



Indian Academy of Sciences 84th ANNUAL MEETING

2-4 November 2018
Banaras Hindu University, Varanasi



Friday | 2 November 2018

0900-0930 Registration

SESSION IA: Inauguration & Presidential Address

0930-1100 The uses of chance

Ram Ramaswamy, JNU, New Delhi

1100-1115 Group photograph

Venue: Front Gate, Swatantrata Bhavan

1115-1200 Tea break

SESSION IB: Inaugural Lectures by Fellows

Chairperson: Dhananjai Pandey, BHU, Varanasi

1200-1220 DNA inspired physics

Sanjay Kumar, BHU, Varanasi

1225-1245 Low-dimensional spin systems and quantum magnetism

S M Yusuf, BARC, Mumbai

1250-1400 Lunch break

SESSION IC: Inaugural Lectures by Associates

Chairperson: V C Thakur, Dehradun

1400-1420 Multiproxy studies on dung of endangered Sangai (*Rucervus eldii*) and Hog deer (*Axis porcinus*) from Manipur, India: Implications to paleoherbivory and paleoecology

Swati Tripathi, BSIP, Lucknow

1425-1445 Hardware implementation of neural network algorithms, based on machine learning and neuroscience models, using spintronic devices as non-volatile memory elements

Debanjan Bhowmik, IIT Delhi, New Delhi

1450-1515 Tea break

SESSION ID: Symposium – Materials of Today and Tomorrow [Senate Hall]

Chairpersons: A K Ganguli, IIT Delhi, New Delhi, and Giridhar Kulkarni, CeNS, Bengaluru

1515-1535 Introduction

A K Ganguli and Giridhar Kulkarni

1540-1600 Battery materials for electric vehicles: Today and tomorrow

K Vijayamohan, CECRI, Karaikudi

1605-1625 Rational design of materials with tailored functionalities

A K Tyagi, BARC, Mumbai

1630-1650 Biomaterialomics: Data-driven accelerated pathways for next generation biomaterials

Bikramjit Basu, IISc, Bengaluru

1655-1715 Low thermal conductive chalcogenides for high performance thermoelectric energy conversion

Kanishka Biswas, JNCASR, Bengaluru

1720-1730 Discussion

1730-1745 Tea break

SESSION IE: Public Lecture and Cultural Event

Chairperson: Ram Ramaswamy, JNU, New Delhi

1745-1845 Public Lecture: Buddhism and science

Geshe Ngawang Samten, Central Institute of Higher Tibetan Studies, Varanasi

1915-2015 Cultural Event: Concert – Three generations on the violin

Smt N Rajam and group

2015-2130 Dinner

Saturday | 3 November 2018

Chairperson: N Sathyamurthy, JNCASR, Bengaluru

0900-0940 GM crops in the Indian context: Looking back, looking forward

Imran Siddiqi, CCMB, Hyderabad

SESSION 2B: Inaugural Lectures by Fellows/Associates

Chairperson: E D Jemmis, IISc, Bengaluru

0940-1000 Electrochemical energy storage via batteries: Prospects & limitations

Aninda J Bhattacharyya, IISc, Bengaluru

1005-1025 Host-microbial associations in a changing world

Deepa Agashe, NCBS, Bengaluru

1030-1050 Tea break

SESSION 2C: Symposium – Community Health – A Genomic Perspective [Senate Hall]

Chairperson: Rajiva Raman, BHU, Varanasi

1050-1115 Genetics and biology of neuromuscular disorders: Unmet scientific need

Alok Bhattacharya, JNU, New Delhi

1120-1145 Translational research approach: Primary congenital glaucoma – Prevalence, genetics and collaboration between scientists and clinicians for successful treatment

D Balasubramanian, L V Prasad Eye Institute, Hyderabad

1150-1215 Public health genomics to innovative targeted therapeutic approaches for relapse-free survival of cancer patients

Bhudev C Das, Amity University, Noida

1220-1245 Early life origins of diabetes in Indians

C S Yajnik, KEM Hospital Research Centre, Pune

1250-1300 Discussion

1300-1400 Lunch break

SESSION 2D: Inaugural Lectures by Fellows/Associates

Chairperson: R K Srivastava, BHU, Varanasi

1400-1420 Fluorescent, AIEgen and cytotoxic behaviour of annulated polycyclic heteroaromatics

Bhisma K Patel, IIT, Guwahati

1425-1445 Organophosphate hydrolase exists as part of Ton complex in *Sphingobium fuliginis* ATCC27551 and plays a role in active transport of nutrients across energy deprived outer membrane

S Dayananda, University of Hyderabad, Hyderabad

1450-1510 Diffusion, growth, and elasticity in batteries – A mathematical modelling perspective

Jeevanjyoti Chakraborty, IIT, Kharagpur

1515-1535 Discovering CP violation in the lepton sector: Challenges and possibilities

Srubabati Goswami, PRL, Ahmedabad

1540-1600 Tea break

1600-1730 Business Meeting of Fellows

Venue: Senate Hall

1730-1800 Tea break

SESSION 2E: Public Lecture

Chairperson: Ram Ramaswamy, JNU, New Delhi

1800-1900 Changing faces of women in Hindi cinema

Shabana Azmi, Actress, Social Activist, Mumbai

1900-2030 Dinner

Sunday | 4 November 2018

SESSION 3A: Inaugural Lectures by Fellows/Associates

Chairperson: S Ananthkrishnan, Savitribai Phule Pune University, Pune

0900-0920 Importance of cellular organelles in controlling miRNA-mediated gene expression in mammalian cells

Suvendra N Bhattacharyya, IICB, Kolkata

0925-0945 Impact of copy number variations in genome organization, evolution and diseases

N B Ramachandra, University of Mysore, Mysuru

0950-1010 Large scale geometry of randomly growing interfaces

Riddhipratim Basu, ICTS, Bengaluru

1015-1045 Tea break

SESSION 3B: Inaugural Lectures by Fellows/Associates

Chairperson: A K Singhvi, Physical Research Laboratory, Ahmedabad

1045-1105 From serendipity to designing molecular gels for drug delivery

P Dastidar, IACS, Kolkata

1110-1130 Cold fermions in artificial gauge fields

Jayanth Vyasanakere, Azim Premji University, Bengaluru

1135-1155 An introduction to some aspects of ergodic theory

Anish Ghosh, TIFR, Mumbai

SESSION 3C: Special Lecture

Chairperson: N Viswanadham, IISc, Bengaluru

1200-1240 The sciences of the artificial: Promise and reality

Vijay Chandru, IISc, Bengaluru

1240-1400 Lunch