

ACTIVITY REPORT

(September-December 2025)





ICTS is delighted to announce that KAVITA RAMANAN and PETER ZOLLER have joined the International Advisory Board (IAB).



ICTS Management Board member and Visiting Professor VIVEK S. BORKAR has been selected as a National Science Chair of the Anusandhan National Research Foundation (ANRF).



ICTS Management Board member and ICTS Program Committee chair MAHAN Mj has received the Vigyan Shri Award in mathematics and computer science.



ICTS and NCBS have signed an agreement to jointly establish a Centre for Artificial Learning and Intelligence for Biological Research and Education (CALIBRE). The centre will be set up through a generous contribution from Mr. Vishal Gupta, founder of Reed India Consulting LLP, and Major Deepshikha Gupta.

I | ICTS ACTIVITIES

Summary of Programming Activities *(For details see following pages)*

Programs/Discussion Meetings held: 12

Academic visitors to ICTS-TIFR: 77

Seminars and colloquia: *(For details see Annexure – A)*

Summary of Research Activities *(For details see Annexure - B)*

Papers published: 48

arXiv submissions: 57

Ia. PROGRAMS

Hydrodynamics, Fluctuations, and Noise in Quantum and Classical Systems

Organizers: Jacopo De Nardis (Cergy Paris University, France), Gautam Mandal (ICTS-TIFR, Bengaluru) and Tridib Sadhu (TIFR, Mumbai) | 1-12 December 2025

Combinatorics, Geometry, and Representation Theory

Organizers: Vyjayanthi Chari (University of California, Riverside, USA), Raghavan K.N. (Krea University, Sricity), Venkatesh Rajendran (IISc, Bengaluru) and Milen Yakimov (Northeastern University, USA) | 17-28 November 2025

Geometry, Mechanics and the Physics of Growth

Organizers: Joel Marthelot (Aix-Marseille University, France), S Ganga Prasath (IIT Madras, Chennai) and Suraj Shankar (University of Michigan, USA) | 3-14 November 2025

Women in Astrophysics: Voices, Equity, and Science (WAVES) - A Workshop on Gender Equity and Advances in Astrophysics

Organizers: Pallavi Bhat (ICTS-TIFR, Bengaluru), Preeti Kharb (NCRA-TIFR, Pune) and Ruta Kale (NCRA-TIFR, Pune) | 3-4 November 2025

FTSky: A program in the field of Fast Radio Transients

Organizers: Jayanta Roy (NCRA-TIFR, Pune), J. Xavier Prochaska (University of California-Santa Cruz, USA), Laura Spitler (MPIFR, Germany), Manisha Caleb (University of Sydney, Australia), Scott Ransom (NRAO, USA), Wesley Armour (University of Oxford, UK), Bhaswati Bhattacharyya (NCRA-TIFR, Pune), Resmi Lekshmi (IIST, Kerala), Yogesh Maan (NCRA-TIFR, Pune) and Visweshwar Ram Marthi (NCRA-TIFR, Pune) | 6-17 October, 2025

Dynamics and Evolution of RNA Functions

Organizers: Sandeep Eswarappa (IISc, Bengaluru), Tanweer Hussain (IISc, Bengaluru), Purusharth I. Rajyaguru (IISc, Bengaluru) and Umesh Varshney (IISc, Bengaluru) | 22 September-3 October 2025

Bangalore School on Statistical Physics-XVI

Organizers: Abhishek Dhar (ICTS-TIFR, Bengaluru) and Sanjib Sabhapandit (RRI, Bengaluru) | 3-19 September 2025





Ib. DISCUSSION MEETINGS

Women at the Intersection of Mathematics and Theoretical Physics

Organizers: Sylvie Paycha (University of Potsdam, Germany), Sujatha Ramdorai (UBC, Canada), Kasia Rejzner (University of York, UK) and Sumati Surya (RRI, Bengaluru) | 29 December-2 January 2025

Frontiers in Quantum Condensed Matter Physics

Organizers: Sumilan Banerjee (IISc, Bengaluru), Ravindra N. Bhatt (Princeton University, USA), Subhro Bhattacharjee (ICTS-TIFR, Bengaluru), Arindam Ghosh (IISc, Bengaluru), H. R. Krishnamurthy (IISc & ICTS-TIFR, Bengaluru), Mohit Randeria (Ohio State University, USA), Subir Sachdev (Harvard University, USA) and Nandini Trivedi (Ohio State University, USA) | 15-19 December 2025

