



April-June 2026

Table of Contents

03	Letter from the Editor
04	From the Dean’s Desk
05	Research Spotlight The Quantum and the Cosmos: Listening to the Universe’s Oldest Stories
10	Nurturing Scientific Exchange Events & Activities
13	Leading with Excellence • Faculty Awards and Distinctions • Grants and Funding • Conferences, Workshops, and Other Accolades • Memberships and Editorial Positions • New Joinees at SoNS
19	The Trailblazing Next Generation • Student Awards and Laurels • Grants, Fellowships, and Internships • Oral Presentations • Poster Presentations and Awards • Congratulations to our Ph.D. Awardees!
24	Alumni Achievements • UG Alumni: Higher Education and Career Placements • Ph.D. Alumni: Career Placements
27	Enhancing the Corpus of Scientific Knowledge Science in the Public Sphere • Sustainable AI: A World Environment Day Perspective
29	Distinguished Guests, Talks and lecture series
31	Selected Publications
34	Glimpses from Convocation 2026



Letter from the Editor

Srijita Banerjee

Academic Associate,
School of Natural Sciences



Dear Readers,

Welcome to the April–June 2026 edition of ***Manthan***, the quarterly newsletter of the School of Natural Sciences.

Our new name draws inspiration from the Sanskrit word ***Manthan***, meaning churning—a process of reflection, exploration, and the coming together of diverse perspectives to generate new understanding. It is through this process of reflection and exploration that observations evolve into ideas, ideas lead to discoveries, and discoveries deepen our understanding of the world.

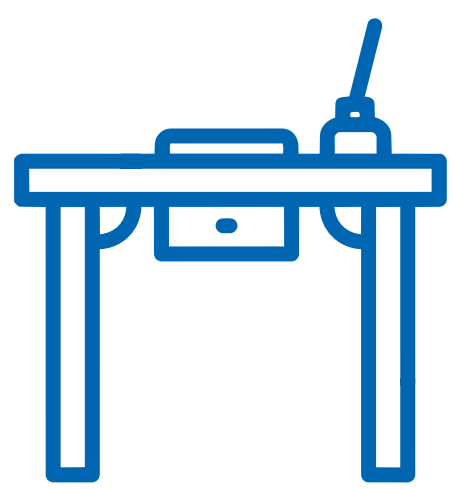
Every quarter offers a glimpse into the many ways science is practised, shared, and celebrated across the School of Natural Sciences. As you browse through these pages, you will discover the diverse research, achievements, and activities that reflect our vibrant academic community.

The cover photograph of this issue features the stunning Whirlpool Galaxy, captured by students of ***Celestia Explora***, the Astronomy Society of SNU. Whether we are studying distant galaxies, exploring the mysteries of dark matter, developing sustainable materials, or understanding the complexities of living systems, the pursuit of knowledge continues to expand the frontiers of our understanding.

In this issue, we also shine a spotlight on the ***High Energy Physics and Cosmology Group***, whose research explores some of the most fundamental questions about our universe, from primordial gravitational waves to the nature of dark matter. A university is, above all, a community of curious minds, and this newsletter offers a snapshot of ours in action. As always, this publication is a collective effort. My sincere thanks to the faculty, students, staff, and contributors who shared their achievements and stories with us.

I hope you enjoy reading this edition.

Photo Credits - Rachit Anand, Piyush Shewani, Swathi Ganesh, Jothi Ram, Kavya S.M., Rahul Dhyani, Dibyendu Chakraborty, and Syed Adil Pasha



From the Dean's Desk

The pursuit of natural sciences is fundamentally an act of optimism. As I look back on the months of April, May, and June 2026, I am filled with immense pride in how our community at the School of Natural Sciences (SNS) exemplifies this spirit every day. This quarter's newsletter showcases the remarkable dual nature of our school: we are simultaneously looking out into the vastness of space and looking inward at the microscopic mechanics of life.

Our faculty, students, and researchers continue to push the boundaries of knowledge while addressing some of the most important scientific questions of our time across disciplines.

As science increasingly tackles pressing global challenges—from climate change and sustainability to health, energy, and emerging technologies—there is greater need than ever for rigorous inquiry, evidence-based thinking, and collaboration. The accomplishments chronicled in these pages demonstrate how our community is contributing to this greater mission through discovery, innovation, and service.

Our students continue to be one of our greatest strengths. Their accomplishments celebrated in this issue, including fellowships, travel grants, and research internships to conference presentations and admissions to world-class universities are a testament to both their talent and their commitment to excellence. They also point to the strong academic and research infrastructure that supports our students as they move forward in their academic and professional endeavours.

Furthermore, the impressive list of research grants, fellowships, and international collaborations won by our faculty and research scholars this quarter demonstrates that our research ecosystem is not just vibrant, but is flourishing and increasingly recognized across the world.

This does not happen in a vacuum. Workshops, international conferences, collaborations with industry, distinguished lectures, and vibrant student-led activities foster an environment where ideas cross-fertilize and innovation flourishes. These interactions enrich our academic community and provide opportunities for cross-disciplinary collaboration.

Heartiest congratulations to all the faculty members, research scholars, students and staff who find a place in this issue. It is your commitment to excellence, your endurance in difficult circumstances and your passion for discovery that really drive our School forward. Let us continue to question, to discover, and to explore.



Prof. Sanjeev Galande

Pro-VC & Dean, School of
Natural Sciences



Research Spotlight

The Quantum and the Cosmos: Listening to the Universe's Oldest Stories

- Srijita Banerjee

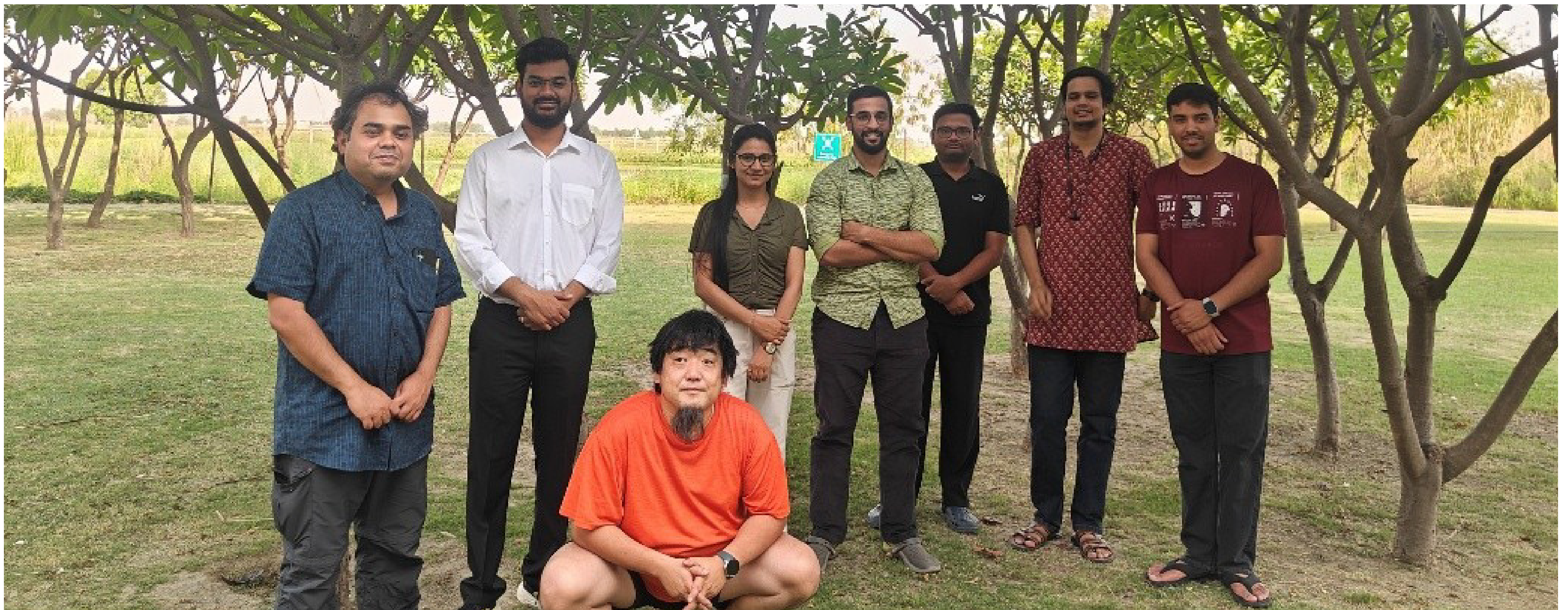
In **1964**, radio astronomers Arno Penzias and Robert Wilson were plagued by a persistent, annoying hiss in their giant horn antenna. They tried everything to fix it, even shooing away pigeons roosting inside and cleaning up their droppings. Yet the hiss remained. What they had accidentally discovered was the **Cosmic Microwave Background (CMB)**, the fading afterglow of the **Big Bang**.

That annoying hiss was the oldest light in the universe, forever changing cosmology.



The **High Energy Physics and Cosmology Group** at Shiv Nadar University, led by **Dr. Arindam Chatterjee** and **Dr. Kenji Nishiwaki**, is looking far beyond that ancient light, searching for even older whispers from the dawn of time. Their work bridges the mind-bending physics of the incredibly small with the vastness of the cosmos.

As Dr. Arindam Chatterjee notes, "The cosmos is not just a vast empty expanse; it is a dynamic laboratory where the smallest quantum events shape the largest structures we observe." Let us take a journey through this cosmic laboratory, seen through the eyes of these researchers.

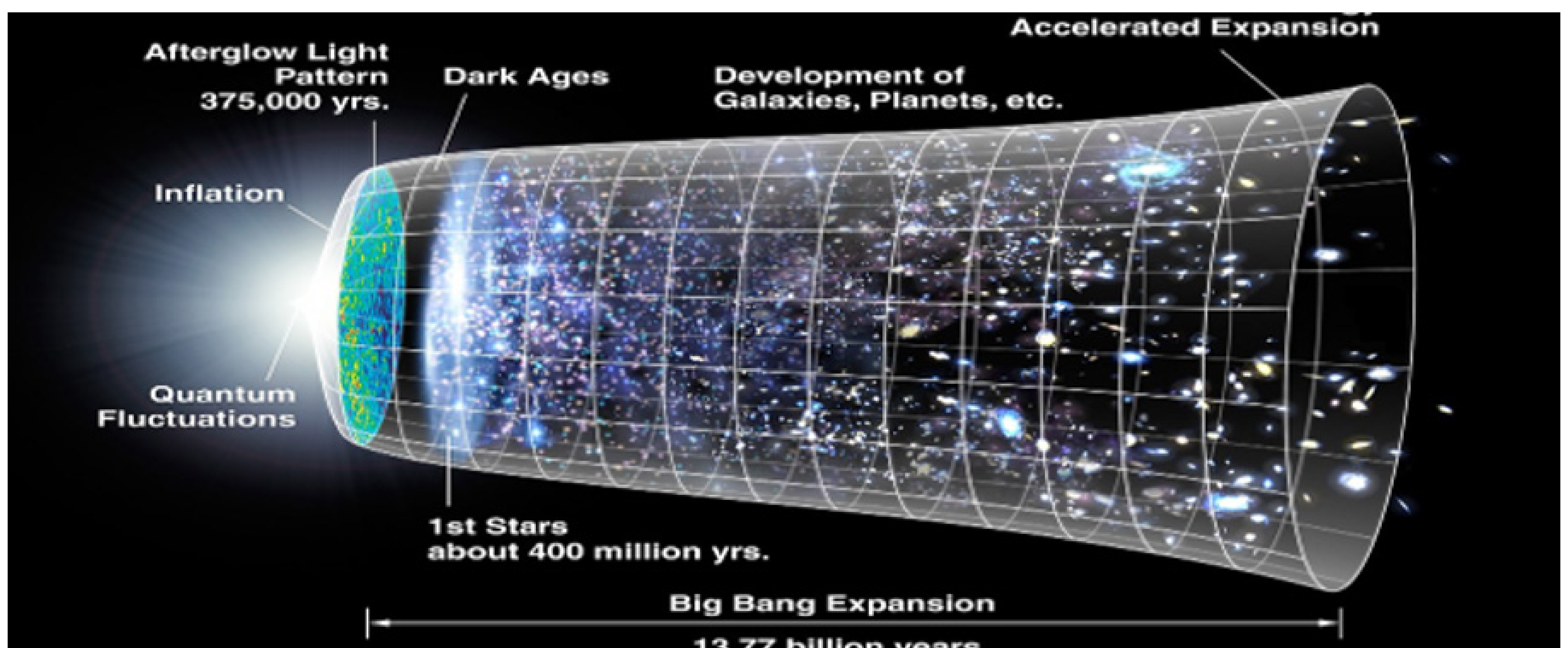


Dr. Arindam Chatterjee and Dr. Kenji Nishiwaki with the HEP- Cosmo Group

Listening to the Echoes of the Infant Universe

In 2015, the **LIGO** experiment made history by detecting gravitational waves from colliding black holes, confirming a century-old prediction by Einstein. But LIGO heard the echoes of a recent cosmic crash. Dr. Chatterjee and his collaborators are hunting for something far older: primordial gravitational waves from when the universe was less than a trillionth of a second old.

