



# International Meeting on Relativistic Astrophysics and Cosmology: Emerging areas

**Sponsored by IUCAA, Pune**

**Jointly Organized  
by**

**ICARD, North Bengal University (NBU); ICARD, Cooch Behar Panchanan Barma University; ICARD, Gauhati University & ICARD, Malda College**

**June 9 - 11, 2025**

**Venue : ICARD, Physics Department, North Bengal University (NBU)**

**[LINK FOR ABSTRACT SUBMISSION](#)**

**NO REGISTRATION FEE**

**Major Topics:** Classical and Quantum gravity ; Compact Objects; Early and Late Universe: Modified gravity; DM and DE; Black Holes, Gravitational Waves; Observational cosmology; AI Applications in Astronomy.

**ABSTRACT SUBMISSION DEADLINE**

**20TH APRIL, 2025**

**INTIMATION TO SHORTLISTED SPEAKERS**

**30TH APRIL, 2025**

**Limited travel support for few PhD students and Post Doctoral fellows**

## INVITED SPEAKERS (TENTATIVE)

Prof. R. Srianand, Director, IUCAA, Pune (Inaugural Speaker)

Prof. Ranjeev Misra, IUCAA, Pune

Prof. Kanak Saha, IUCAA, Pune

Prof. Parampreet Singh, Louisiana SU, USA

Dr. Kinjlak Lochan, IISER, Mohali

Prof. Manjari Bagchi, IISc, Chennai

Prof. Rajesh Nayak, IISER, Kolkata

Dr. Sumanta Chakraborty, IACS Kolkata

Dr. Dawood Kothawala, IIT, Madras

Prof. Sunil D. Maharaj, UKZN, South Africa

Dr. Arman Tursunov, MPI, Bonn

Prof. Naresh Dadhich, IUCAA, Pune

Prof. Ajit Kembhavi, IUCAA, Pune

Prof. Sanjeev Dhurandhar, IUCAA, Pune

Prof. Samir Mathur, Ohio State university

Prof. Archana Pai, IIT Bombay

Prof. Narayan Banerjee, IISER, Kolkata (Retd.)

Prof. Aroonkumar Beesham, South Africa

Prof. Sumit R. Das, University of Kentucky, USA

Dr. Suvodip Mukherjee, TIFR, Mumbai

Dr. Sudan Hansraj, UKZN, South Africa

Dr. Megan Govender, South Africa

Dr. Shasvath Kapadia, IUCAA, Pune

## ORGANIZING COMMITTEE

**IUCAA Coordinator:** Prof. Kanak Saha

### CONVENORS

**Prof. Bikash Ch. Paul, Coordinator, ICARD, NBU**

**Dr. Ranjan Sharma, Coordinator, ICARD, CBPBU**

**Dr. Sanjeev Kalita, Coordinator, ICARD, Gauhati University**

**Dr. Shyam Das, Coordinator, ICARD, Malda College**

### SCIENTIFIC ORGANIZING COMMITTEE (SOC)

Prof. Ranjeev Misra, IUCAA, Pune

Prof. Kanak Saha, IUCAA, Pune

Prof. Sunil D. Maharaj, ACRU, South Africa

Prof. Banibrata Mukhopadhyay, IISc, Bengaluru

Prof. Naresh Dadhich, IUCAA, Pune

Prof. Ajit Kembhavi, IUCAA, Pune

Prof. S. Dhurandhar, IUCAA, Pune

Prof. Parampreet Singh, USA

Prof. Dawood Kothawala, IIT, Chennai

Prof. Aroonkumar Beesham, South Africa

Prof. Bikash Ch. Paul, NBU

### LOCAL ORGANIZING COMMITTEE (LOC)

Prof. Bikash Ch. Paul, ICARD, NBU

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Dr. Sanjeev Kalita, ICARD Gauhati University

Dr. Shyam Das, ICARD, Malda College

Dr. Rajat Kumar Dey, HOD, Physics Department, NBU

Dr. Sujay Kr. Biswas, Mathematics Department, NBU

Dr. Tamal Sarkar, HECRR, NBU

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[sanjeev@gauhati.ac.in](mailto:sanjeev@gauhati.ac.in); [dasshyam321@gmail.com](mailto:dasshyam321@gmail.com)

**Contact:** [icardphy@nbu.ac.in](mailto:icardphy@nbu.ac.in)

**For Details please visit:** [www.nbu.ac.in](http://www.nbu.ac.in)

# Brochure



## INTERNATIONAL MEETING ON RELATIVISTIC ASTROPHYSICS AND COSMOLOGY: EMERGING AREAS

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**June 9 - 11, 2025**

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### THEME OF THE CONFERENCE

Relativistic astrophysics and cosmology have recently seen tremendous progress -thanks to advances like discovery of accelerating universe and gravitational waves. On theoretical side, we still have unsettled problems, such as black hole physics, nature of compact objects, quantum gravity and dark universe. The meeting is an initiative of inter-ICARD activities. Four ICARDs from the North Eastern (NE) Region of India have joined to propose an International Meeting with their common research interests in the fields of astronomy, astrophysics and cosmology. The motivation is to bring together active scientists from IUCAA and abroad and to discuss frontiers of these fields for exchanging ideas between young researchers and faculty members of the NE region. The required funding, facilities and eminent Scientists from IUCAA, active scientists (National and International) in the Conference will be helpful for the researchers and young faculties of NE region to expose them with the advancement of knowledge and exchange of ideas. The recent developments in theoretical and observational aspects of relativistic astrophysics and cosmology will be discussed. It will give an opportunity to develop collaboration in the interface of the modern investigations pushing up the horizon of research which might open up new avenues for research in general relativity and beyond.