The Future of Gravitational-Wave Astronomy

Organizers: Parameswaran Ajith (ICTS-TIFR, Bengaluru), K G Arun (CMI, Siruseri), Sumanta Chakraborty (IACS, Kolkata), Bala Iyer (ICTS-TIFR, Bengaluru), Prayush Kumar (ICTS-TIFR, Bengaluru), Surhud More (IUCAA, Pune), Archana Pai (IIT Bombay, Mumbai) and Sudipta Sarkar (IIT Gandhinagar) | 27-31 October 2025

Spatial Organization of Biological Functions

Organizers: Sankar Adhya (NCI, USA), Anjana Badrinarayanan (NCBS-TIFR, Bengaluru), Vijaykumar Krishnamurthy (ICTS-TIFR, Bengaluru), Melike Lakadamyali (University of Pennsylvania, USA), Satyajit Mayor (NCBS-TIFR, Bengaluru & University of Warwick, UK) and Jie Xiao (Johns Hopkins School of Medicine, USA) | 21-24 October 2025

AI and Fundamental Sciences Workshop

Organizers: Jatin Batra (TIFR, Mumbai), Sarthak Chandra (ICTS-TIFR Bengaluru), Rajesh Gopakumar (ICTS-TIFR Bengaluru), Manish Gupta (Google DeepMind), Prateek Jain (Google DeepMind), Ameena Khaleel (Google, India), Prayush Kumar (ICTS-TIFR Bengaluru), Vinothkumar Kutri Ragunath (NCBS-TIFR, Bengaluru), Suvarat Raju (ICTS-TIFR Bengaluru), Ashwani Sharma (Google, India), LS Shashidhara (NCBS-TIFR, Bengaluru) and Shruthi Viswanath (NCBS-TIFR, Bengaluru) | 7 October 2025



Ic. LECTURE SERIES

DISTINGUISHED LECTURES

Gravitational Wave Stochastic Backgrounds and Pulsar Timing Arrays

Bruce Allen (Max Planck Institute for Gravitational Physics, Hannover, Germany) | 30 October 2025



Id. FOUNDATION DAY EVENTS

FOUNDATION DAY LECTURE

A Tale of Two Symmetries

Chandrashekhhar Khare (University of California, Los Angeles, USA) | 9 December 2025

Dedication of Prof. S Ramanan's Personal Mathematics Book Collection

Sundararaman Ramanan gifted a collection of his gifts to ICTS-TIFR, which will now be a part of the ICTS Library. Prof. Ramanan is a distinguished mathematician known for his fundamental contributions to algebraic geometry and differential geometry, in particular, for his study of the moduli spaces of vector bundles on curves which has received wide application in mathematics and theoretical physics.

Chasing a Conjecture: Chandrashekhhar Khare in conversation with Rajesh Gopakumar

Chandrashekhhar Khare in conversation with Rajesh Gopakumar on his book *Chasing a Conjecture: Inside the Mind of a Mathematician*, a personal and insightful memoir that captures the intellectual and emotional journey behind mathematical discovery. Through the story of pursuing deep problems in

number theory, Prof. Khare reflects on mentorship, collaboration, setbacks and breakthroughs, offering a rare look into how a mathematician thinks and what it takes to arrive at a profound result. It is a celebration of curiosity, perseverance and the human drive to understand.



Ie. VISITS OF SCIENTISTS

The following researchers visited ICTS during September-December 2025.

1. **Sridip Pal**, Institut des Hautes Études Scientifiques, France
2. **Bikram Pal**, IISER Kolkata
3. **Surya Raghavendra**, Yale University, USA
4. **Sameer Murthy**, King's College London, UK
5. **Sree Ram Valluri**, University of Western Ontario, Canada
6. **Anweshha Behera**, IISER Kolkata
7. **Radhika Achikanath Chirakkara**, University of Toronto, Canada
8. **Parameswaran Velayudhan Nair**, City College of New York, USA
9. **Amolak Ratan Kalra**, University of Waterloo, Canada
10. **Prashant Valluri**, University of Edinburgh, UK
11. **Ruma Maity**, Technische Universität Wien, Austria
12. **Sreekanth Harikumar**, Nicolaus Copernicus Astronomical Center, Poland
13. **Prashant Kumar**, IIT Bombay, Mumbai
14. **Aaditya Jyotishi**, Azim Premji University, Bengaluru
15. **Kazi Wasim Raj**, IIT Kharagpur
16. **Vidyanand Nanjundiah**, Centre for Human Genetics, Bengaluru
17. **Itamar Procaccia**, Weizmann Institute of Science, Israel
18. **Dhruv Shah**, Massachusetts Institute of Technology, USA
19. **Shruto Kalyan Dey**, IISER Pune
20. **Siddhartha Mukherjee**, IIT Kanpur
21. **Rushikesh Suroshe**, TIFR, Mumbai
22. **Ajay Mohan**, TIFR, Mumbai
23. **Nina Mikhailiuk**, Azai Studios, New York, USA
24. **Nikita Nekrasov**, Stony Brook University, USA
25. **Ankur Renduchintala**, BITS Pilani
26. **Satyam Sinha**, IISER Pune
27. **Shakti Aishvarya**, St Joseph's University, Bengaluru
28. **Sudeshna Bhattacharjee**, Indian Institute of Science, Bengaluru
29. **Felix von Oppen**, Freie Universität Berlin, Germany
30. **Shrobona Ghosh**, Max Planck Institute for Gravitational Physics, Hannover, Germany