According to modern cosmology, the universe underwent a brief, extraordinary phase called **inflation**, where space expanded unbelievably fast. Imagine drawing dots on a balloon and inflating it rapidly. The dots are not moving across the balloon; the balloon itself stretches, carrying everything apart. During this wild expansion, microscopic quantum fluctuations in the energy field were stretched to enormous scales. These created tiny variations in the density of the early universe, which eventually acted as gravitational seeds around which matter could clump to form galaxies.



This timeline traces the Universe's journey across 13.77 billion years, beginning with the earliest observable instant, when a brief but dramatic phase of inflation caused space itself to expand at an astonishing rate

Photo credit: NASA / WMAP Science Team

Inflation should also have disturbed spacetime itself, producing primordial gravitational waves.

The researchers study a special cosmic landscape called an inflection-point potential. Imagine riding a bicycle downhill and suddenly hitting an almost flat patch.

Your speed changes in a complicated way. Similarly, the inflation field evolves uniquely near this flat patch, producing observable **gravitational waves** and a second population of "secondary" waves.

These secondary waves are generated later, when the large density fluctuations interact violently with one another. These massive clumps of energy act as powerful sources, shaking the fabric of spacetime and creating a new, distinct spectrum of gravitational waves. Much like how two massive ocean swells colliding create a complex pattern of surface ripples, the interaction of these density fluctuations creates gravitational waves that are distinct from the primordial ones.

Future space observatories like LISA and DECIGO might one day tune into these frequencies, hearing the very first birth cries of the cosmos.

Probing Dark Matter in the Universe's Baby Picture

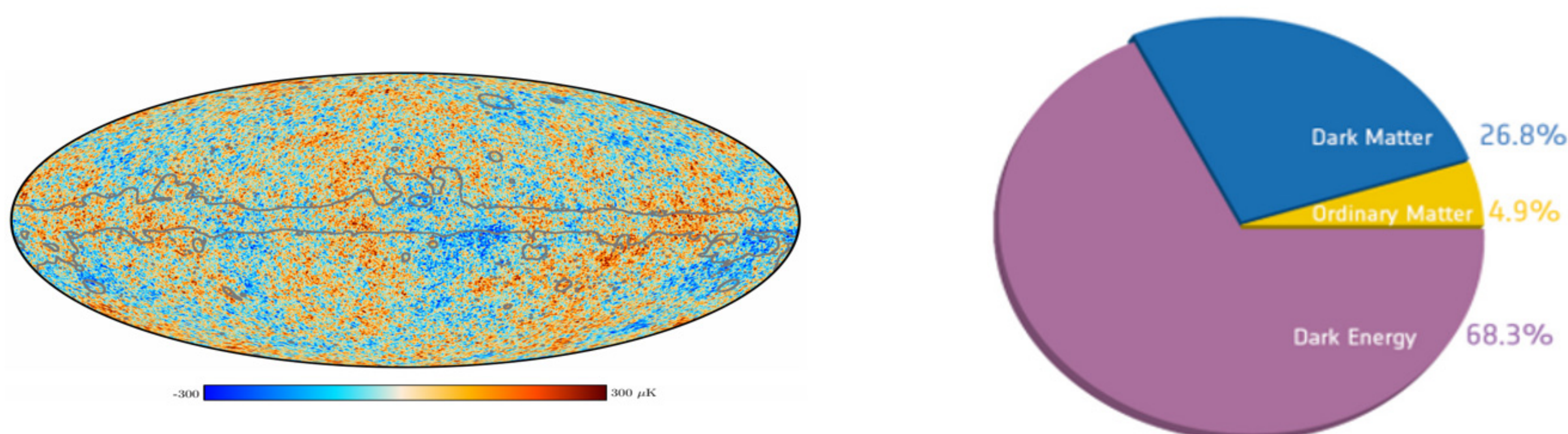
The CMB photons not only reveal a baby picture of the universe; it is a map hiding clues about dark matter. We know that visible matter makes up only about 5% of the cosmic energy budget. About 26% is dark matter, an invisible scaffold that shapes galaxies. But does dark matter interact with ordinary matter through anything other than gravity?

Around the world, experiments like XENONnT and LUX-ZEPLIN hunt for dark matter deep underground, mostly looking for it to bump into heavy atomic nuclei. Dr. Chatterjee asked a different question: what if dark matter is very light?

If so, it would barely nudge a heavy nucleus. It would, however, interact effectively with lightweight electrons.

By studying data from the **European Space Agency's Planck satellite**, which mapped the CMB with extraordinary precision, the researchers found that dark matter interacting with electrons in the early universe would leave distinct fingerprints. If dark matter annihilated or scattered off electrons, it would act like a cosmic drag force, suppressing the growth of small cosmic structures and altering the CMB's temperature patterns. Their work shows that both annihilation and scattering must be studied together, shifting previous constraints by up to 13 percent.

As Dr. Kenji Nishiwaki explains, "Precision is the bridge between theoretical possibilities and experimental realities. A tiny deviation in our calculations can either open a new window to fundamental physics or close it entirely."



These images show the most precise map of the Cosmic Microwave Background, the faint afterglow of the Big Bang, captured by the Planck space telescope (above). Everything we see- the stars, planets, galaxies, makes up less than 5% of the Universe, with the rest hidden in dark matter and dark energy (below). Photo credit: European Space Agency (Planck mission)

Quantum Whispers in the Dark: The Hunt for Higgsino Dark Matter

While the CMB is particularly sensitive to light dark matter interactions, underground labs are hunting for heavier candidates.

One leading candidate comes from supersymmetry, a theory suggesting every known particle has a heavier "superpartner." A prime candidate is the **neutralino**, a quantum mixture of particles including the Higgsino.

In 2012, the Large Hadron Collider at CERN discovered the **Higgs boson**, the particle responsible for giving other particles mass. Supersymmetry suggests that Higgsino-like dark matter should also interact with the Higgs boson. However, for a nearly pure Higgsino, this interaction is incredibly tiny at the simplest level of calculation. It is like trying to tune into a radio station with barely any signal overlap.

But quantum mechanics is rarely simple. Empty space seethes with temporary quantum fluctuations, where virtual particles pop in and out of existence. These create "radiative corrections" through quantum loops. The group calculated how loops involving gauge bosons, charginos, and squarks modify the Higgsino-Higgs interaction. Because the original signal is so tiny, these quantum corrections almost double the predicted scattering rate. A faint whisper becomes a detectable shout. This forces a major shift in our understanding, tightening the limits on the Higgsino mass by roughly 60 to 100 GeV.

Dr. Chatterjee reflects on this finding: "When we include the contributions from the quantum loops, what seemed like an invisible particle may step into the light of detectability."

Hidden Dimensions and Neutrino Clues

Sometimes physics advances not by building bigger machines, but by measuring tiny deviations. At Fermilab in the US, the Muon g-2 experiment recently made a precision measurement of the muon's magnetic moment. Interpreting this result, however, has become a complex puzzle. While comparisons with one theoretical method suggest a discrepancy that hints at unknown forces, updated calculations using lattice QCD show agreement with the experimental value at the 1-sigma level. Resolving this tension between different theoretical predictions is now essential to determining if the Standard Model is truly incomplete.

Could a new force between muons and tau particles explain this? The group explored this by extending the idea into five dimensions.

While we experience three dimensions of space and one of time, string theory suggests extra dimensions might exist, curled up so tightly we cannot see them. When particles move through these extra dimensions, they appear as a whole series of heavier copies called Kaluza-Klein modes. Imagine plucking a guitar string; it vibrates not only at a main frequency but also at higher harmonics.

The researchers investigated how the Deep Underground Neutrino Experiment (DUNE), currently under construction, could detect these extra-dimensional particles through neutrino-electron scattering. They discovered fascinating "blind spots" where different interaction pathways cancel each other out, much like noise-canceling headphones. Even with these blind spots, DUNE's high precision could probe vast regions of unexplored physics, potentially shedding light on fundamental interactions beyond the Standard Model."

Dr. Nishiwaki notes, "Nature often hides its deepest secrets not in the unreachable extremes, but in the subtle, minute deviations from what we consider normal. Looking for these deviations is how we find the cracks in our current understanding."



Dr. Arindam Chatterjee in discussion with a research scholar from the HEP-Cosmology Group.



Dr. Nishiwaki (left) with Dr. Chatterjee

Darkness and Light Intertwined: The Z4 Scotogenic Model

Modern physics faces two enormous mysteries: the nature of dark matter, and why neutrinos have such incredibly tiny masses.

Experiments like Super-Kamiokande in Japan proved that neutrinos oscillate and therefore must have mass, but the Standard Model cannot explain why they are so light. What if these two puzzles are connected?

The group explored the "Z4 scotogenic model," where the word scotogenic means "born from darkness." In this model, neutrino masses are not generated directly by the Higgs field, but indirectly through quantum loops involving dark sector particles. The model relies on a four-step clock symmetry (Z4), which protects the lightest new particle from decaying and thereby makes it a dark matter candidate.

A central feature is the "Higgs portal." The ordinary Higgs field mixes with a new scalar particle, creating a hidden doorway between the visible universe and the dark sector.

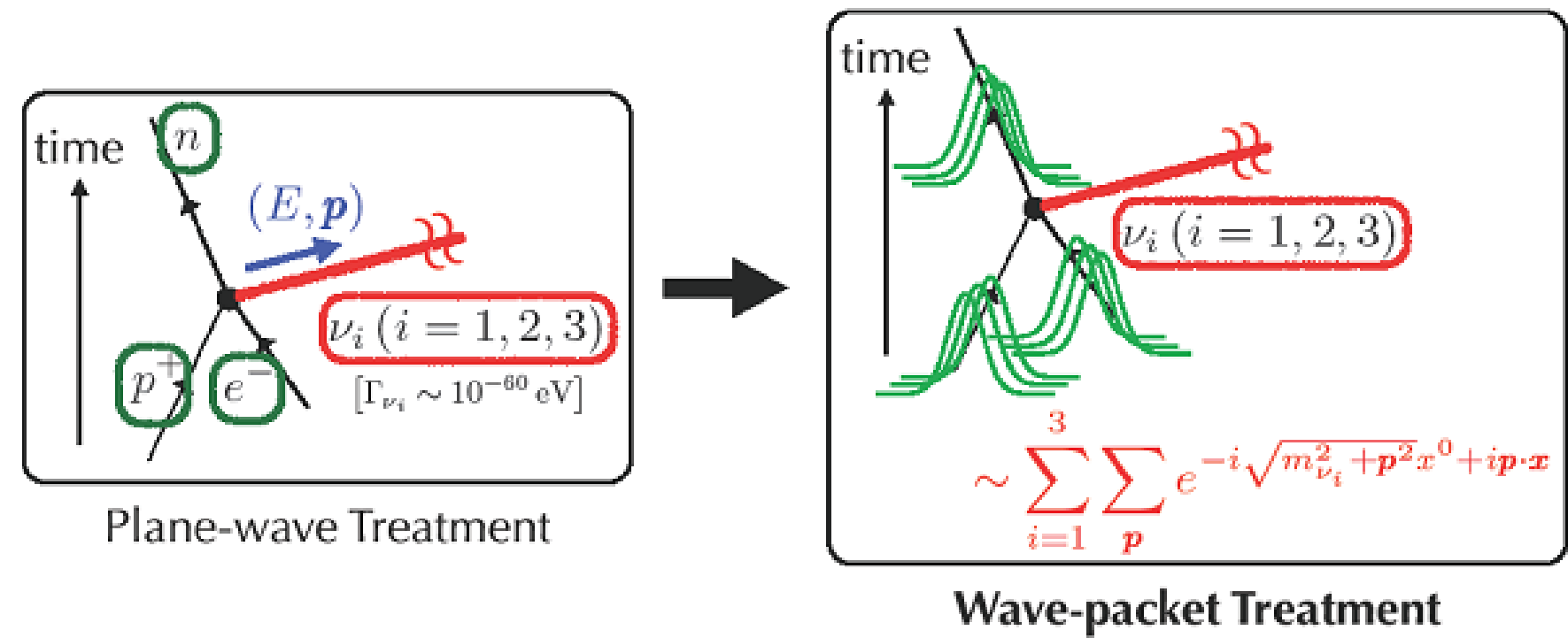
The study shows that dark matter created in the hot early universe could naturally survive to today through processes like coannihilation, where particles with similar masses annihilate together. This elegant framework ties the origin of neutrino mass directly to the stability of dark matter.

Rethinking the Particle Ideal: Wave-Packet Effects

Sometimes the real mystery is not what particles exist, but how we mathematically describe them. For decades, physicists have been puzzled by isospin anomalies in vector meson decays.