### SUB -THEME

**CLASSICAL AND QUANTUM GRAVITY, COMPACT OBJECTS, EARLY AND LATE UNIVERSE: MODIFIED GRAVITY, DM AND DE, BLACK HOLES, GRAVITATIONAL WAVES, OBSERVATIONAL COSMOLOGY  
AI APPLICATIONS IN ASTRONOMY**



## ABOUT INTER-UNIVERSITY CENTRE FOR ASTRONOMY AND ASTROPHYSICS (IUCAA), PUNE

The Inter-University Centre for Astronomy and Astrophysics (IUCAA) is an autonomous institution set up by the University Grants Commission (UGC) of India to promote the nucleation and growth of active groups in astronomy and astrophysics at Indian universities. IUCAA aims to be a centre of excellence within the university sector for teaching, research, and development in astronomy and astrophysics. IUCAA's activities fall under two broad programmes: core academic programmes and visitor academic programmes. Core academic programmes include basic research, the PhD programme, advanced research workshops and schools, the giant metre-wave radio telescope and guest observer programmes. Visitor academic programmes include the visitor and associates programme, refresher courses for teachers and helping the nucleation and growth of astronomy and astrophysics at Indian universities.

## ABOUT IUCAA CENTRE FOR ASTRONOMY RESEARCH AND DEVELOPMENT (ICARD) AT FOUR REGIONS

- IUCAA Centre for Astronomy Research and Development (ICARD) at North Bengal University (NBU) is part of a collaborative initiative by the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, to promote and facilitate research in astronomy, astrophysics, and cosmology in universities across India. In astrophysics and cosmology a total of 15 Ph. D. came out in the Department of Physics since 2000 using the facilities of ICARD. A number of M. Sc. Students from different universities did internship. At present there are eight in house scholars working for their Ph. D. degree and using the facilities of ICARD. Eminent Astrophysicists and Cosmologists visit the Centre from IUCAA and other institutes in India and Abroad. ICARD has a vibrant visiting program and organize seminar/symposium/Group discussion/school time to time.
- ICARD, CBPBU, West Bengal, is also part of the initiative by IUCAA, Pune. Every year, this ICARD organize workshops, training programs, and seminars to enhance the research potential of faculty, researchers, and students.
- ICARD, Gauhati University (GU) is part of the nationwide initiative by IUCAA, Pune. It holds frequent workshops/schools/meetings at various levels.
- ICARD, Malda College was formally established on 1st November 2024, with the objective of promoting research and development in astronomy, astrophysics, and cosmology.





## INVITED SPEAKERS (TENTATIVE)



- Prof. R. Srikanth, Director, IUCAA, Pune (Inaugural Speaker)
- Prof. Ranjeev Misra, Faculty and Dean (Visiting Programmes), IUCAA
- Prof. Kanak Saha, IUCAA, Pune
- Prof. Parampreet Singh, Louisiana SU, USA
- Dr. Kinjalk Lochan, IISER, Mohali
- Prof. Manjari Bagchi, IMSc, Chennai
- Prof. Rajesh Nayak, IISER, Kolkata
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- Dr. Suvodip Mukherjee, TIFR, Mumbai
- Dr. Sudan Hansraj, UKZN, South Africa
- Dr. Megan Govender, South Africa
- Dr. Shasvath Kapadia, IUCAA, Pune



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## ORGANIZING COMMITTEE

### CONVENORS

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Coordinator, ICARD, NBU  
Dr. Ranjan Sharma, Coordinator, ICARD, CBPBU  
Dr. Sanjeev Kalita, Coordinator, ICARD, Gauhati University  
Dr. Shyam Das, Coordinator, ICARD, Malda College

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Dr. Rajat Kumar Dey, HOD, Physics Department, NBU  
Dr. Sujay Kr. Biswas, Mathematics Department, NBU  
Dr. Tamal Sarkar, HECRRC, NBU



## HOW TO REACH NORTH BENGAL UNIVERSITY, SILIGURI, DARJEELING

**BY TRAIN:** Siliguri is well connected with the other parts of India. From Kolkata one can reach New Jalpaiguri Junction(NJP), served by numerous trains such as the Vande Bharat Express, Shatabdi Express, Kanchenjunga Express, Teesta Torsa Express, and Darjeeling Mail, to name a few.

**BY ROAD:** Siliguri is 550 Kms away from Kolkata. The Asian Highway passes through the Siliguri. NBSTC, SBSTC, CSTC buses, and many privately operated buses ply between Kolkata and Siliguri. The buses, leaving from the Shahid Minar and the Ultadanga bus terminuses take about eight hours to complete the journey. The university is located adjacent to Asian Highway.