31. **Harold Erbin**, Institute of Theoretical Physics, France
32. **Prateek Gupta**, IIT Delhi
33. **Anantharaman S.V.**, Ashoka University, Haryana
34. **Mandar Inamdar**, IIT Bombay, Mumbai
35. **Saurabh K.**, Max Planck Institute for Radio Astronomy, Germany
36. **Trishen Gunaratnam**, TIFR, Mumbai
37. **Jerome Peter Gauntlett**, Imperial College, London, UK
38. **Dheeraj Nagaraj**, Google DeepMind, Bengaluru
39. **Kedar Damle**, TIFR, Mumbai
40. **Meenakshi Venkatadri**
41. **Mendel Nguyen**, Durham University, UK
42. **Scott A. Hughes**, Massachusetts Institute of Technology, USA
43. **Hardik Shah**, IISER Pune
44. **Srashti Goyal**, Max Planck Institute for Gravitational Physics, Albert Einstein Institute, Germany
45. **Joel Marthelot**, Aix-Marseille University, France
46. **Saqlain Afroz**, IISER Kolkata
47. **Subhajit Goswami**, TIFR, Mumbai
48. **Aniruddha Bhattacharya**, Georgia Institute of Technology, USA
49. **Alankrita Bhatt**, Granica in Mountain View, USA
50. **Vivek Borkar**, IIT Bombay, Mumbai
51. **Masatoshi Nishikawa**, Hosei University, Japan
52. **Shailesh Chandrasekharan**, Duke University, USA
53. **Nigel Tempest Bishop**, Rhodes University, South Africa
54. **Arunava Mukherjee**, Saha Institute of Nuclear Physics, Kolkata
55. **Izumi Takimoto Schmiegelow**, Gran Sasso Science Institute, Italy
56. **Anil Ananthaswamy**, NCBS-TIFR, Bengaluru and IIT Madras, Chennai
57. **Radhika Ganapathy**, Indian Institute of Science, Bengaluru
58. **Pulkit Ghoderao**, Imperial College, London, UK
59. **Sumanta Chakraborty**, IACS, Kolkata
60. **Ipsita Mandal**, Shiv Nadar University, Uttar Pradesh
61. **M.S. Raghunathan**, Centre for Excellence in Basic Sciences, Mumbai
62. **Manas Rachh**, IIT Bombay, Mumbai
63. **Siddharth Jha**, University of California, Los Angeles, USA
64. **Jyotirmoy Paul**, University of Oslo, Norway
65. **Bulbul Chakraborty**, Brandeis University, USA
66. **Roji Pius**, Institute of Mathematical Sciences, Chennai
67. **Adrian Röllin**, National University of Singapore
68. **Promit Ghosal**, University of Chicago, USA
69. **Wilhelmus Theodorus Franciscus den Hollander**, Leiden University, The Netherlands
70. **Shyam Dhamapurkar**, Chennai Mathematical Institute, Chennai
71. **Ranjan Laha**, Indian Institute of Science, Bengaluru
72. **Mattia Serra**, University of California, San Diego, USA
73. **Sanjay K. Reddy**, University of Washington, USA
74. **Sangeetha V**
75. **Kusum Dhochak**, IIT Palakkad, Kerala
76. **Prithvi Narayan**, IIT Palakkad, Kerala
77. **Manish**, Institute of Mathematical Sciences, Chennai

1f. NEWS ON GRANTS, AWARDS AND FELLOWSHIPS



RAMA GOVINDARAJAN was elected as a **Fellow of The World Academy of Sciences (TWAS)**. She was also awarded the prestigious **J.C. Bose grant** by the Department of Science and Technology, Government of India, for her outstanding contributions to fluid dynamics. She joined the **Editorial Committee of the Annual Review of Fluid Mechanics**.