Experiments showed that certain particles decayed at drastically different rates than theory predicted, reaching a staggering 9.5 sigma discrepancy. In particle physics, a 5-sigma difference is considered a definitive discovery, so this was a huge problem.

The group proposed a brilliant solution rooted in a basic quantum truth: real particles are not perfectly ideal mathematical objects. Most calculations use the plane-wave approximation, treating particles as infinitely extended waves with perfectly defined momentum. However, the researchers showed that treating these decaying mesons as localized "wave packets" naturally resolves the anomaly. It is a reminder that our mathematical shortcuts must eventually yield to the physical reality of how particles actually exist in space and time.

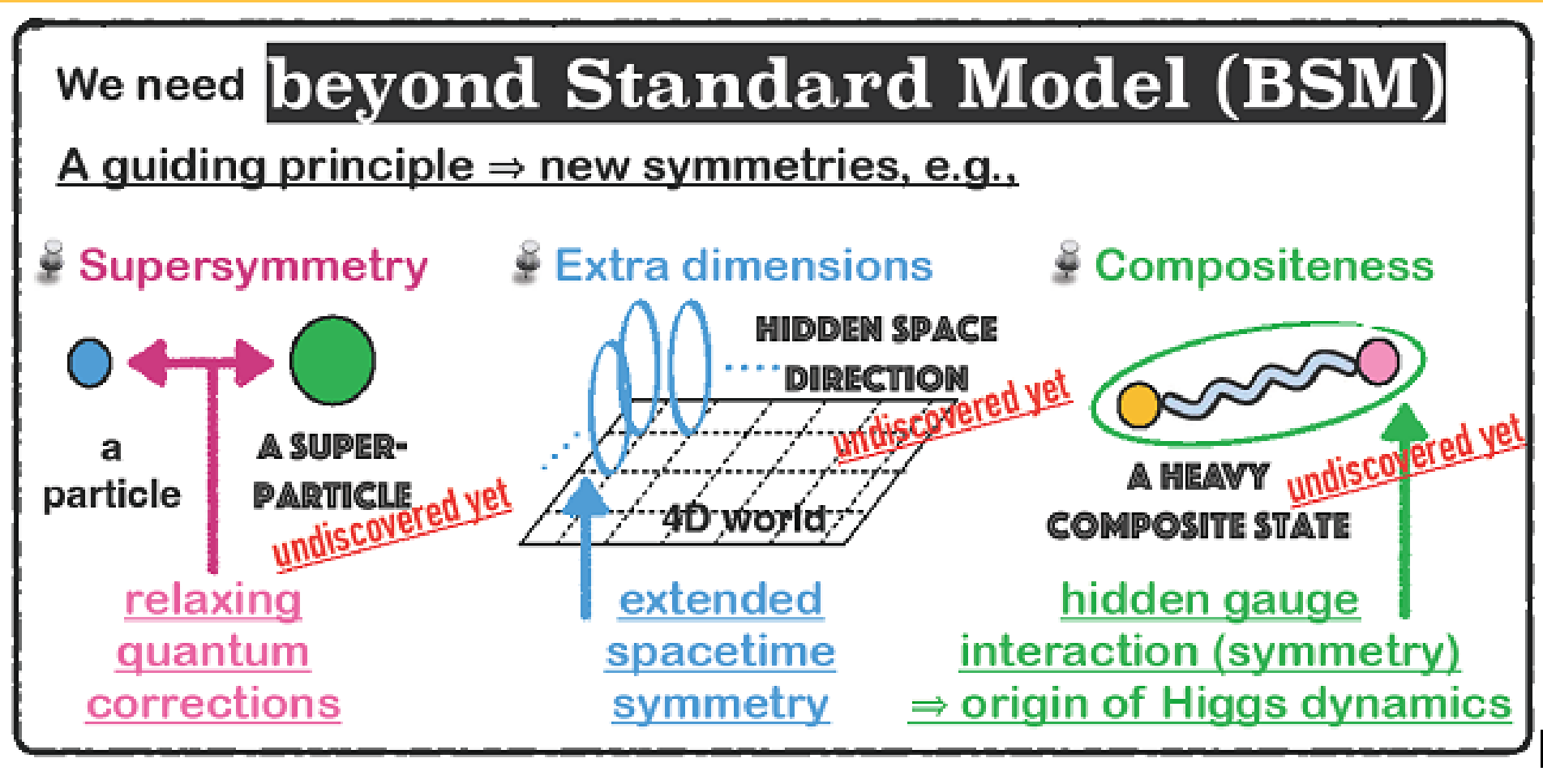


The Bigger Picture

From the primordial ripples of the infant universe to the quantum loops of dark matter, and from hidden extra dimensions to the mathematical nuances of wave packets, the work of Dr. Chatterjee and Dr. Nishiwaki's group reveals a universe of breathtaking complexity. Their research demonstrates that the cosmos is not a static stage, but a vibrant, interconnected system where the smallest quantum whisper can echo across billions of years.

As we build more sensitive detectors and peer further into the cosmic microwave background, we are listening to the universe's oldest stories and decoding its deepest secrets. The quest for understanding is far from over, but each theoretical insight brings us closer to grasping the ultimate reality.

In addition to research, the group actively contributes to the scientific community. In 2023, they organized a Workshop on Particle Physics, Astrophysics and Cosmology, which brought together researchers to discuss current developments across these fields.





The 2023 Workshop on Particle Physics, Astrophysics and Cosmology organised by the HEP-Cosmo Group at Shiv Nadar University

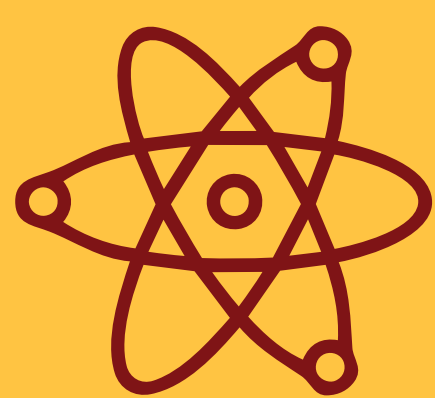
Such interactions are essential for building connections between different areas of study and for shaping future directions.

Ultimately, the goal is not only to discover new phenomena but also to understand how different pieces of physics fit together. Because before we can interpret what we observe, we must know what questions to ask and how to ask them.

As Satyendra Nath Bose once reflected, "The true laboratory is the mind, where behind illusions we uncover the laws of truth." And it is in that quiet act of uncovering, step by step, that the universe reveals both its structure and its beauty.



A detailed telescopic view of the Moon, revealing its ancient plains, bright highlands, and impact-sculpted surface.



Nurturing Scientific Exchange

|Events and Activities

The Department of Mathematics, School of Natural Sciences, hosted the international conference "2026 Workshop on Matrices and Operators" from 25-28 June 2026 at Shiv Nadar University, Delhi-NCR. The conference aimed to promote research and collaboration among scholars working in matrix theory, operator theory, operator algebras, quantum information theory, and related areas. It received financial support from the National Board for Higher Mathematics (NBHM)

Participants presented their latest research findings, shared emerging challenges and open problems, and engaged in discussions that fostered collaboration and mutual learning. Through dialogue and the exchange of ideas, the workshop featured 38 research talks, contributing to the continued growth and advancement of the research community.

Annual International Conference on Matrices and Operators (25-28 June 2026)



Organizing Committee: Sudip R. Bhuia, Dipti Dubey, Priyanka Grover, Amber Habib, Sneha Lata, T.S.S.R.K. Rao, and A. Satyanarayana Reddy.

Inauguration of the Femtosecond Laser Laboratory



The School of Natural Sciences at Shiv Nadar University has established a new Femtosecond Laser Laboratory, equipped with a state-of-the-art Transient Absorption Spectroscopy (TAS) system. The facility enables researchers to investigate how materials respond to light on femtosecond timescales—one quadrillionth of a second. This capability will provide valuable insights into the fundamental mechanisms of energy transfer, chemical reactions, and the behaviour of molecules, nanomaterials, and semiconductors.

By facilitating the study of ultrafast light-matter interactions, the laboratory opens new avenues for research across chemistry, physics, materials science, and biology, significantly strengthening the University's advanced research infrastructure.

Shiv Nadar University (SNU) Day 2026



1. Vice Chancellor's Award:

- Chinamy Desai (Physics)- Class of 2027
- V. Shiv Vale (Physics)- Class of 2028



2. Student of the Year:

- Shreyashi Manna (B.Sc. Research Physics)- Class of 2027
- Tiya Garg (B.Sc. Research - Chemistry)- Class of 2025

SNU Day was celebrated on 9 April 2026. The occasion celebrates shared journeys, achievements, and the collective spirit that unites the university community. Among the students from the School of Natural Sciences who were honoured on this occasion were:

3. Distinguished Alumni Award:



Sujit Deshmukh
(Physics)- Ph.D.
Class of 2020



Achal Awasthi
(Physics) – B.Sc.
Class of 2016

Poster Presentation by Final Year Undergraduate Students (28 April 2026)

The Department of Mathematics organized a Poster Presentation session for final year undergraduate students. The event provided a structured and interactive platform for students to present their project work, research ideas, and mathematical findings. Students showcased their posters before faculty members and peers, which was followed by engaging discussions and constructive feedback sessions.



Poster Presentation by Ph.D. Scholars (2 April 2026)



A poster presentation session was organized for the Ph.D. scholars of the Department of Mathematics. The scholars presented their ongoing research and interacted with faculty members and students, fostering meaningful academic discussion and research exchange within the department.

Celestia Explora, the student-run Astronomy club of the Department of Physics, organized a seminar titled “Astronomy using Polarized Light,” presented by Prof. Dipankar Bhattacharya from Ashoka University. The session provided students with a deeper understanding of astronomical phenomena and the application of polarized light in modern astrophysics.

Seminar on “Astronomy using Polarized Light



Collaboration Meeting with INCISE INFOTECH LIMITED (11 June 2026)



Prof. Alope Kanjilal organized a strategic meeting with INCISE Infotech Limited as part of the ARIA initiative. The discussion explored potential avenues for collaboration in the rapidly evolving field of semiconductors, with the goal of strengthening connections between academic research and industrial applications.



Leading with Excellence

Faculty Awards and Distinctions School of Natural Sciences Annual Awards

Faculty Honour for External Recognition - Prof. Subhabrata Sen & Dr. Tatini Rakshit

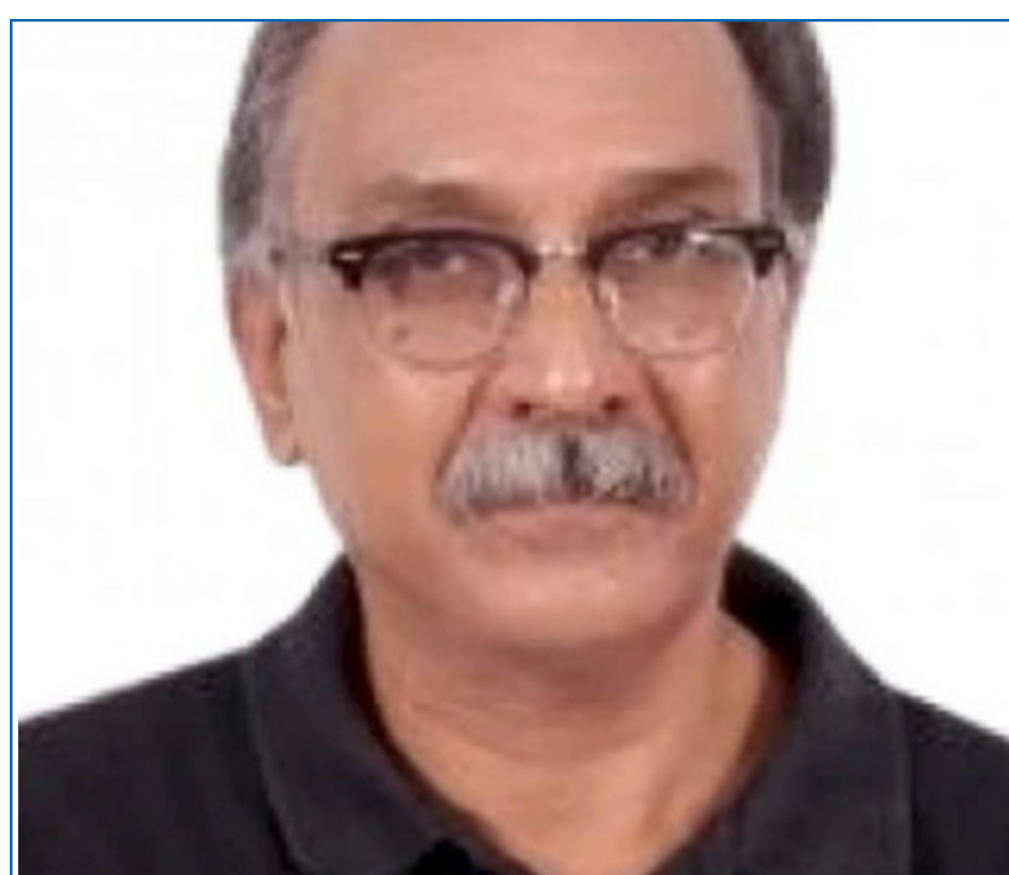


Research Excellence Award: Prof. Sajal K Ghosh, & Dr. Priyanka Grover



Teaching Excellence Award: Dr. Arindam Chatterjee, Dr. Pradip Kumar, Dr. Neelesh Dahanukar





Prof. Bimlesh Lochab

was conferred the Chartered Chemist (CCChem) designation by the Royal Society of Chemistry (RSC), UK in June 2026.



