



INDIAN ACADEMY OF SCIENCES
BENGALURU

91ST

**ANNUAL
MEETING**

14–16 November 2025

Venue: Coliseum, IISER Tirupati, Tirupati



Host

Indian Institute of Science Education and
Research Tirupati



In association with

Sri Venkateswara University, Tirupati,
Indian Institute of Technology Tirupati and
National Atmospheric Research Laboratory, Tirupati

PROGRAMME

14th November 2025 (Friday)

08:45 : Registration

09:10–10:30 : Welcome and Introduction of Fellows

10:30–11:15 : **Session 1A – Presidential Address**

Raghavan Varadarajan, IISc, Bengaluru
(President of the Academy)

Enhancing the stability and efficacy of viral vaccines

Watch live on: <https://www.youtube.com/live/ZeWMm9HLM1E>

11:15–11:45 : **Tea Break**

11:45–12:30 : **Session 1B – Public Lecture**

Chairperson: **Raghavan Varadarajan**, IISc, Bengaluru

Watch live on: <https://www.youtube.com/live/Qkw3x1xcgFw>

Shivkumar Kalyanaraman

CEO, Anusandhan National Research Foundation (ANRF),
New Delhi

ANRF AI for science and engineering

12:30–14:00 : Group Photograph and Lunch Break

14:00–15:20 : **Session 1C – Lectures by Fellows/Associates**

Chairperson: **Vijayamohanan Pillai**
IISER Tirupati

Watch live on: <https://www.youtube.com/live/RC7Rv30-LLQ>

14:00–14:20 : **Prasad V Bharatam**, NIPER, SAS Nagar

*Divalent cationic nitrogen species:
Chemical bonding, synthesis and drug discovery*

14:20–14:40 : **Arindam Banerjee**, IACS, Kolkata

Self-associating peptides for sustainable development

14:40–15:00 : **Divya Nayar**, IIT Delhi, New Delhi

*Molecular crowding:
Biomolecular processes to nanomaterials design*

15:00–15:20 : **Shibdas Banerjee**, IISER Tirupati, Tirupati

The alchemy with water microdroplets

15:20–16:00 : **Tea Break**

16:00–16:40 : **Session 1D – Special Lecture**

Chairperson: **Satish K Gupta**, Gurugram

Watch live on: <https://www.youtube.com/live/RC7Rv3O-LLQ>

Shinjini Bhatnagar, THSTI, Faridabad

*From discovery to delivery:
Translating science to improve maternal and child health*

16:40–17:40 : **Session 1E – Special Session**

*Science opportunities at
an underground science facility (USF)*

Chairperson: **Amol Dighe**, TIFR, Mumbai

Watch live on: <https://www.youtube.com/live/RC7Rv3O-LLQ>

16:40–16:45 : **Vinod Gaur**, Bengaluru

Underground science facility as a multi-science activity

16:45–17:00 : **Arjun Datta**, IISER Pune, Pune

*Underground science facility for studying Earth's
density structure*

17:00–17:15 : **Basudeb Dasgupta**, TIFR, Mumbai

*Underground science laboratory: Neutrino and dark
matter frontiers*

17:15–17:30 : **Prakash Rout**, BARC, Mumbai

*Underground science facility for nuclear
astrophysics research*

17:30–17:40 : Discussion

17:40–18:10 : **Tea Break**

18:10–19:30 : **Session 1F – Lectures by Fellows/Associates**

Chairperson: **Anirban Basu**, NBRC, Manesar

Watch live on: <https://www.youtube.com/live/RC7Rv30-LLQ>

18:10–18:35 : **Pawan Malhotra**, ICGEB, New Delhi

Plasmodium falciparum secretome/surfactome at asexual blood stages – a hidden treasure for new antimalarial development

18:35–19:00 : **P V Sthivaprasad**, NCBS, Bengaluru

Histone variant H4.V: A gatekeeper to H4K5Ac marks and salt stress transcriptome

19:00–19:30 : **Harsha Bajaj**, NIIST, Thiruvananthapuram

When liquid droplets meet lipid membranes: A dynamic partnership

19:30–21:00 : **Dinner**

15th November 2025 (Saturday)

09:30–10:30 : **Session 2A – Lectures by Fellows/Associates**

Chairperson: **Sanjay Kumar**, BHU, Varanasi

Watch live on: <https://www.youtube.com/live/XzNn0IJQtLg>

09:30–09:50 : **Bedangadas Mohanty**, NISER, Bhubaneswar

Phase diagram of strong interactions

09:50–10:10 : **Satyaprasad Senanayak**, NISER, Bhubaneswar

Polarization engineering for artificial neural circuits

10:10–10:30 : **Sukanya Ghosh**, Central University of Kashmir, Ganderbal

*Interplay of unusual structural reconstruction,
exchange mechanism and electron correlation in
high-temperature 2D van-der-Waals magnets*