VIJAYKUMAR KRISHNAMURTHY was awarded the **TAA B. M. Udgaonkar Excellence in Teaching Commendation for 2025** for biology.



MYTHILY RAMASWAMY was elected as a **Fellow of the Indian National Science Academy (INSA)**, in recognition of her contributions to control theory and mathematical analysis.



ICTS student MRINAL JYOTI POWDEL has won the **best poster prize at CompFlu 2025**, the Annual International Meeting on Complex Fluids and Soft Matter in India. The conference was held at IISc, Bengaluru and brought together more than 500 participant



Former ICTS postdoctoral fellow SIDDHARTHA MUKHERJEE was awarded the **2025 Saraswathi Cowsik Medal**, recognizing his theoretical work on the scaling theory and hydrodynamics of dense bacterial suspensions, highlighted in the paper titled, *"Intermittency, Fluctuations and Maximal Chaos in an Emergent Universal State of Active Turbulence."*



SRIRAM RAMASWAMY was awarded the prestigious **National Science Chair of the Anusandhan National Research Foundation (ANRF)**.



SUMATHI RAO was elected as a **Fellow of The World Academy of Sciences (TWAS)**



STHITADHI ROY was awarded the **2025 ICTP Prize**. He shares the prize with Titas Chanda of the Indian Institute of Technology Madras, Chennai.



JIM THOMAS was awarded a **major research grant from the Naval Research Board (NRB)** of the Defence Research and Development Organisation (DRDO) for his project titled *“Turbulent Dynamics and Energy Cascades of Internal Gravity”*



ANUPAM KUNDU and ANIRBAN BASAK were awarded the **ARG MATRICS grant** by ANRF.



MANAS KULKARNI, and postdoctoral fellow REKHA KUMARI, in collaboration with Tomoki Ozawa from Tohoku University (Japan), was awarded an **Indo-Japan grant under the India-Japan Circulation of Talented Youths in Science Programme** (LOTUS Programme) by Japan Science and Technology (JST) Agency.



Three ICTS postdoctoral researchers, SAKETH MUDDU, INDRAJIT SAU, and FARMAN ULLAH, have been selected for the **National Postdoctoral Fellowship (NPDF)** given by ANRF.

II ICTS PEOPLE

IIa FACULTY

1. VIVEK BORKAR joined as ICTS Endowed Visiting Professor. He is also National Science Chair, ANRF, at IIT Bombay. Prof. Borkar is interested in Stochastic Control and Optimization, Applied Probability, Stochastic Algorithms and their Applications to Machine Learning.
2. VISHAL VASAN was promoted to Associate Professor G.
3. The following scientists have joined ICTS-TIFR as Senior Faculty Associates: V. RAVINDRAN (IMSc, Chennai; Perturbative Quantum Chromodynamics); MAHENDRA VERMA (IIT Kanpur; Turbulence, Nonequilibrium Statistical Physics); SRIKANT SASTRY (JNCASR, Bengaluru, Statistical Mechanics and Soft Matter Physics)

IIb STUDENTS

GRADUATE PROGRAM

1. The 2025 Fall semester began on 1 August 2025. This semester 15 courses (including elective, reading and core courses) were offered to the students. Please refer to the website for more details: <https://courses.icts.res.in/course/index.php?categoryid=27>
2. The following students successfully defended their thesis during September-December 2025:
Sahil Kumar Singh (GS 2020 PhD Batch, *advisor*: Abhishek Dhar)
Anup Kumar (GS 2019 PhD Batch, *advisor*: Rama Govindarajan)
Shivam Kumar Sharma (GS 2019 PhD Batch, *advisor*: R. Loganayagam)
Uddeepa Deka (GS 2019 PhD Batch, *advisor*: P. Ajith)
Harshit Joshi (2019 IPhD Batch, *advisor*: Rama Govindarajan)
3. Students who submitted their thesis during September-December 2025:

Student Name	Batch	Research Advisor	Thesis submitted on
Ankush Chaubey	2019 IPhD	Subhro Bhattacharjee	15 October 25
Sparsh Gupta	2020 PhD	Manas Kulkarni	22 October 25
Aditya Singh Rajput	2019 IPhD	Vijaykumar Krishnamurthy	2 December 25

4. Students who submitted their synopsis during the report period:

Student Name	Batch	Research Advisor	Synopsis submitted on
Ritwik Mukherjee	2021 PhD	Samriddhi Sankar Ray	11 December 25