Dr. Rohini Garg

Selected as an Associate Fellow of the Indian National Science Academy (INSA) in May 2026.



Dr. Bappaditya Gole

Two artworks created for publications from his research group were featured on the journal covers of Organic Chemistry Frontiers and Chemical Communications.



Grants and Funding

- Dr. Kamalesh Kumari (PI)** was awarded funding under the Anusandhan National Research Foundation (ANRF) Prime Minister Early Career Research Grant Scheme for the project titled “Regulators of Membrane-Crumpling Exocytosis (Mem-CruX) and Their Dysfunction in Human Secretopathies.”
Duration: 2026-2028 | Total Grant Value: ₹65,00,000
- Dr. Siddiqui Md. Mujahuddin (PI)** was awarded funding under the Anusandhan National Research Foundation (ANRF) Prime Minister Early Career Research Grant Scheme for the project titled “Designing High-Performance Earth-Abundant Main Group Electrocatalysts for Hydrogen Generation.”
Duration: 29 May 2026 – 30 April 2029 | Total Funding: ₹68,17,440
- Dr. Naiwrit Karmodak (PI)** and Dr. Ashish Singha Deb (Co-PI) have been awarded a research grant from the Board of Research in Nuclear Sciences (BRNS) for the project titled “Theoretical Study for Understanding the Catalytic Hydrogenation of Complex Benzo-Crown Ether Systems of Different Ring Sizes.”
Duration: 11 May 2026 – 10 May 2029 | Total Funding: ₹31,76,800
- Dr. Subhajit Sarkar (PI)** was awarded funding under the Anusandhan National Research Foundation (ANRF) Prime Minister Early Career Research Grant Scheme for the project titled “Non-Markovian Dissipative Time Crystals in Nanoscale Quantum Devices: From Transport to Metrology.”
Date of Approval: 11 April 2026 | Total Budget Applied: ₹55,57,440
- Dr. Priyanka Grover** received a grant from ANRF to support the International Conference, “2026 Workshop on Matrices and Operators” (25th-28th June 2026).
- Dr. Samarendra Pratap Singh** received project support under a non-financial Memorandum of Understanding (MoU) with Genesa Lab, titled “Development of Printed Organic-Inorganic Hybrid Detectors for Heavy Metal Ion Contamination.”

Conferences, Workshops, and Other Accolades

- | | |
|---|--|
| <p>Dr. Binson Babu
Visited the Institute of Condensed Matter and Nanosciences (IMCN), Université catholique de Louvain (UCLouvain), Belgium, as a Visiting Professor. He was invited to speak on “Confined Water, Fast Ions, Flexible Power: Unraveling K Storage Mechanisms in $\text{Ti}_3\text{C}_2\text{T}_x\text{MXenes}$,” highlighting recent advances in MXene-based energy storage materials and their potassium-ion storage mechanisms.</p> | <p>Dr. Samarendra Pratap Singh
Delivered a talk on “Photothermal and Organic Semiconductor-Enabled Fully Printed Photosupercapacitors” at the 9th International Conference on AI, Nano, 3D (Bio)Printing, Intelligent Manufacturing and Automation (AI3D26), held from 7-9 July 2026 in Thessaloniki, Greece.</p> |
| <p>Dr. Priyanka Grover
Presented a talk titled “Distance problems for tuples of operators” at the National Symposium on Modern Mathematics and Applications: Algebra, Analysis, and Artificial Intelligence, SPS March Meeting 2026 (13-14 March 2026).</p> | <p>Dr. Subhra Sen Gupta</p> <ul style="list-style-type: none">Delivered a talk on “Quantum Chaos and the Nature of Eigenstates in Disordered Quantum Spin Systems and some Special Random Matrix Models” at the S.N. Bose National Centre for Basic Sciences (SNBNCBS), Kolkata, on 17 June 2026. |
| <p>Dr. Sumeet Pal Singh</p> <ul style="list-style-type: none">Delivered a talk on ‘Physics of Cells and Tissues’ at the Indian Institute of Science (IISc) Bangalore, on 16 April 2026.Delivered a seminar at the IRR Zebrafish Club, University of Edinburgh, on 28 April 2026.Presented a talk on ‘Innovation in Genetic Manipulation and Gene Therapy’ at the Indo-French Node “InFLiMeN” on 17 April 2026. | <ul style="list-style-type: none">Delivered a talk on “Theory of Spin-orientation on Correlated Thin Films - a Subtle Interplay between Strain and Multipole Coulomb Interactions” at the Indian Institute of Science Education and Research (IISER), Kolkata, on 24 June 2026. |

Dr. Geetanjali Chawla

Delivered a talk on ‘MicroRNA Pathways in Aging and Dietary Restriction’ at the IISc Bangalore–RNA India Meeting 2026, on 28 April 2026.

Prof. Parthapratiim Munshi

- Delivered a talk on ‘Flexible Organic Ferroelectrics as Piezoelectric Nano-generators and Memristors’ at the 2nd International Conference on Advance Chemical and Material Science (ACMS-2026), Jadavpur University, Kolkata, from 12–14 April 2026.
- Delivered a talk on ‘Translation of a Physicist’s Knowledge into the Domain of Chemical (and Biological) Sciences Research’ at the Summer Interns Meet, IISER Mohali, from 26–27 June 2026.

Dr. Tatini Rakshit

- Invited as a member of the Epigenetics Society by Professor Melanie Ehrlich, President and Founder, Tulane University School of Medicine, on 6 June 2026.
- Delivered a talk on ‘Exosomes for Biomarker Discovery’ at EVOLVE 2026, Institute of Life Sciences (ILS)-Department of Biotechnology (DBT) Biotechnology Industry Research Assistance Council (BIRAC), Bhubaneswar, from 2–4 April 2026.
- Presented a talk on ‘Cancer Biomarkers: One Molecule at a Time’ at Cells and Tissues 4.0, IISc Bangalore, from 16–18 April 2026.
- Delivered a talk on ‘Mechano-Epigenetics: A New Era of Diagnostics’ at ACMS 2026, Jadavpur University, Kolkata, from 12–14 April 2026.
- Presented a talk on ‘Probing Cancer Biomarkers Using a Biophysical Approach’ at the International Soft Matter Conference (ISMC) 2026, Goa, from 25–29 May 2026.

Prof. Bimlesh Lochab

Delivered a Distinguished Lecture on ‘Vitrimers: Bridging Sustainability’ at the Golden Jubilee celebrations of the School of Chemistry, University of Hyderabad, on 29 May 2026.

Dr. Ashish Gupta

Presented a talk on ‘Epigenetic Regulation of Whole-Body Regeneration: Lessons from Planarians’ at the Institute for Stem Cell Science and Regenerative Medicine (inStem), Bangalore, on 10 June 2026.

Dr. Bidyut Sarkar

Presented a talk on ‘Towards Decoding Gene Regulation by Tandem SAM-II/SAM-V Riboswitch’ at the Soft Matter Young Investigators Meet 2026, Goa, from 21–23 May 2026.

Dr. Nidhi Malhotra

Served on the organizing committee of the Soft Matter Young Investigators Meet 2026, Goa, from 21–23 May 2026.

Dr. Kenji Nishiwaki

Delivered an online seminar talk at the Majorana-Raychaudhuri Seminar Series titled “Revisiting neutrino oscillations in vacuum with wave packets,” on 1st May 2026.

Dr. Sucheta Mondal

Delivered a talk at the Quantum Colloquium, hosted by Professor Asif Eqbal at New York University (NYU) Abu Dhabi campus (online mode), on 18th May 2026.

Dr. Debarshi Das

Delivered talks on “Single-System Quantum Correlations: Foundations and Applications” on 1st June 2026 and 12th June 2026 at the Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China (UESTC), Chengdu, China.

Dr. Ipsita Mandal

Presented a talk in the Theoretical Physics Seminar Series titled ‘Detectable signatures of topology of the band structures in 3d semimetals.’

Prof. Sajal Kumar Ghosh

- Served as a session organizer and session chair at the International Soft Matter Conference (ISMC), held at the Birla Institute of Technology and Science (BITS), Goa, from 25th to 29th May 2026.
- Talk on “A ferromagnetic liquid droplet: Comprehending liquid-liquid interface” at ISMC 2026, BITS Goa.
- Talk on “Assembly, rheology and structure of magnetic nanoparticle film at liquid-liquid interface” at Universität Bremen, Germany, on 24th June 2026.

Prof. Priya Johari

- Delivered a talk on “Atomistic Understanding of Electrode Materials for High-Performance Alkali-Ion Batteries” at the Symposium on Emerging Trends in Materials Science, Bennett University, Delhi-NCR, and at the Applied Computational Materials Programme Symposium 13 (ACEPS13), IISc Bangalore.
- Talk on “Accelerating the Development of Efficient Materials for Renewable Energy Devices” at the American Chemical Society (ACS) SPRING 2026 Global Virtual Symposium: Computational Materials Discovery.
- Delivered a talk on “Rational Designing of Efficient Anode Materials for Alkali-Ion Batteries” at the 4th International Conference on Materials Genome (ICMG-IV) ACCMS Theme Meeting, SRM University-Andhra Pradesh (AP).

Memberships and Editorial Positions

Dr. Koyeli Mapa

Joined the Core Committee of the National Post-Doctoral Fellowship (NPDF) Expert Committee of Life Sciences, ANRF, in May 2026.

Dr. Neelesh Dahanukar

Served as an Editor for PLoS ONE and BMC Zoology from April-June 2026.

Dr. Rohini Garg

Appointed as an Expert Member of the Interdisciplinary Panel at the Research Foundation – Flanders (FWO), Belgium, and was also appointed as an Editor for BMC Plant Biology.

Dr. Rudra Nayan Das

Serving as a Guest Editor for the Research Topic "Extracellular Matrix in Development and Diseases" in Frontiers in Cell and Developmental Biology.

New Joinees (Department of Life Sciences)



**Dr. Anjil Kumar
Srivastava**

Joined as Assistant
Professor on
1 March 2026.



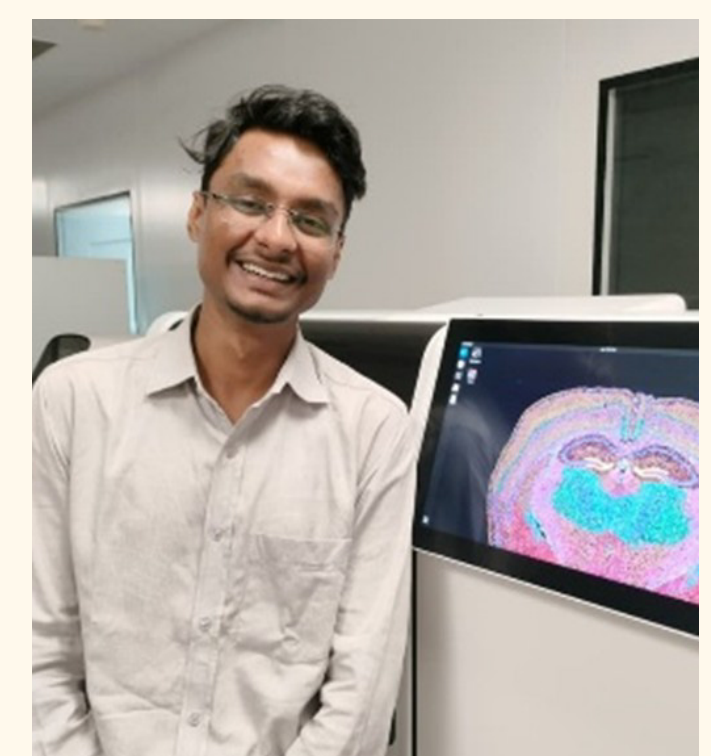
**Dr. Gaurav
Singh**

Joined as Assistant
Professor on
1 March 2026.



**Mr. Amit Kumar
Tripathi**

Joined as Scientific
Officer on 2 June
2026.



**Mr. Aman
Raj**

Joined as Scientific
Officer on 1 June
2026.



The Trailblazing Next Generation

Student Awards and Laurels

Convocation ceremony

The Twelfth Convocation Ceremony for the Class of 2026 was held on Saturday, May 23, 2026.

Shreya Sivaramakrishnan (B.Sc. Research - Chemistry) received the Program Topper of 2026 Award and the School of Natural Sciences Topper Gold Medal.

