



BITS Pilani
KK Birla Goa Campus

Indian Academy of Sciences
Bengaluru 560 080

89th ANNUAL MEETING

03–05 November, 2023

Host/Venue: BITS-Pilani, KK Birla Goa Campus, Goa
Co-host: National Centre for Polar and Ocean Research, Goa

PROGRAMME

3 NOVEMBER 2023 (FRIDAY)

Venue: Main Auditorium

0900–0930	Registration
	SESSION 1A
0930–1100	Inaugural Session and Presidential Address Umesh V Waghmare , JNCASR, Bengaluru Metavalent bonding
1100–1130	Tea Break and Group Photograph (in front of B-Dome)
	SESSION 1B
1130–1330	Symposium: Catalysis for a sustainable society
1130–1145	Introduction by the Convener Swadhin K Mandal , IISER, Mohanpur Catalysis for a sustainable society: A chemist's perspective
1145–1225	Matthias Driess , Technische Universität, Berlin Expectation of chemistry: All-in to meet the needs of society
1225–1250	Sebastian C Peter , JNCASR, Bengaluru Catalyst designs in carbon recycling for sustainable energy
1250–1315	E Balaraman , IISER, Tirupati Non-noble metal catalysis for sustainable development
1315–1330	Discussion
1330–1430	Lunch Break
	SESSION 1C
1430–1510	Chairperson: Partha P Majumder , ISI, Kolkata SPECIAL LECTURE Ramgopal V Rao , Group Vice-Chancellor, BITS - Pilani Connecting academic R&D with product innovation: A few case studies and a way forward
1515–1600	SESSION 1D – Lectures by Fellows/Associates Chairperson: Shridhar R Gadre , SPP University, Pune
1515–1535	Sundargopal Ghosh , IIT, Chennai Coordination chemistry of diborane(4) and diborane(6)
1540–1600	Vijay Kodiyalam , IMSc, Chennai Infinitely many quantum solutions to Euler's 36 officers problem
1605–1630	Tea Break
1630–1715	SESSION 1E – Lectures by Fellows/Associates Chairperson: Meena B Mahajan , IMSc, Chennai
1630–1650	Moumanti Podder , IISER, Pune Combinatorial games on random premises, their connections with percolation, probabilistic automata and statistical mechanics
1655–1715	Uttam K Ghorai , Ramakrishna Mission Vidyamandira, Howrah Electrocatalytic synthesis of green ammonia and green urea: Lab to library vs. lab to land

1720–1800	Tea Break
1800–1900	PUBLIC LECTURE Chairperson: Umesh V Waghmare , JNCASR, Bengaluru Dean D'Cruz , Goa Foundation, Goa The art and science of design
1900–2000	Cultural Programme
2000	Dinner

4 NOVEMBER 2023 (SATURDAY)

Venue: DLT 9 with relay of proceeding in DLT 10

0900–1035	SESSION 2A – Lectures by Fellows/Associates Chairperson: Appa Rao Podile , University of Hyderabad, Hyderabad
0900–0920	Bijnan Bandyopadhyay , IIT, Jodhpur Modeling and control of large size nuclear reactors
0925–0945	Ganesh Nagaraju , IISc, Bengaluru RTEL1 helicase regulates homologous recombination during DNA replication
0950–1010	Anindita Das , IACS, Kolkata Controlled two-dimensional (2D) assemblies from chromophore-appended poly (L-lactide)s
1015–1035	Biswarup Mukhopadhyaya , IISER, Kolkata Some aspects of dark matter
1040–1100	Tea Break SESSION 2B Chairperson: Binod Sreenivasan, IISc, Bengaluru
1100–1300	Symposium: Landscape and seascape of Western India and beyond
1100–1105	Introduction by the Convener Rajiv Kumar Chaturvedi , BITS-Pilani, Goa
1105–1130	C P Singh , ISRO, Ahmedabad Phenological monitoring: Sensing the pulse of the forest ecosystem
1130–1155	Rajiv Kumar Chaturvedi , BITS-Pilani, Goa Forest monitoring studies in Western Ghats – Connecting satellite and near-surface observations to ground-based observations
1155–1220	M A Atmanand , IIT, Chennai Indian Ocean observations
1220–1245	V Sunil , NCPOR, Goa Mapping the hidden features and potential hazards in the exclusive economic zone of India
1245–1300	Discussion
1300–1400	Lunch Break
1400–1535	SESSION 2C – Lectures by Fellows/Associates Chairperson: Somdatta Sinha , IISER, Mohali
1400–1420	Rajiv Sinha , IIT, Kanpur Riverscape dynamics in the northwestern Himalaya and its non-contemporaneity to the Harappan civilization

- 1425–1445 **Bibin G Anand**, SRM Institute of Science and Technology, Kattankulathur
Understanding the molecular mechanism underlying protein and metabolite cross-catalysis and coalescence using bio-physical approaches
- 1450–1510 **Sanghamitra Bandyopadhyay**, ISI, Kolkata
On some machine learning applications in biomedical research
- 1515–1535 **Amiya Kumar Samal**, BHU, Varanasi
Large igneous provinces of the Indian shield: Insights and perspectives
- 1540–1600 Tea Break
- 1600–1730 Business Meeting of Fellows (Venue: DLT 10)
- 1730–1800 Tea Break
- SESSION 2D**
Chairperson: **Umesh V Waghmare**, JNCASR, Bengaluru
- 1800–1900 PUBLIC LECTURE (Venue: Main Auditorium)
Gurmeet Kaur, Panjab University, Chandigarh
The saga of laterite
- 1930 Dinner

5 NOVEMBER 2023 (SUNDAY)

Venue: DLT 9

- 0900–1010 **SESSION 3A** – Lectures by Fellows/Associates
Chairperson: **E Krishnakumar**, RRI, Bengaluru
- 0900–0920 **B Senthilkumaran**, University of Hyderabad, Hyderabad
“Brain sex differentiation” in bony fishes
- 0925–0945 **Vikash Kumar**, NCPOR, Goa
Polar climate reconstructions and Indian monsoon teleconnections
- 0950–1010 **Ishwariya Venkatesh**, CCMB, Hyderabad
Decoding the molecular blueprint of regeneration in mammalian CNS neurons:
Peeling back the regulatory layers
- 1015–1045 Tea Break
- 1045–1155 **SESSION 3B** – Lectures by Fellows/Associates
Chairperson: **Praveen Chaddha**, Gurugram
- 1045–1105 **I N N Namboothiri**, IIT, Mumbai
Functionalized polycyclic cage compounds as prospective high energy density materials
- 1110–1130 **Haripada Sau**, IISER, Pune
A constrained Ando dilation problem
- 1135–1155 **B Eswar Reddy**, IIA, Bengaluru
Evolution of the element lithium in the Universe – A case of anomalously high lithium in red giant stars
- SESSION 3C**
Chairperson: **P C Pandey**, IIT, Gandhinagar
- 1200–1240 SPECIAL LECTURE
D Shankar, NIO, Goa
Evolution of our understanding of the dynamics of the North Indian Ocean
- 1240 Lunch