5. A re-orientation session for students, postdocs, visiting students, staff was held on 3 December 2025. The session covered important topics including Gender Sensitization, Academic Ethics, Cyber Safety and Security, Health Insurance, Medical Emergencies, SSC, SGRC, and other relevant concerns.
6. **Aiswarya NS** (2022 Integrated PhD) registered for PhD in Nov. 2025.
7. **Ankush Chaubey, Aditya Singh Rajput, Harshit Joshi** were appointed as Research Associates (RA)
8. Subsequent affiliation of graduate students from ICTS:
 - a) **Sahil Kumar Singh** - Post Doctoral Fellow at University of Luxembourg
 - b) **Harshit Joshi** - Post Doctoral Fellow at University of France
 - c) **Anup Kumar** - Technician at Okinawa Institute of Science and Technology, Japan
 - d) **Shivam Kumar Sharma** - Post Doctoral Fellow at Institute of Mathematical Sciences, Chennai

POSTDOCTORAL PROGRAM

1. Postdoctoral application for the Fall Hiring Cycle 2026 is currently in the screening stage: <https://www.icts.res.in/academic/postdoctoral-fellowships>.
2. Following offers were made from Summer 2026 hiring cycle and accepted the offer:

Name	Research Group	Current Affiliation	Current Designation
Lijin J	Fluid Dynamics and Turbulence	IIT Madras, Chennai	Postdoctoral researcher
Amal Manoharan	Fluid Dynamics and Turbulence	IIT Madras, Chennai	PhD research scholar
Santana Majee	Geometry and Physical Mathematics	IIT, Kharagpur	Research Associate
Nimisha Pahuja	Probability Theory	Institute of Mathematics, University of Augsburg, Germany	Guest Scientist
Ramananda Santra	Astrophysics & Relativity	National Centre for Radio Astrophysics (NCRA-TIFR), Pune	PhD Research scholar

3. From the Fall 2025 hiring cycle, 7 candidates have joined ICTS as postdoctoral fellows. They are Farmal Ullah, Mohd Ali, Georg Stettinger, Nathan Matthew McStay, Ken Kikuchi, Mainak Pal and Tista Banerjee
4. Subsequent affiliations of postdoctoral fellows who finished their tenure at ICTS-TIFR between September-December 2025:
 - a) **Prateck Anand** - Assistant Professor at IIT Bombay, Mumbai

- b) **Naveen Prabhakar** - Visiting Assistant Professor, Krea University
 - c) **Sibaram Ruidas** - Postdoctoral Fellow at RRI, Bengaluru
 - d) **Navaneeth Krishna Gaddam** - Researcher at Utrecht University, The Netherlands
 - e) **Kaushik Paul** - Postdoctoral Researcher at Nikhef, The Netherlands
5. **Sounak Biswas** was appointed as a Long-Term Visiting Researcher for 3 months under Sthitadhi Roy in the Statistical Physics and Condensed Matter group.

VISITING STUDENTS PROGRAM

1. Applications are being invited for the ICTS Long-Term Visiting Students Program 2026
2. Applications are being invited for the ICTS S. N. Bhatt Memorial Excellence Fellowship Program 2026.

III

OUTREACH

KAAPI WITH KURIOSITY

New Frontiers for Statistical Physics

Rahul Nandkishore (University of Colorado Boulder, USA) | 14 December 2025

Flexible Solutions: Lessons from Nature's Rubber Proteins

Namrata Gundiah (Indian Institute of Science, Bengaluru) | 23 November 2025

Neutron Stars: Natural Laboratories for the Universe's Smallest and Largest Scales

Sukanta Bose (Washington State University, Pullman, USA) | 26 October 2025

Why Strings?

Rajesh Gopakumar (ICTS-TIFR, Bengaluru) | 28 September 2025



EINSTEIN LECTURES

Nature's Symmetries and Textures

Sidney R. Nagel (University of Chicago, USA) | 06 December 2025

How Natural Structures Shape Themselves: Growth, Geometry, and Frustration

Efi Efrati (Weizmann Institute of Science, Israel) | 11 November 2025

Einstein's Ears: The Astronomy of Gravitational Waves

Scott Hughes (Massachusetts Institute of Technology, Cambridge, USA) | 07 November 2025



MATHS CIRCLE INDIA

ICTS conducted seven online Maths Circle India sessions during September-December 2025.