Rohan Banerjee Ravindran received the Program Topper Award for the Department of Physics

Diwakar G. received the Program Topper Award for the Department of Life Sciences.



Oral Presentations and Awards



Akshat Srivastava (UG student) secured First Position in the Quiz Competition held during the 20th Statistics Day celebrations, organized by the National Statistics Office at the Govind Ballabh Pant Social Science Institute, Prayagraj on 29 June 2026.



Vijith Tirumala Doss (B.Sc. Research student) was appointed as a Copy Editor at the Journal of Young Investigators (JYI) on 28 April 2026.

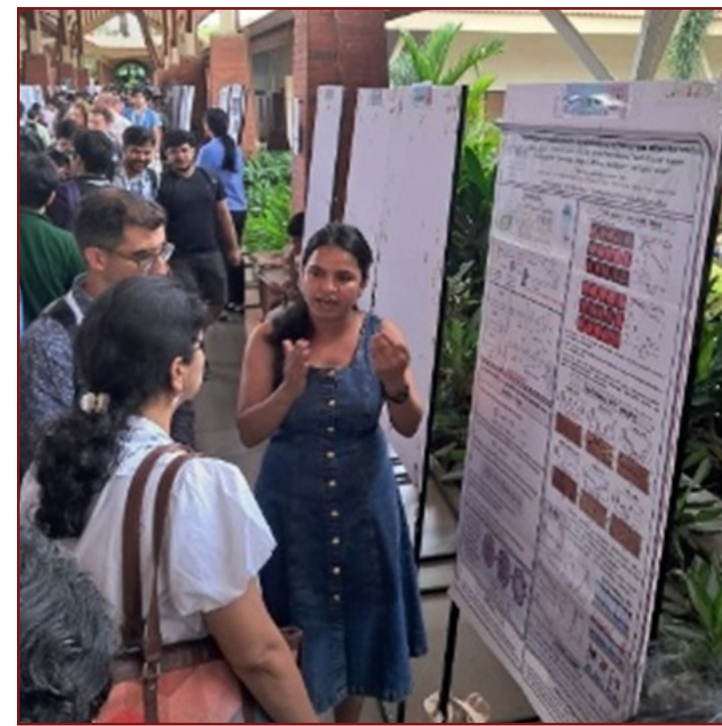
Grants, Fellowships, and Internships



**Dr. Deepak Sharma
(Ph.D. student)**

was awarded a Horizon Europe Marie Skłodowska-Curie Actions (MSCA) COFUND Fellowship under the Basic Sciences for Society Needs

(BS4S) Postdoctoral Programme. He will pursue his postdoctoral research at the Institute of Physical Chemistry, Polish Academy of Sciences (ICHP), Warsaw, Poland.



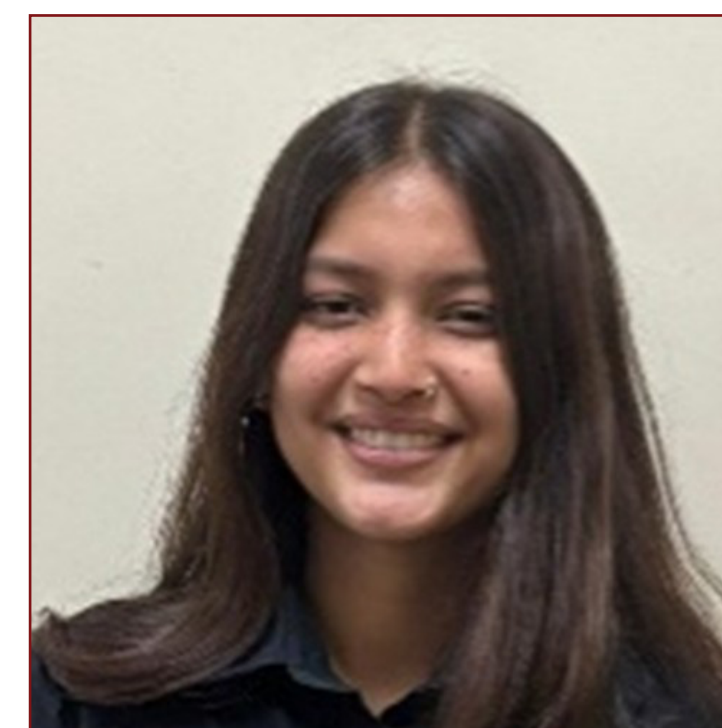
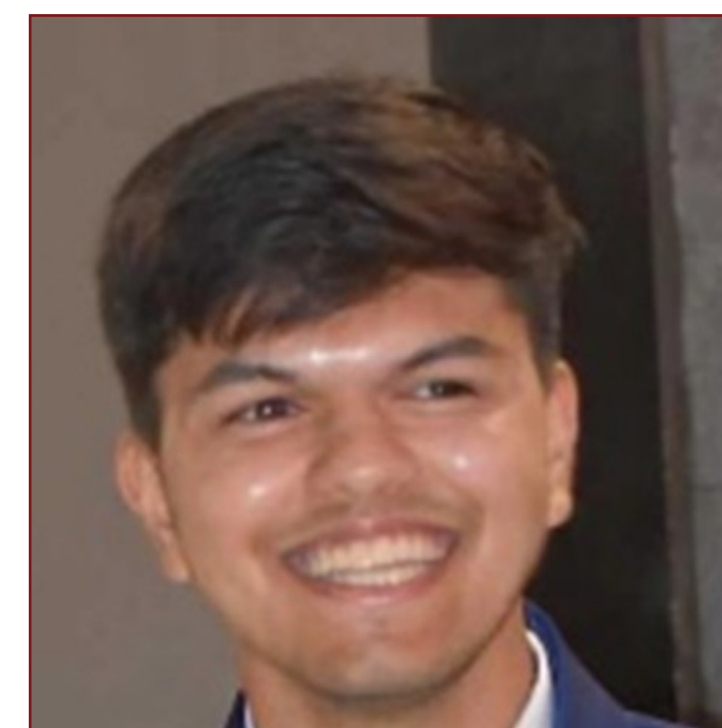
**Sonam Raghav
(Ph.D. student)**

was selected by the Young Scientist Committee for a Young Researcher Bursary at the European South Atlantic Biophysics Congress 2026 (ESAB 2026). She also undertook an academic visit to DESY, Hamburg, Germany, from 21 June–3 July 2026.



**Akanksha Agarwal
(Ph.D. student)**

was awarded a travel grant and complimentary registration by the European Association for Cancer Research (EACR) to attend the EACR 2026 Congress in Budapest, Hungary (8–11 June 2026).



**Svayam Kalpesh Shah and Kashvi Jain
(B.Sc. Research students)**

were selected for the NUS Summer Science Institute (SSI) internship at the National University of Singapore.



Soumyasri Nikhilesh Mahapatra (Integrated M.Sc.–Ph.D. student)

received ANRF International Travel Support to attend the EuroMXene 2026 Congress in Ireland (3–5 June 2026).



**Yashika Sheoran
(Ph.D. student)**

was awarded the LOTUS Fellowship to conduct one year of research at Yokohama National University, Japan (April 2026).

Mansi (M.Sc. Chemistry student) completed a summer internship at IISER Bhopal (25 May–20 July 2026).

Oindrila Bhattacharyya (B.Sc. Research student) completed a summer internship at the National Centre for Biological Sciences (NCBS) from 20 May–31 July 2026.

Dev Bijlani (B.Sc. Research student) completed a summer internship at IISER Pune.



Tiya Garg (B.Sc. Research student)

undertook a research internship at the Leibniz Institute for Catalysis, Rostock, Germany (15 May-15 August 2026).



Ayushi Kaushik (Ph.D. student)

has been awarded a fellowship to attend and present at the 47th Course of the International School of Nuclear Physics (Erice School), to be held in Erice, Sicily, Italy, from 16-22 September 2026.



Baisali Ghadai (Ph.D. student)

received a travel grant from the conference organizers and ANRF travel support to attend Physics in Magnetism, Poznań, Poland, in June 2026.

Oral Presentations

Diwakar G. (B.Sc. Research student) delivered a talk titled *“Advancing Plant Nanobiotechnology: Nucleic Acid Delivery for Transient Expression”* at the SUMMIT Conference, Shiv Nadar Institution of Eminence (April 2026).

Sonam Raghav (Ph.D. student) was an invited speaker at the Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain, where she delivered a talk titled *“Deciphering the Assembly of Antimicrobial Peptides in a Phospholipid Membrane”* on 19 June 2026.

Zubair Nabi (Ph.D. student) presented a talk at the ACS Spring Meeting 2026 (Virtual), Atlanta, USA, titled *“DFT Study of Sb₂S₃ and Pre-Lithiated Sb₂S₃-Biphenylene Composite as High-Performance Anodes for Lithium-Ion Batteries.”*

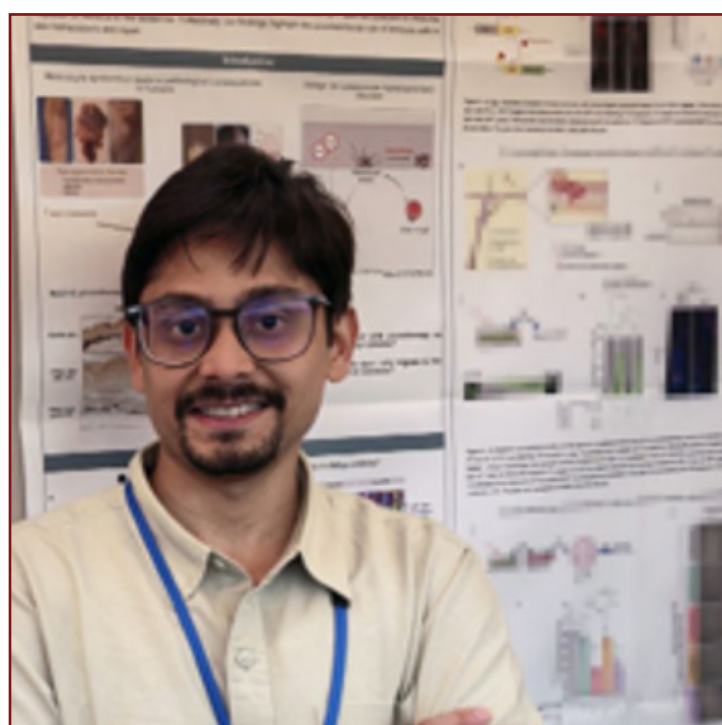
Shweta Yadav (Ph.D. student) presented a talk titled *“On the Properties of the Solution Set of Absolute Value Equations”* at ILAS 2026, organized by the International Linear Algebra Society at Virginia Tech, USA, from 18-22 May 2026.

Poster Presentations and Awards



Devid Sahu (Ph.D. student)

received the Best Poster Award at the Charusita Chakravarty Memorial Symposium on Emerging Trends in Computational Chemistry and Materials, IIT Delhi (2 April 2026).

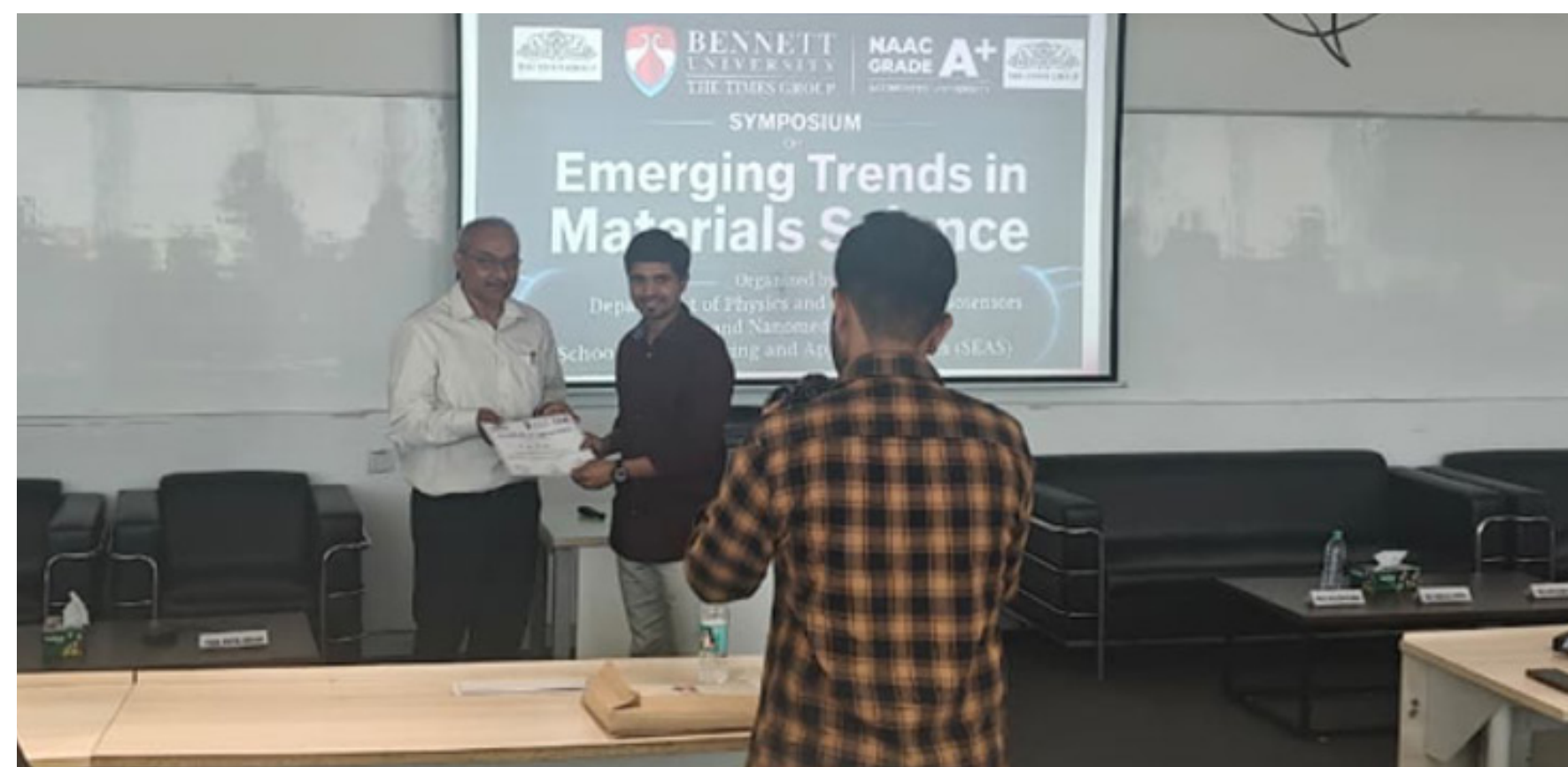


Abhik Dutta (Ph.D. student)