10:30–11:00 : **Tea Break**

11:00–12:20 : **Session 2B – Invited Lectures**

Chairperson : **Ekambaram Balaraman**, IISER Tirupati

Co-Chairperson: **Vasudharani Devanathan**, IISER Tirupati

Watch live on: <https://www.youtube.com/live/XzNn0IJQtLg>

11:00–11:20 : **Anilatmaja Aryasomayajula**, IISER Tirupati, Tirupati

Estimates of automorphic forms

11:20–11:40 : **Arunima Banerjee**, IISER Tirupati, Tirupati

*Identifying lopsidedness in spiral galaxies using a
deep convolutional neural network*

11:40–12:00 : **K. Saikranthi**, IISER Tirupati, Tirupati

Sub-daily scale rainfall extremes in India

12:00–12:20 : **Suresh Jain**, IIT Tirupati, Tirupati

*Advancing urban transport sustainability through
AI-based emission mapping, policy scenario modelling,
and the built environment–Health nexus*

12:20–14:00 : **Lunch Break**

14:00–15:00 : **Session 2C – Lectures by Fellows/Associates**

Chairperson: **K N Raghavan**, Krea University, Sri City

Watch live on: <https://www.youtube.com/live/XzNn0IJQtLg>

14:00–14:20 : **Sudesh Kaur Khanduja**, IISER Mohali, SAS Nagar

Glimpses of algebraic number theory

14:20–14:40 : **Dishant Pancholi**, IMSc, Chennai

Embeddings of 4-manifolds in $\mathbb{CP}^1 \times \mathbb{CP}^1 \times \mathbb{CP}^1$

14:40–15:00 : **Tarak Karmakar**, IIT Delhi, Delhi

*From atoms to algorithms:
Computer simulations in the age of AI*

15:00–15:15 : The Academy Trust – Overview of Activities

15:15–15:20 : **e-Book Launch: Kannada and Odia versions of
Lilavati's Daughters - The Women Scientists of India**

15:20–16:00 : **Tea Break**

16:00–18:00 : Business Meeting of Fellows
Venue L.H. 2, IISER Tirupati

18:00–19:00 : **Session 2D – Public Lecture**

Chairperson: **Raghavan Varadarajan**, IISc, Bengaluru

Watch live on: <https://www.youtube.com/live/tKJfvRtmGkl>

Vijay Chandru, IISc, Bengaluru

*From human-engineered intelligence to re-engineered
biology: A journey*

20:00–21:30 : Gala Dinner at Starlit Suites

16th November 2025 (Sunday)

09:30–11:30 : **Session 3A – Symposium**
on Evolutionary Ecology in the Wild

Chairperson: **Renee Borges**, IISc, Bengaluru

Watch live on: https://youtube.com/live/1VB_dfKo_eM

09:30–10:00 : **Uma Ramakrishnan**, NCBS, Bengaluru

*Indian small mammals: biogeography,
communities and zoonoses*

10:00–10:30 : **Robin Vijayan**, IISER Tirupati, Tirupati

Population trends inferred from field and genomic data indicate differential roles for climate and landscape change for Sky Island birds

10:30–11:00 : **Ullasa Kodandaramiah**, IISER Thiruvananthapuram, Thiruvananthapuram

Hybridization and diversification of Impatiens in the Western Ghats

11:00–11:30 : **Meghna Krishnadas**, NCBS, Bengaluru

Traits of trees shape community assembly, but intraspecific variation is substantial and meaningful

11:30–11:40 : Discussion

11:40–12:10 : **Tea Break**

12:10–12:30 : **Session 3B – Lectures by Fellows/Associates**

Chairperson: **Tarun Kant**, IIT Bombay, Mumbai

Watch live on: https://youtube.com/live/1VB_dfKo_eM

12:10–12:30 : **Pradeep K Singh**, Varanasi

Ulwe hill flattened by controlled blasting technique for construction of Navi Mumbai International Airport – A success story

12:30–12:40 : NARL Outreach Presentation

AK Patra, Director, NARL

12:40–13:20 : **Session 3C – Special Lecture**

Chairperson: **Parthasarathi Mukhopadhyay**, IISER Berhampur, Berhampur

Watch live on: https://youtube.com/live/1VB_dfKo_eM

Ravi S Nanjundiah, IISc, Bengaluru

Heat stress forecasts: Its importance in present day changing climate

13:20–14:30 : **Lunch and Closure of the Meeting**

Catch us live on **YouTube**



**Session 1A
Presidential Address**

14 November 2025 (Friday)



**Session 1B
Public Lecture**

14 November 2025 (Friday)



**Sessions 1C, 1D, 1E, 1F
Lectures and Special Sessions**

14 November 2025 (Friday)



**Sessions 2A, 2B, 2C
Lectures by Fellow/Associates**

15 November 2025 (Saturday)



**Session 2D
Public Lecture**

15 November 2025 (Saturday)



**Sessions 3A, 3B, 3C
Symposium and Lectures**

16 November 2025 (Sunday)