Session 89

Conducted by: Mainak Ghosh, R. Nandagopal and B. Sury | **Interactive session:** 5 December 2025

Session 88

Conducted by: Mainak Ghosh, R. Nandagopal and B. Sury | **Interactive session:** 21 November 2025

Session 87

Conducted by: Utpal Chattopadhyay | **Interactive session:** 7 November 2025

Session 86

Conducted by: Utpal Chattopadhyay | **Interactive session:** 24 October 2025

Session 85

Conducted by: Utpal Chattopadhyay | **Interactive session:** 10 October 2025

Session 84

Conducted by: Utpal Chattopadhyay | **Interactive session:** 3 October 2025

Session 83

Conducted by: Mainak Ghosh, R. Nandagopal and B. Sury | **Interactive session:** 12 September 2025

ICTS-RRI MATHS CIRCLE

During September-December 2025, three maths circle sessions were held at the Raman Research Institute, Bengaluru.

Session 54

Conducted by: Suvrat Raju | **Interactive session:** 22 November 2025

Session 53

Conducted by: Suvrat Raju | **Interactive session:** 8 November 2025

Session 52

Conducted by: Joseph Samuel, Disha Kuzhively, Supurna Sinha, Jaikumar Radhakrishnan | **Interactive session:** 27 September 2025 | **Venue:** JN Planetarium, Bengaluru

PRISM

Think, Play, Prove: Hands-on Explorations in Maths

Shweta Naik Homi Bhabha Centre for Science Education (HBCSE-TIFR) | 30 November 2025



OTHER EVENTS

Lunar Eclipse

Sanjana Anand (Visvesvaraya Industrial and Technological Museum (VITM), Bengaluru) | 7 September 2025 | ICTS-TIFR, Bengaluru

ANNEXURE - A

The following are the details of seminars and colloquia during the period September-December 2025:

Semi-universality of CFTd at large spin | Sridip Pal (Institut des Hautes Études Scientifiques, France) | 24 December 2025

Influence of particle geometry on hydrodynamic and electrostatic interactions | Harshit Joshi (ICTS-TIFR, Bengaluru) | 19 December 2025

Twisted D-branes and TQFTs valued in Calabi-Yau categories | Surya Raghavendran (Yale University, USA) | 18 December 2025

The Role of r-modes in Pulsar Spin-down, Pulsar Timing, and Gravitational Waves | Sree Ram Valluri (University of Western Ontario, Canada) | 18 December 2025

Localization of strings on group manifolds | Sameer Murthy (King's College, London, UK) | 15 December 2025

Genetic Algorithm-Based Training of a Smart Triangular Swimmer | Ruma Maity (Technische Universität Wien, Austria) | 12 December 2025

Intermittency, Multifractality and Chaos in Turbulence | Ritwik Mukherjee (ICTS-TIFR, Bengaluru) | 11 December 2025

Lensing of Gravitational Waves by Globular Clusters and Dark Matter | Sreekanth Harikumar (Nicolaus Copernicus Astronomical Center, Poland) | 11 December 2025

The Disordered Quantum Ising Model with Periodic and Quasiperiodic Driving | Felix von Oppen (Freie Universität Berlin, Germany) | 5 December 2025

Cubic String Field Theory Using Auxiliary Fields | Harold Erbin (Institute of Theoretical Physics, France) | 5 December 2025

Microlensing of Gravitational Waves as a New Tool for Astrophysics | Uddeepa Deka (ICTS-TIFR, Bengaluru) | 5 December 2025

Model-Agnostic Identification of Compact-Binary Morphologies with Phenomenological Waveforms | Shrobana Ghosh (Max Planck Institute for Gravitational Physics, Germany) | 4 December 2025

SU(2) Representations from Geometry | Pranav Pandit (ICTS-TIFR, Bengaluru) | 2 December 2025

Close But No Cigar: A Brief Review of Pulsar Glitches and Some New Perspectives | Anantharaman S.V. (Ashoka University, Sonapat) | 28 November 2025

Modeling Mixing in Turbulence – Non-Markovianity is Essential

Prateek Gupta (IIT Delhi) | 28 November 2025

Holographic Fluctuations at Finite Density

Shivam Kumar Sharma (ICTS-TIFR, Bengaluru) | 28 November 2025

New constraints on renormalization group flows

Ken Kikuchi (ICTS-TIFR, Bengaluru) | 27 November 2025

ICTS Statistics and Probability Lab PhD Student Seminar Series

Sourish Maniyar (IISc), Shaibal Karmakar (ICTS-TIFR) and Pradeeptha Jain (ICTS-TIFR) | 27 November 2025

High-Energy Pion Scattering in Holographic QCD

Bartosz Pyszkowski (Yukawa Institute for Theoretical Physics, Japan) | 26 November 2025

Computation of Monodromy Hypergeometric Case

T. N. Venkataramana (ICTS-TIFR, Bengaluru) | 4, 11, 18, 25 November 2025

Entanglement inequalities, black holes and the architecture of typical states

Ayan Mukhopadhyay (Pontificia Universidad Catolica de Valparaiso, Chile) | 24 November 2025