presented a poster titled “Understanding the Role of $\gamma\delta$ T Cells in UV-Induced Melanocyte Stem Cell Migration” at the Kyoto T Cell Conference (KTCC), Kyoto University, Japan (25–29 May 2026). He also received a Travel Award from KTCC.

Ayan Chakravorty (Ph.D. student)

received the Best Poster Award for “Decoding Optoelectronic Behaviour in $X_3\text{BI}_3$ Antiperovskite Derivatives Through Many-Body Perturbation Theory” at the Symposium on Emerging Trends in Materials Science, Bennett University, Greater Noida (21 April 2026).



- **Athira S.J. (Ph.D. student)** presented a poster titled “First-Principles Insights into O-Cl Terminated Janus MXenes for Advanced Supercapacitor Applications” at the International Conference on Materials Genome (ICMG-IV), SRM University-AP.
- **Ummar Bhatt (Ph.D. student)** presented a poster titled “DFT Study of Prussian Blue Analogues: A Cathode Material for Sodium-Ion Batteries” at ICMG-IV, SRM University-AP.
- **Madhu Pandey (Ph.D. student)** presented a poster titled “Advancing Magnesium-Ion Batteries with 2-1-1 MAX Phases: Remarkable Anode Properties of V_2SC ” at ICMG-IV, SRM University-AP.
- **Manuj Ahuja (Ph.D. student)** presented a poster titled “Unravelling the K-Ion Storage Mechanism in $\text{Ti}_3\text{C}_2\text{T}$ MXene for High-Performance Supercapacitors” at ICMG-IV, SRM University-AP.
- **Shreyasi Mitra (Ph.D. student)** presented a poster titled “miR-34 Regulates Stress-Induced Behavioral Responses Through Its Target Melancholy (Mel) in *Drosophila*” at IISc Bengaluru (April 2026).
- **Sanjula Ghosh (B.Sc. Research student)** presented a poster titled “Eocene Origin and Miocene Diversification in Hillstream Loach Genus *Indoreonectes* Coincide with Major Shifts in Indian Monsoon” at the 35th International Union of Biological Sciences (IUBS) General Assembly, IISc Bengaluru (9–13 June 2026).
- **Sreedhar Prabhu (B.Sc. Research student)** presented a poster titled “Genetic Barcoding of Cartilaginous Fishes from Fish Landing Sites Along the Coast of Kerala” at the 35th International Union of Biological Sciences (IUBS) General Assembly, IISc Bengaluru (9–13 June 2026).
- **Kirti (Ph.D. student)** presented a poster at the International Conference on Magnetic Materials and Applications (ICMAGMA), NIT Goa (3–5 June 2026).
- **Rumal Singh (Ph.D. student)** presented a poster titled “Anomalous Electrowetting of Physiochemically Heterogeneous Surfaces” at the International Soft Matter Conference (ISMC) 2026, BITS Goa (25–29 May 2026).
- **Sonam Raghav (Ph.D. student)** presented the poster “Exploring Pore-Formation Kinetics by Antimicrobial Peptides in Giant Unilamellar Vesicles” at ISMC 2026, BITS Goa, and at the European South Atlantic Biophysics Congress 2026 (ESAB 2026), France (16–19 June 2026).
- **Akshat Gupta (B.Sc. Research student)** presented a poster titled “Structural and Rheological Studies of Functionalised Magnetic Nanoparticles at the Air-Water Interface” at ISMC 2026, BITS Goa.
- **Megha (Ph.D. student)** presented posters titled “Developing Efficient Flexible LIG/ZnO Nanoparticle Hybrid Photocatalysts for Efficient Methylene Blue Degradation” and “Room-Temperature Gas Sensing of Carbon Monoxide Using ZnO/CuO Core-Shell Heterostructures on Interdigitated Flexible LIG” at the E-MRS Spring Meeting and Exhibit, France (25–29 May 2026).

Congratulations to our Ph.D. Awardees!

Name	Thesis
Dr. Rabban (Dr. Bappaditya Gole)	Dye-Appended Macrocyclic and Foldamer Hosts for Guest Encapsulations and Supramolecular Polymerization
Dr. Biswajit Mohanty (Prof. Parthapratim Munshi)	Multiscale Computational Design of Molecular Inhibitors Targeting the VEGFA-VEGFR-2 Axis in Pathological Angiogenesis
Dr. Sauvik Sen (Dr. Arindam Chatterjee)	Study on Certain Aspects of Hawking Radiation and Related Issues in Black Hole Physics
Dr. Monika (Dr. Basab Bijayi Dhar)	Design, Synthesis, and Applications of First-Row Transition Metal Complexes Using Amido-Based Ligand Frameworks
Dr. Sangeeta (Dr. Biswajit Guchhait)	Photochemical Dynamics and Solvent Relaxation in Bulk and Confined Deep Eutectic Solvents: A Spectroscopic Investigation
Dr. Lubna Khanam (Prof. Samarendra P. Singh)	Interface Engineering in Binary and Ternary Semitransparent Organic Solar Cells
Dr. Atanu Samanta (Prof. Aloke Kanjilal)	Study of Perovskite Materials for Optoelectronic Applications
Dr. Sayani Das (Prof. Susanta Sinha Roy)	Fabrication of Surface Interaction-Driven Transitions in Molecular Alignment at Liquid Crystal-Aqueous Interfaces for Applications in Optical Biosensors
Dr. Deepak Sharma (Prof. Susanta Sinha Roy)	Nanoarchitectonics of Transition Metal Compounds and Carbonaceous Materials for Electrochemical Water Splitting Applications
Dr. Abhishek Panghal (Prof. Susanta Sinha Roy)	Nanoengineering of 2D Materials for Multifunctional Energy Storage Devices
Dr. Ashutosh Dheer (Late Dr. Santosh Kumar and Prof. Sujit Tandel)	Quantum Transport in Mesoscopic Systems: Random Matrix Theory Investigation
Dr. Devansh Kaushik (Dr. Syed Kamil)	Rheology and Structure of Self-Assembled Amphiphiles
Dr. Ajit Seth (Prof. Sajal K. Ghosh)	Development of Antibacterial Materials and Quantification of Their Interactions with Model Cell Membranes
Dr. Syed Adil Pasha (Dr. Arindam Chatterjee)	Radiative Corrections to the Direct Detection of Neutralino Dark Matter in the Minimal Supersymmetric Standard Model Paradigm



Alumni Achievements

UG Alumni: Higher Education and Career Placements



Shreya Sivaramakrishnan (B.Sc. Research - Chemistry)

Joined the Ph.D. programme in Chemistry at the California Institute of Technology (Caltech), USA.



Athish Pranav K.V

Joined the Ph.D. programme in Theoretical Chemistry at New York University (NYU), pursuing research in Computational Photophysics and Photochemistry.



Diwakar G

was selected for both the Master's Programme in Life Sciences and the Ph.D. Programme in Ecological Sciences at the Indian Institute of Science (IISc), Bengaluru.



Mridul Jain

Joined the M.Sc. programme in Materials Science and Engineering at Nanyang Technological University (NTU), Singapore.



Archit Jain

Joined the M.Sc. programme at the University of Geneva, Switzerland.



Sukriti Chhabra

Joined a Master's programme at Uppsala University, Sweden.



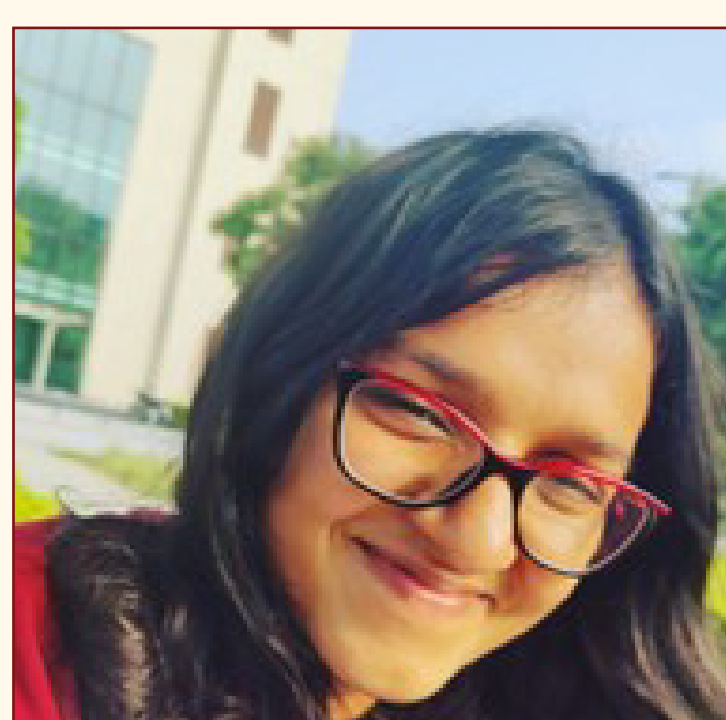
Shivangi Gupta

Joined the M.Sc. programme in Cosmetic Science at Liverpool John Moores University, England.



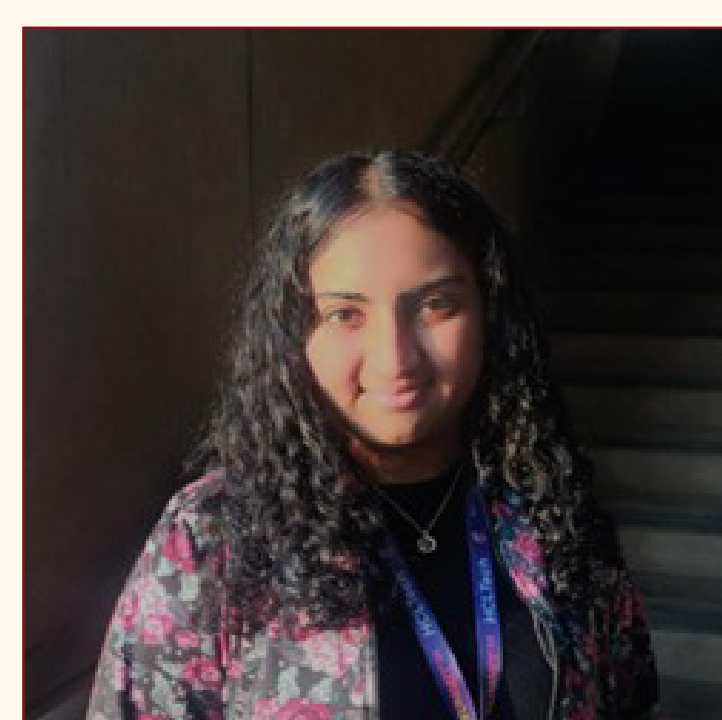
Kaivalya Neerukattu

joined the M.Sc. programme in Molecular Precision Medicine at the Medical University of Vienna, Austria.



