 2000 respectively in addition to certificates.
- Certificate of participation will be given for presence at all sessions on all three days
- A Commuting Allowance of Rs. 300 (@Rs. 100 per day) will be given to participating INSPIRE Scholars.
- Duly filled Pre-Registration Form may be emailed to the Secretariat at the address below.

Secretariat

D S Kothari Centre for Research and Innovation in Science Education

Miranda House, University of Delhi, Delhi 110 007

Phone: +91-11-27666201, +91-11-27666983

Contact: science.conclave@mirandahouse.ac.in

[To Download Pre Registration form Click here](#)

Convenor

Dr. Pratibha Jolly

Principal & PI, DSKC

Co-Convenors

Dr. Bani Roy

Department of Chemistry

Dr. Mallika Verma

Department of Physics

Dr. Janaki Subramanyan

Department of Botany

Dr. Sadhna Sharma

Department of Zoology

Local Organizing Committee

Dr. Amrita Sheikh Tripathi

Department of Chemistry

Dr. Mallika Pathak

Department of Chemistry

Dr. Monika Tomar

Department of Physics

Dr. Madhu Bajaj

Department of Botany

Dr. Saloni Bahri

Department of Botany

Dr. Jyoti Arora

Department of Zoology

Dr. Monika Sharma

Department of Zoology

Secretarial Assistance

Sandeep Anand

Shelly Jeena

Registration Form

Students: <http://soft.mirandahouse.in/registrationnew.html>

Duly filled appended/linked form may be emailed to science.conclave@mirandahouse.ac.in

Further details

Website: www.mirandahouse.ac.in

Email: science.conclave@mirandahouse.ac.in

Secretariat

Science Conclave: Research on the Frontiers

D S Kothari Centre for Research and Innovation in Science Education Miranda House,
University of Delhi, Delhi 110 007 Phone: +91-11-27666201, +91-11-27666983