Probing Horizon Scale Magnetic Fields and Strong-field Gravity with Polarized EHT Observations of M87*

Saurabh K. (Max Planck Institute for Radio Astronomy, Germany) | 20 November 2025

Interpreting Biological Complexity with Systems Approaches (Online)

Lokanand Koduru (Genome Institute of Singapore, Singapore) | 17 November 2025

Beyond Propagation of Chaos: A Stochastic Algorithm for Mean Field Optimization

Dheeraj Nagaraj (Google DeepMind, Bengaluru) | 14 November 2025

Emergent photons vs confinement: the roles of vortices and monopoles

Mendel Nguyen (Durham University, United Kingdom) | 13 November 2025

Unveiling Statistical Properties of Galactic Synchrotron Emission

Aniket Nath (ICTS-TIFR, Bengaluru) | 13 November 2025

Lattice Bosonization of Matrix Quantum Mechanics and $c = 1$

Ajay Mohan (TIFR, Mumbai) | 12 November 2025

Channel Flow Stability: Influence of Dust Particles and Geometry

Anup Kumar (ICTS-TIFR, Bengaluru) | 11 November 2025

Exquisite Clutter in the Circumgalactic Plasmas: Crosstalk Between Macro and Microphysics (Online)

Prakriti Palchoudhury (University of Oxford, UK) | 10 November 2025

The Role of Synoptic Circulations in Lower-tropospheric Dry Static Energy Variability Over a South Asian Heatwave Hotspot

Hardik Shah (IISER Pune) | 7 November 2025

Moments of the Hurwitz Zeta Function with Irrational Shifts

Anurag Sahay (Purdue University, USA) | 7 November 2025

Stellar Dynamics and Astrophysical Transients in Centers of Galaxies

Karamveer Kaur (Technion - Israel Institute of Technology, Israel) | 6 November 2025

Tensor Manipulation with Mathematica and xAct/xTensor

Guillaume Faye (Paris Institute of Astrophysics, France) | 6 November 2025

Tensor Categories and Their Applications to Vertex Operator Algebras

Harshit Yadav (University of Alberta, Canada) | 6 November 2025

Topological Photonics: From Exciton-Polariton Devices to On-chip Photonic Terahertz Communications

Rimi Banerjee (Nanyang Technological University, Singapore) | 5 November 2025

Geometry of Random Walks and Random Interlacements

Subhajit Goswami (TIFR, Mumbai) | 4 November 2025

A Re-look at "What is Life"?

Vidyanand Nanjundiah (Centre for Human Genetics, Bengaluru) | 3 November 2025

Entangling Light Without Uncertainties: From Quantum Differential Geometry Towards Quantum Optical Computation

Aniruddha Bhattacharya (Georgia Institute of Technology, USA) | 3 November 2025

Algebro-Geometric Algorithms for Program Synthesis and Verification

Harshit Jitendra Motwani (Max Planck Institute for Software Systems, Germany) | 31 October 2025

Spatial Decomposition of Operators in 2d CFT

Manish Ramchander (Institute of Mathematical Sciences, Chennai) | 30 October 2025

Instance-optimality in Universal Prediction

Alankrita Bhatt (Granica Computing Inc., USA) | 30 October 2025

Exact Solutions of Matrix Models and String Theories

João Carlos Rodrigues (Instituto Superior Tecnico, Portugal) | 29 October 2025

Approximation Barriers for Big Data Problems

Karthik C. S. (Rutgers University, USA) | 28 October 2025

Gravitational Waves Passing Through Matter

Nigel Tempest Bishop (Rhodes University, South Africa) | 24 October 2025

Tidal Responses of Black Holes and their Imprints in Gravitational Waves Emitted by their Binaries

Sukanta Bose (Washington State University, USA) | 24 October 2025

Deciphering Enigmatic Neutron Stars: Where Ultra-dense Matter Meets Strong-field Gravity

Arunava Mukherjee (Saha Institute of Nuclear Physics, Kolkata) | 23 October 2025

To Love or Not to Love

Sumanta Chakraborty (Indian Association for the Cultivation of Science [IACS], Kolkata) | 16 October 2025

State Dependence and its Discontents

Suvrat Raju (ICTS-TIFR, Bengaluru) | 15 and 16 October 2025

A Gentle Introduction to Bruhat-Tits Theory

Radhika Ganapathy (IISc, Bengaluru) | 14 October 2025

Are Moduli Vacuum Expectation Values or Parameters?