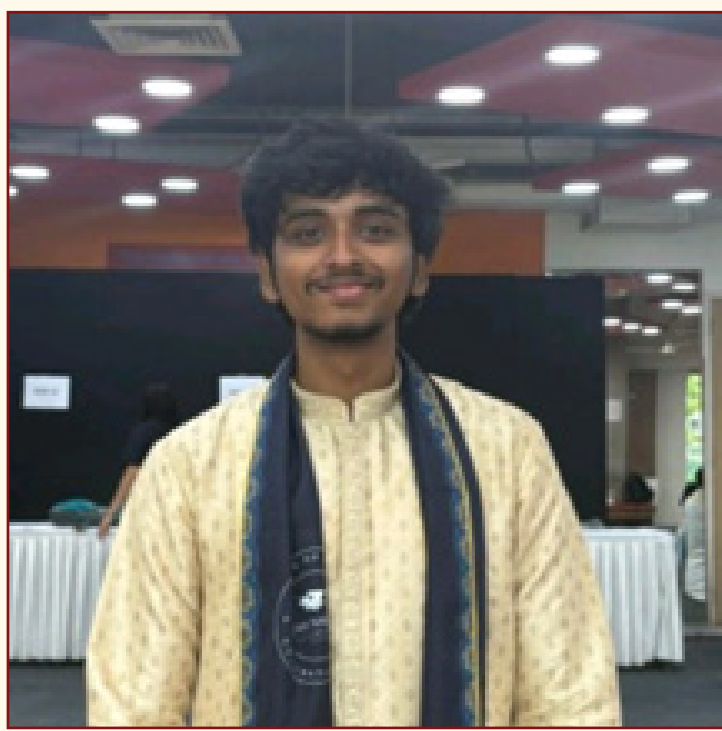
Prarthana Nanda

joined the Master's programme in Biotechnology at Utrecht University, Netherlands



Prisha Bhatia

joined the Master's programme in Biotechnology at the University of Melbourne, Australia.



Arumugam G.

Secured a research internship at the University of Oxford, England.



Gargi Yadav

Joined the M.Tech. programme at IIT Gandhinagar.



Joella Karen Jose

Joined the Ph.D. programme at Cincinnati Children's Hospital Medical Center, USA.



Shreya Joe

was selected for the Integrated Neuroscience Ph.D. Program at the University of Nevada, USA.

Mehul Bhattacharya

Joined the M.Sc. programme at the National University of Singapore (NUS).

Aarnav Vijaiyan

received a scholarship from Riga Technical University, Latvia, for an M.Sc. in Materials Science and Nanotechnology.

Rithvikha T.K. Nair

joined the University of Alabama at Birmingham, USA, as a Research Scholar.

• **Sai Sanjeeth Muralikrishna** joined D. E. Shaw & Co. as a Financial Research Associate.

• **Prakhar Verma** joined the M.Sc. Physics (Particles and Cosmos) programme at Stockholm University.

• **Sarvesh Thirunavakkarasu** enrolled in the M.Sc. programme in Biophysics at the University of Madras and also received an admission offer to pursue an M.Sc. in Physics at Heidelberg University.

• **Parmest Roy** joined the M.Sc. (International) Physics programme at the University of Hamburg, Germany.

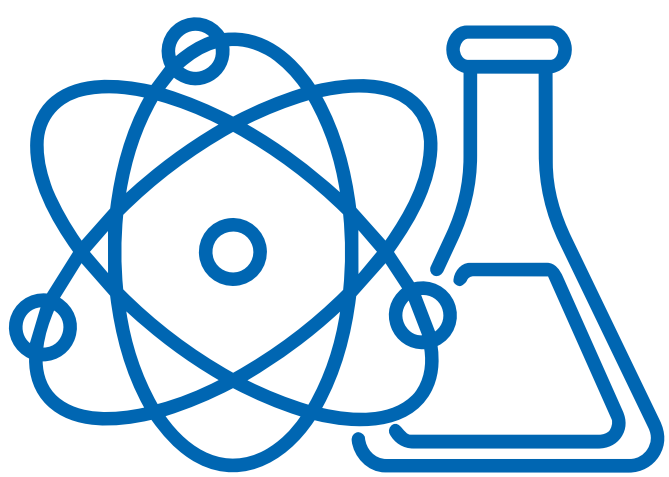
• **Sarthak Kumar** joined the M.Sc. programme in Quantum Science and Technology at the Technical University of Munich.

Ph.D. Alumni: Career Placements

- **Dr. Ajit Seth** joined Christian-Albrechts-Universität zu Kiel, Germany, as a Postdoctoral Researcher.
- **Dr. Devansh Kaushik** joined the Indian Beamline, Photon Factory (KEK), Japan as a Postdoctoral Fellow.
- **Dr. Atanu Samanta** joined Kyungpook National University (KNU), South Korea, as a Postdoctoral Researcher.
- **Dr. Abhishek Panghal** joined the Institute of Nano Science and Technology (INST), Mohali, India, as a Postdoctoral Fellow.
- **Dr. Syed Adil Pasha** joined the Institute of Physics, Bhubaneswar, as a Postdoctoral Fellow.
- **Dr. Pawanesh** joined O.P. Jindal Global University as an Assistant Professor.
- **Dr. Renu Saraswat** joined O.P. Jindal Global University as an Assistant Professor.
- **Dr. Haya** joined Prof. Sen's laboratory at Shiv Nadar University, Greater Noida, as a Research Associate.



Setting up the telescope ahead of the observation session



Enhancing the Corpus of Scientific Knowledge

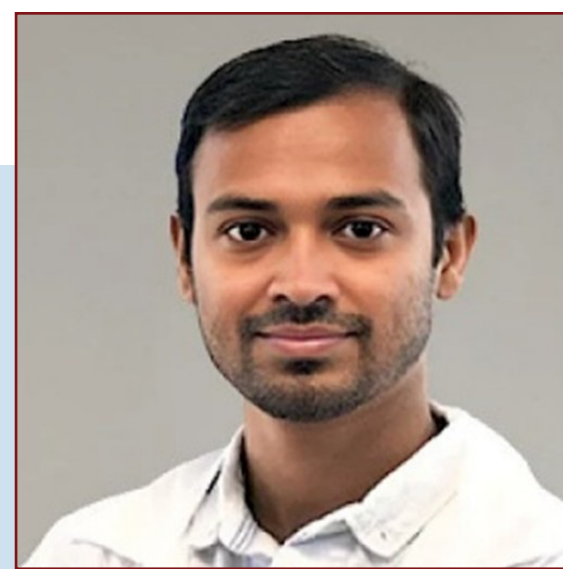
Science in the Public Sphere



Prof. Priya Johari

The collaborative work of Prof. Priya Johari and researchers at the Centre for Nano and Soft Matter Sciences, Bengaluru, on advanced battery materials was featured in major national media outlets, including The Times of India and The Tribune.

(<https://timesofindia.indiatimes.com/science/new-material-may-help-aluminium-batteries-last-longer-cost-less/articleshow/130268281.cms>;
<https://www.tribuneindia.com/news/science-technology/scientists-discover-way-to-make-aluminium-batteries-affordable-and-safer-offering-alternative-to-lithium/>



Sustainable AI: A World Environment Day Perspective

This **World Environment Day**, as we think about protecting nature, we must also look at the hidden environmental cost of our digital lives. The rapid rise of Artificial Intelligence requires massive data centers that consume enormous amounts of electricity, leaving a growing carbon footprint.

Dr. Subhrajit Mukherjee is tackling this challenge from a unique angle. Instead of just trying to power data centers with green energy, he is redesigning the computer chips themselves. Inspired by the human brain—which can learn and process complex information using barely enough energy to power a lightbulb, Dr. Mukherjee and his team are developing "neuromorphic" electronics. These smart chips can sense and process AI tasks using a fraction of the energy required by traditional computers.

By drastically reducing the power-hungry nature of AI hardware, this research directly helps lower carbon emissions, ensuring our technological progress doesn't come at the planet's expense. Read the recent popular article from his group on sustainable AI hardware and brain-inspired electronics in Policy Circle here- [Neuromorphic chips can cut AI energy use and boost speed | Policy Circle](#)



Prof. Debdas Ray- His research was featured in an article published in Science Factors Magazine on 26 April 2026, discussing the development of smart materials capable of changing their luminescence in response to specific chemicals.
<https://factors.press/articles/a-smart-material-that-changes-its-glow-to-detect-chemicals/>



Dr. Geetanjali Chawla

- Authored an article titled 'RNA and Dietary Interventions in Geroscience: Advancing Lifespan and Healthspan,' featured in the Indian Society of Cell Biology newsletter-
<https://heyzine.com/flip-book/1cef34dd.html#page/44>

- Featured in India Today for an article debunking internet myths: 'Don't listen to the internet, experts say NAD+ supplements are a fad.'

<https://www.indiatoday.in/health/story/dont-listen-to-the-internet-experts-say-nad-supplements-are-a-fad-2888009-2026-03-28>

<https://www.indiatoday.in/amp/health/story/dont-listen-to-the-internet-experts-say-nad-supplements-are-a-fad-2888009-2026-03-28>

- Featured in India Today questioning the efficacy of popular health trends: 'Do nutrition patches work? Experts question their efficacy.'

<https://www.indiatoday.in/health/story/nutrient-patches-india-effectiveness-science-expert-views-2889694-2026-03-31>



Prof. Parthapratim Munshi

His research paper published in NPG Asia Materials, titled "Flexible organic piezoelectric nanogenerator with high power density and excellent ferroelectric and memristor characteristics," was featured by the science communication platform ClearSkyScience.

<https://www.clearskyscience.com/en/10.1038/s41427-026-00632-z/>



Prof. Bimlesh Lochab

Published the article "Plastic Recycling: A Lost Cause or a Reversible Healing in the Development" through Factors Academic Press (RFCSR), 25 April 2026.

<https://factors.press/articles/plastic-recycling-a-lost-cause-or-a-reversible-healing-in-the-development/>

Authored the invited National Science Day 2026 opinion article "India Needs Science and Science Needs Women" for Moneycontrol.

<https://www.moneycontrol.com/news/opinion/india-needs-science-and-science-needs-women-13846604.html>



The crescent Moon captured through a telescope, showcasing the rugged beauty of its surface

Distinguished Guests, Talks and lecture series

Department of Life Sciences

SHIV NADAR
INSTITUTION OF CHINHOKE DEDICATED TO DE
—UNIVERSITY—
DELHI NCR

SCIENTIFIC SEMINAR SERIES

TALK ON

Biological Phase Transitions: Where Chemistry and Physics Meet Biology



SPEAKER

Professor Samrat Mukhopadhyay

Professor and JC Bose Fellow, IISER Mohali
Visiting Professor, IIT, Bombay
Fellow, Indian National Science Academy (FNA) and the Indian Academy of Sciences (FASc)

📅 06 April 2026
🕒 12:00 PM – 01:00 PM
📍 D330, Shiv Nadar IoE

SHIV NADAR
INSTITUTION OF CHINHOKE DEDICATED TO DE
—UNIVERSITY—
DELHI NCR

SCIENTIFIC SEMINAR SERIES

TALK ON

Developing prophylactic and therapeutic approaches to prevent pesticides induced toxicity and lethality: A clinical translational approach



SPEAKER

Professor Praveen Kumar Vemula

Professor at Institute for Stem Cell Science and Regenerative Medicine (BRIC-inStem), Bengaluru

📅 10 April 2026
🕒 03:00 PM – 04:00 PM
📍 D128, Shiv Nadar IoE

SHIV NADAR
INSTITUTION OF CHINHOKE DEDICATED TO DE
—UNIVERSITY—
DELHI NCR

SCIENTIFIC SEMINAR SERIES

TALK ON

Understanding bacterial cell wall growth and morphogenesis



SPEAKER

Dr. Manjula Reddy

JC Bose Fellow and Scientist at CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), Hyderabad

📅 16 April 2026
🕒 02:00 PM – 03:00 PM
📍 D128, Shiv Nadar IoE

SHIV NADAR
INSTITUTION OF CHINHOKE DEDICATED TO DE
—UNIVERSITY—
DELHI NCR

SCIENTIFIC SEMINAR SERIES

TALK ON

Understanding the Sources of Regenerative Capacity in Animals



SPEAKER

Professor Alejandro Sánchez Alvarado

Professor, President, Chief Scientific Officer, and Investigator at Howard Hughes Medical Institute, Salk Institute for Medical Research, USA

📅 12 June 2026
🕒 12:00 PM – 01:00 PM
📍 D330, Shiv Nadar IoE

Department of Mathematics



Professor Sameep Mehta:

9th April'26

Title of Colloquium:
“Data-Enabling the Build and Consumption of AI”



Seminar by Dr Rahu Gupta:

13th May'26

Title: The \etale fundamental group and its torsion



Professor Soumitro Banerjee:

16th April'26

Title: From Order to Chaos: Exploring Nonlinear Dynamics

Department of Chemistry

SHIV NADAR
UNIVERSITY

SCHOOL OF
NATURAL
SCIENCES

Department of Chemistry Colloquium

Bio-Inspired High-Valent Iron Complexes for C–H Functionalization: Insights into Hydrogen Atom Transfer Mechanisms