**BY Flight:** Bagdogra Airport (IXB) is an airport serving the city of Siliguri in West Bengal, India. It is located in Bagdogra, Darjeeling, 4 kms from the NBU.

### ACCOMMODATION

Limited accommodation available at University Guest House on shared basis from 8th June (evening) to 11th June (morning), 2025 for Research scholars and PDFs. For Other participants, we may book Hotels on request. Please send your booking request at (Email: [bcpaul@nbu.ac.in](mailto:bcpaul@nbu.ac.in)). The booking cost and hotel charges will be informed by return email.

### NOTE

- *Partial travel assistance in Sleeper class train fare covering the shortest route will be provided between your nearest station and New Jalpaiguri Junction (NJP) depending on the fund availability.*
- *In June, Siliguri experiences warm, humid weather with temperatures ranging from 25°C to 35°C. Occasional rainfall and thunderstorms occur due to the monsoon season, making it cooler and more humid.*

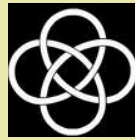
### IMPORTANT CONTACT(S)

Emails: [bcpaul@nbu.ac.in](mailto:bcpaul@nbu.ac.in); [rsharma@associates.iucaa.in](mailto:rsharma@associates.iucaa.in); [dashyam321@gmail.com](mailto:dashyam321@gmail.com); [sanjeev@gauhati.ac.in](mailto:sanjeev@gauhati.ac.in)

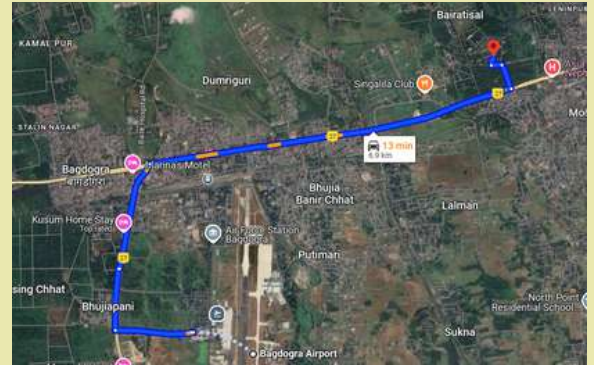
Contact(s): 94345399881, 9832096288, 9832500823, 9864087304



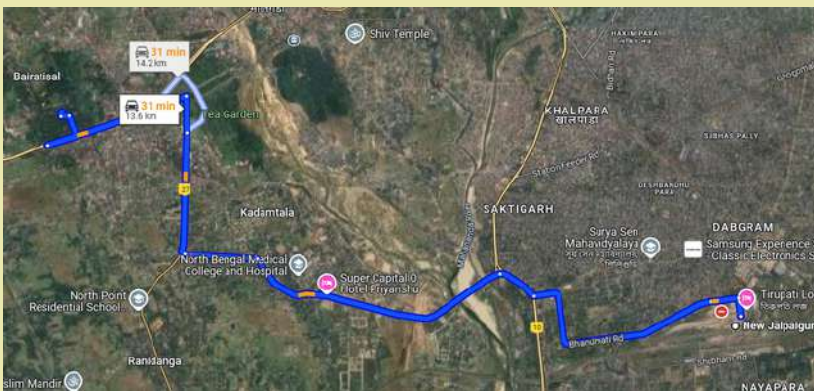




## ROUTE TO REACH NBU



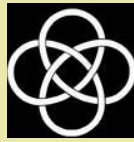
From Bagdogra Airport



From New Jalpaiguri Junction(NJP) Railway Station







## PLACES OF INTEREST



- **Darjeeling** is a town in India's West Bengal state, in the Himalayan foothills. It is located at a distance of 62 kms from NBU.



- **Sevoke** (also Sevak or Sivok) is a small town near Siliguri in the Darjeeling district of West Bengal state of India near the border with Sikkim state. Situated in Dooars, Sevoke lies on the bank of River Teesta and has two bridges - namely Coronation Bridge and Sevoke Railway Bridge over it. Sevoke is 27 kilometres from NBU.

- **Mirik** is a small town and a Notified Area of Darjeeling district in the state of West Bengal, India. It is the headquarters of the Mirik subdivision. The name Mirik comes from the Lepcha words Mir-Yok meaning "place burnt by fire". Mirik is 48 kilometres from NBU.



- **Kurseong** Located at an altitude of 1,482.55 metres (4,864.0 ft) and 35 kilometres from NBU.

- **Bengal Safari Park**, situated within the verdant forested area of Mahananda Wildlife Sanctuary is the first animal safari park of North Bengal region. It is located on the Sevoke road at a distance of 16kms from NBU.



- **Bagrakote's stunning new flyover** in the heart of Dooars is turning heads with its innovative design and engineering brilliance. Located on NH-717A, this architectural marvel connects Dooars and Sikkim via Nimbong, Kafer and Pedong. Located at 40kms from NBU.