Ashoke Sen (ICTS-TIFR, Bengaluru) | 8 October 2025

Universality and Scaling in the Proximity of Jamming: A Perspective on the Rheology of Dense Suspensions

Bulbul Chakraborty (Brandeis University, USA) | 8 October 2025

Mautner's Theorem on Decomposing a Unitary Representation into Irreducible Ones

M.S. Raghunathan (Centre for Excellence in Basic Sciences, Mumbai) | 8 October 2025

Reflections of Topology in Magnetoconductivity of Nodal-point Semimetals

Ipsita Mandal (Shiv Nadar University, Noida) | 8 October 2025

Integral Formulations and Numerical Methods for a Class of Half-space Interface Problems

Manas Rachh (IIT Bombay, Mumbai) | 7 October 2025

The Wheeler-DeWitt Equation in Asymptotically Flat Spaces

Marc Henneaux (Université Libre de Bruxelles and International Solvay Institutes, Belgium) | 6 October 2025

Local Tests of Global Properties

Jaikumar Radhakrishnan (ICTS-TIFR, Bengaluru) | 30 September 2025

Seeing Through the Confinement Screen: DGLAP/BFKL Mixing and Light-ray Matching in QCD

David Simmons-Duffin (California Institute of Technology, USA) | 29 September 2025

The Role of Earth's Mantle Convection in Planetary Habitability

Jyotirmoy Paul (University of Oslo, Norway) | 25 September 2025

The Efficient Primality Testing Algorithm of Agrawal, Kayal and Saxena

Jaikumar Radhakrishnan (ICTS-TIFR, Bengaluru) | 23 September 2025

String Field Theory, Graph Homology and the Transition from Φ^3 to Gauge Theory Amplitudes

Roji Pius (Institute of Mathematical Sciences, Chennai) | 22 September 2025

A Grothendieckian Taming of the Special Function Zoo. Part 1: The Loga Paradigm

Godwin Martin (ICTS-TIFR, Bengaluru) | 17 September 2025

Probabilistic Facets of Virasoro Conformal Blocks

Promit Ghosal (University of Chicago, USA) | 17 September 2025

Word Maps and their Images on Finite Groups

Shrinithi Singh (ICTS-TIFR, Bengaluru) | 16 September 2025

Self-Reinforced Preferential Attachment

Frank den Hollander (Leiden University, The Netherlands) | 15 September 2025

Covariant Phase Space and L_∞ Algebras

Atakan Hilmi Firat (University of California, Davis, USA) | 15 September 2025

Interplay of Microscopic Symmetries and Entanglement in Effective Theories of Correlated Quantum Matter

Ankush Chaubey (ICTS-TIFR, Bengaluru) | 12 September 2025

Search for Dark Matter Over a Wide Mass Range: Using JWST and Neutrino Telescopes to Search for Non-gravitational Signatures of Dark Matter

Ranjan Laha (IISc, Bengaluru) | 11 September 2025

Control of Tissue Flows and Embryo Geometry in Avian Gastrulation

Mattia Serra (University of California, San Diego, USA) | 11 September 2025

Some Applications of Representation Theory to Classical Number Theory

B. Sury (ICTS-TIFR, Bengaluru) | 3 and 10 September 2025

A Localising AdS3 Sigma Model

Lorenz Eberhardt (University of Amsterdam, The Netherlands) | 8 September 2025

From Microscopics to Hydrodynamics

Sahil Kumar Singh (ICTS-TIFR, Bengaluru) | 2 September

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Quantum Bounds to Chaos and Fluctuation - Dissipation Equality

Jorge Kurchan (LPENS, École Normale Supérieure, Paris) | 10 December 2025

Dipole Induced Topological Transition in Three-dimensional Amorphous Solids

Itamar Procaccia (Weizmann Institute of Science, Israel) | 8 December 2025

High Precision Waveforms with the Small Mass Ratio Limit and the Future of Gravitational-wave Source Modeling

Scott A. Hughes (Massachusetts Institute of Technology, USA) | 11 November 2025

Morphing Without Muscles: Hydraulic Actuation in Nature

Joel Marthelot (Aix-Marseille University, France) | 4 November 2025

From LLMs to LRMs: The Rise of Reasoning Models

Anil Ananthaswamy (NCBS-TIFR, Bengaluru and IIT Madras, Chennai) | 14 October 2025

Neutron Stars as Cosmic Laboratories: Probing QCD, Dark Matter and Axions in the Multi-Messenger Era

Sanjay K. Reddy (University of Washington, USA) | 2 September 2025

ANNEXURE - B

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