



86TH ANNUAL MEETING

6-8 November, 2020

PROGRAMME

6 NOVEMBER 2020 (FRIDAY)

SESSION 1A

- 10:00-11:00 Presidential Address
Partha P. Majumder, NIBMG, Kalyani
Selective sweep of a SARS-CoV-2 mutant, with some hiccups
- 11:00-11:30 Short break

SESSION 1B

- 11:30-13:05 Lectures by Fellows/Associates
11:30-11:50 Vikram Mathews, CMC, Vellore
Acute promyelocytic leukemia: A bench to bedside journey
- 11:55-12:15 Sushmee Badhulika, IIT, Hyderabad
Nanomaterials based low cost, flexible devices for point of care diagnostics
- 12:20-12:40 Ravi S. Nanjundiah, IITM, Pune
A possible cause for change in Indian monsoon & El-Nino relationship
- 12:45-13:05 Justin R. David, IISc, Bengaluru
Entanglement entropy and holography
- 13:10-14:00 Break

SESSION 1C

- 14:00-15:10 Lectures by Fellows/Associates
14:00-14:20 Vishvanath Tiwari, Central University of Rajasthan, Ajmer
Strategies for combating carbapenem resistant *Acinetobacter baumannii*
- 14:25-14:45 Amritanshu Prasad, IMSc, Chennai
Polynomials as characters
- 14:50-15:10 A Sundaresan, JNCASR, Bengaluru
Magnetoelectrics and multiferroics
- 15:15-15:30 Short break

SESSION 1D

- 15:30-17:30 Symposium: "Quantum Technology"
organized by Urbasi Sinha and Vibhor Singh
- 15:30-16:00 Kavita Dorai, IISER, Mohali
Nuclear magnetic resonance as a testbed quantum processor
- 16:00-16:30 Madhu Thalakulam, IISER, Thiruvananthapuram
Charge amplification approaching the quantum limit
- 16:30-17:00 Vibhor Singh, IISc, Bengaluru
Electromechanical device with a transmon qubit
- 17:00-17:30 Urbasi Sinha, RRI, Bengaluru
Photonic quantum science and technologies
- 17:30 Discussion
- 17:40-18:00 Short break

SESSION 1E

- 18:00-19:00 Public lecture
Martin Rees, University of Cambridge, UK
The World in 2050 and beyond
- 19:15-20:00 Cultural Programme- Gaash Band
By SARHAD, Pune

7 NOVEMBER 2020 (SATURDAY)

SESSION 2A

- 09:00-09:40 Special Lecture
M. Rajeevan, Ministry of Earth Sciences, New Delhi
Recent advances in weather and climate prediction in India

SESSION 2B

- 09:40-10:30 Lectures by Fellows/Associates
09:40-10:00 Riddhi Singh, IIT, Mumbai
On the use of hydrological models to estimate future surface water availability
- 10:05-10:25 Aloke Paul, IISc, Bengaluru
Solving the issues of multicomponent diffusion
- 10:30-10:50 Short break

SESSION 2C

- 10:50-13:00 Symposium: "Rare Genetic Disorders"
organized by Sudha Bhattacharya
- 10:50-11:00 Sudha Bhattacharya, Ashoka University, Sonapat
Introduction
- 11:00-11:30 V.M. Katoch, JIPMER, Puducherry
Rare genetic diseases in India : Unmet needs, challenges and opportunities
- 11:30-12:00 Meenakshi Bhat, Centre for Human Genetics, Bengaluru
Rare genetic diseases in India: An overview and experiences from one centre
- 12:00-12:30 Souvik Maiti, Institute of Genomics & Integrative Biology, Delhi
FELUDA^{scd} - FnCas9 editor linked uniform detection assay for sickle cell disease
- 12:30-13:00 Krishna M. Ella, Bharat Biotech Limited, Hyderabad
Translational and manufacturing of viral vectors for gene therapy to correct genetic disorders
- 13:00-13:10 V. M. Katoch
Concluding Remarks
- 13:10-14:00 Break

SESSION 2D

- 14:00-15:40 Lectures by Fellows/Associates
14:00-14:20 Mahesh Sankaran, NCBS, Bengaluru
The paradox of forest-grassland mosaics: revisiting the 'one climate-one biome' paradigm
- 14:25-14:45 Purvi Gupta, IISc, Bengaluru
The role of topology in certain analytic problems
- 14:50-15:10 Ruta P. Kale, NCRA, Pune
Plasma laboratories on megaparsec-scales
- 15:15-15:35 Manjula Reddy, CCMB, Hyderabad
Break before make - how do bacteria make their cell walls
- 15:40-17:10 Business Meeting of Fellows
- 17:10-18:00 Virtual Group Photograph Session for Fellows

SESSION 2E

- 18:00-19:00 Public Lecture
Jairam Ramesh, Member of Parliament, Chairman of the Parliament's Standing Committee on S&T, Environment, Forests and Climate Change & former Union Minister
Science & Technology in Post-Covid-19 World

SESSION 3A

- 09:00-10:15 Lectures by Fellows/Associates
09:00-09:20 Yogita K. Adlaka, THSTI, Faridabad
Understanding post transcriptional mechanisms in neural development: Implications of induced pluripotent stem cells and organoids
- 09:25-09:45 Debashree Chakraborty, NIT, Suratkal
Structural and dynamical properties of water near surfactant like peptide nanotubes

8 NOVEMBER 2020 (SUNDAY)

- 09:50-10:10 Arnab Bhattacharjee, JNU, New Delhi
Understanding protein transport on DNA track
- 10:15-10:30 Short break

SESSION 3B

- 10:30-11:10 Special Lecture
C. Jagadish, Australian National University, Canberra, Australia
Semiconductor nanowires for optoelectronics, energy and neuroscience applications

Please follow the below links to join the sessions

Day 1, (06th November 2020) : <https://ias.webex.com/ias/onstage/g.php?MTID=eb02fe150c657de66949a467556709302>
Watch Live : <https://youtu.be/pRieSBYPYDg>

Day 2 (07th November 2020) : <https://ias.webex.com/ias/onstage/g.php?MTID=ead08a6586b38fdf9bac521bc8a73f88e>
Watch Live : <https://youtu.be/dHquMMCzoCU>

Day 3 (08th November 2020) : <https://ias.webex.com/ias/onstage/g.php?MTID=e9be64ee9906ee9d2667e1de7aabb6c31>
Watch Live : https://youtu.be/Jxbbj6_iqNM