SPEAKER

PROFESSOR SAYAM SEN GUPTA

Department of Chemical Sciences,
IISER Kolkata

Date: Monday, 27 April 2026

Time: 2:00 to 3:00 PM

Venue: B007, Shiv Nadar University, Delhi-NCR

Selected Publications (April- June 2026)

• Sangeeta Sahu, Arnab Ghosh, Monisha Monisha, Murali Krishna, Shakir Ali Siddiqui, Sunan Tian, De-Yi Wang, Sagar Mitra, Bimlesh Lochab. Sulfur-Rich Sustainable Copolymers for Enhancing Redox Kinetics and Alleviating Cathode Passivation in Lithium-Sulfur Batteries. <i>Exploration</i> (2026).	• Giuseppina Lambiase, Gal Perlmoter, Yaara Tevet, Pallavi Chakraborty, Amitai Shen, Noga Moshe, Calanit Raanan, Rudra N. Das, Karina Yaniv. A Conserved Biphasic Venous Remodeling Program Governs Inferior Vena Cava Formation in Zebrafish. <i>Science Advances</i> 12 (2026).
• Dipti R. Panigrahi, Pranjit Barman, Shouvik Mete, Anil Kumar U, Vishal M. Dhavale, Vijay Kumar, Kotaro Takeyasu, Santosh K. Singh. Subsurface Graphitic Nitrogen Activates Protonated Pyridinic-N Sites for Acidic Oxygen Reduction. <i>Small</i> (2026).	• B. Dam, J. Ajnabi, T. Saha, A. Shrivastava, K. Badarinathan, A. Hegde, A. Dutta, S. Jasoria, S. Kataria, A. Singh, Colin Jamora. Mindin-Mediated αM-Integrin Endocytosis Activates STAT3 to Maintain Keratinocyte Stemness. <i>Cell Communication and Signaling</i> (2026).
• Prashansa Gupta, Bhavika Bhatia, Jan-Marten Sprenger, Adrian Wolf, Katharina Koschek, Bimlesh Lochab. Chemically Recyclable and Room-Temperature Self-Healable Siloxane-Imine Benzoxazine Vitrimers for Soft Magnetic Actuation. <i>Journal of Materials Chemistry A</i> (2026).	• Pranjit Barman, Santosh K. Singh. Solvation Chemistry Modulation by Dual-Aprotic Polar Additives in Aqueous Zinc-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> (2026).
• Namra Ali, Rohini Garg. From Wound Perception to Organogenesis: New Routes to Efficient Plant Transformation. <i>Plant Stress</i> 21, 101368 (2026).	• Atanu Samanta, Ankita Sharma, Bidya Mondal, Biswajit Guchhait, Vijay Kumar, Upendra Kumar Pandey, Aloke Kanjilal. Samarium Iodide Incorporated MAPbI₃ with Improved Structural, Photophysical and Photovoltaic Properties. <i>Solar Energy Materials and Solar Cells</i> 302, 114353 (2026).
• Sunidhi Brindavan, Vasanthapandiyan Mari, Naiwrit Karmodak. Mechanistic Insights into Urea Electrosynthesis on Copper-Based Bimetallic Electrocatalysts. <i>Electrochimica Acta</i> (2026).	• Chandan Biswas, Nilmadhab Mukherjee, Sunidhi Brindavan, Ratul Paul, Naiwrit Karmodak, Uttam Kumar Ghorai, John Mondal. Ambient Electrocatalytic Urea Synthesis from CO₂ and N₂ Compartmentalized by Cyclic Cu-Trinuclear (Cu₃)-Ferrocene Networking Porous Organic Polymer. <i>Small</i> (2026).

Selected Publications (April- June 2026)

• Deepak, Tanuja Singh, Debosmita Banerjee, Barnali Mahato, Abhinav Mahapatra, **Susanta Sinha Roy**. Nanoengineered NiO/ZnO Heterostructure-Integrated WS₂ Nanostructures as a Bifunctional Catalyst for Water/Seawater Splitting Applications. *ACS Applied Energy Materials* (2026).

• Athira S. J., Ayan Chakravorty, **Priya Johari**. DFT Investigation of Layer-Parity-Driven V-Based MXene Nanosheets for Uremic Toxin Adsorption: Implications for Wearable Artificial Kidney Applications. *ACS Applied Nano Materials* 9, 8703–8715 (2026).

• Dibyendu Chakraborty, **Arindam Chatterjee**, Ayushi Kaushik, **Kenji Nishiwaki**. Muon Beam Dump Experiments Probe Five-Dimensional Nature of U(1)Lm–Lt. *Physical Review D* **113**, 115038 (2026).

• Yashika Tyagi, Subhankar Bera, Soumil Sen, Renu Bhati, **Biswajit Guchhait**, D. Sriram, Tanmay Chatterjee, Ludovic Gremaud, **Subhabrata Sen**. Deep Eutectic Solvent Mediated Ionic Cascades: Direct Access to Azaindazoles and Related Fused Heterocycles from Diverse N-Arenes. *Advanced Synthesis & Catalysis* (2026). IF: 4.0

• Ali Maheswaran, B. Maheswaran, D. Sahu, **Nidhi Malhotra**, **Koyeli Mapa**. The N-terminal Segment of the Human ANKZF1 Negatively Regulates Its Internal Mitochondrial Targeting Signal to Prevent Localization to Mitochondria. *FEBS Journal* (2026). DOI: 10.1111/febs.70526.

• Zubair Ganaie, **Priya Johari**. Biphenylene Concentric Nanorings as High-Performance Anode Materials for Sodium-Ion Batteries: A DFT and AIMD Study. *ACS Applied Energy Materials* 9, 1962–1976 (2026).

• Bishwajit Mandal, Ushasri Mukherjee, Donjo George, **Samarendra Pratap Singh**. Interface Engineering in PBTTT-C14 OFETs: Unified Control of Voltage- and Photogating Performance. *ACS Applied Electronic Materials* 8(11), 4649–4663 (2026).

• Yogita Gupta, Sanjay Dutta, Biswajit Mohanty, Alison Jeanine Edwards, **Vijay Kumar**, **Parthaprati Munshi*** Deciphering Divergent Ferroelectric Behaviour in Hydrogen-Bonded Organic Polymorphs. *Materials Advances*, 2026, 7, 6744–6754.

• **Kaushik Bhattacharya**, Yasuhiro Tokiwa, and **Mayukh Majumder**. Quantum Spin Liquid Ground State with the Evidence of Roton-Like Excitations at Elevated Temperatures in the Triangular-Lattice Delafossite YbCuSe₂. *Physical Review B*, 113, L220407 (2026). **[Selected as an Editors' Suggestion]**

• **Sujit Kashinath Tandel**, Harsh Kumar, Saket Suman, Partha Chowdhury, Christopher J. Lister, Dariusz Seweryniak et al.. Contrasting Decays of 3-Quasiparticle Isomers in ¹⁷³W: A Discerning Test of K Conservation and K Mixing. *Physical Review C* 113, L051301 (2026).

Selected Publications (April- June 2026)

• Madhu Pandey, Ummar Bhatt, **Priya Johari**. Exploring 2-1-1 MAX Phases as Anode Materials for Magnesium-Ion Batteries: Exceptional Performance of V₂SC. *Advanced Theory and Simulations* 9, e01709 (2026).

• Krishna Kumar Gupta, **Priyanka Grover**. Properties of Best Approximations with Respect to the Ky Fan p-k Norm and the Strict Spectral Approximant of a Matrix. *Linear Algebra and its Applications* 743, 102-122 (2026).

• Dhanyashree Das, Dhrubajyoti Talukdar, **Bappaditya Gole**. Discrimination of Aliphatic and Aromatic Hydrocarbons via Modulated Folding and Fluorescence of an NDI-Tetramer. *Chemical Communications* 62 (2026).

• Sayani Das, Sriradha Ganguli, Sarthak Kumar, Dinesh Singh, Kshatresh Dutta Dubey, Przemysław Kula, Ranadhir Chakraborty, **Susanta Sinha Roy**. Integrated Biosensing and Biodegradation for Sustainable Remediation of Ciprofloxacin from Hospital Wastewater. *Langmuir* 42, 12558-12569 (2026).

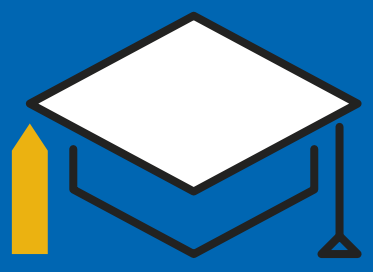
• Akansha Pal, Ankit Arora, Hemant Kumar, Anna Thokchom, Bharti Jaiswal, Dasaradhi Palakodeti, **Ashish Gupta**. TIP60 Acts as a Wound-Induced Factor Essential for Efficient Regeneration in Planaria. *Journal of Biological Chemistry* **302**(7), 113139 (2026).

• Surajit Adhikari, **Priya Johari**. Theoretical Insights into Monovalent-Metal-Cation Transmutation Effects on Lead-Free Halide Double Perovskites for Optoelectronic Applications. *Physical Review Materials* 10, 058402 (2026).

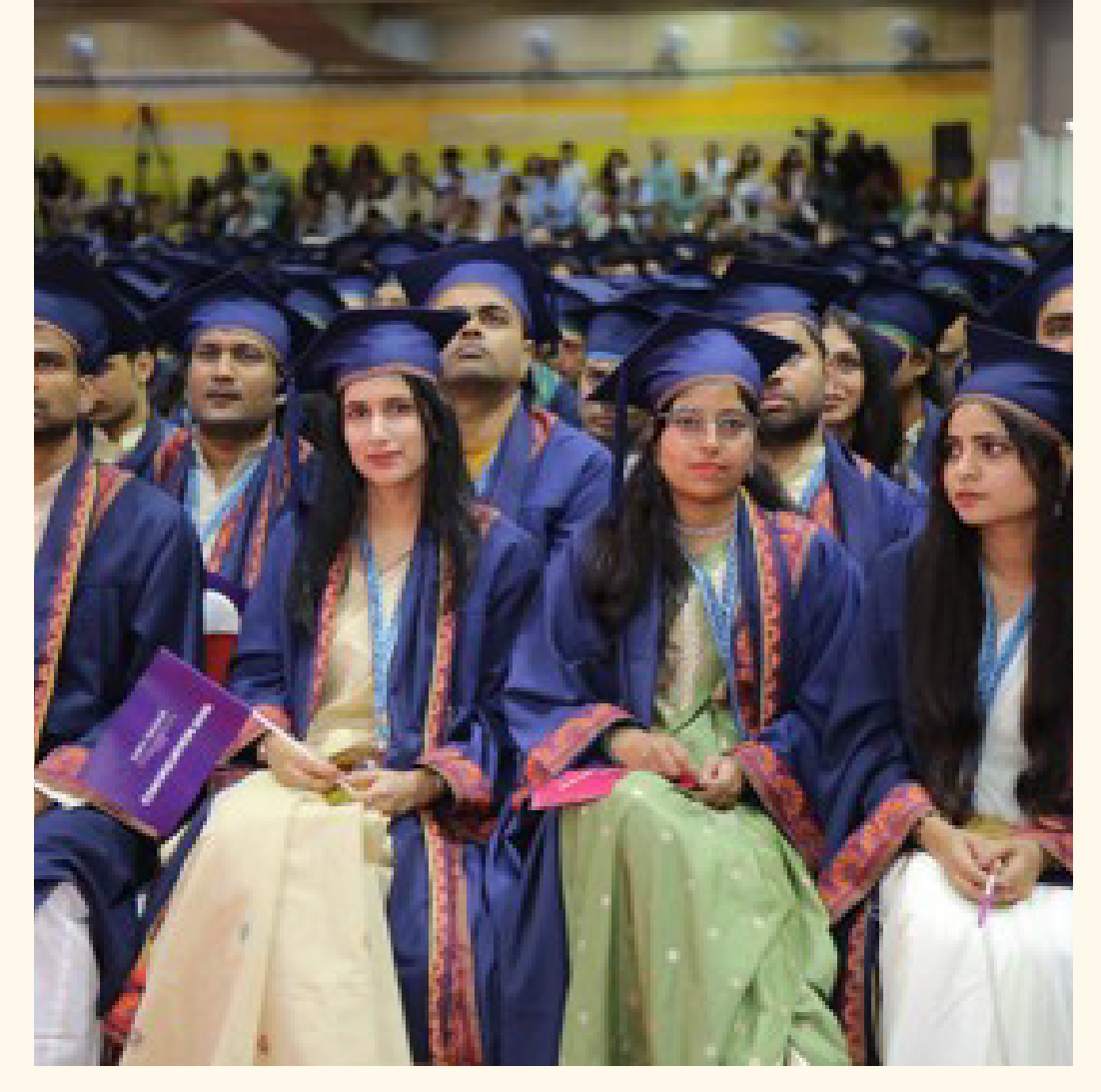
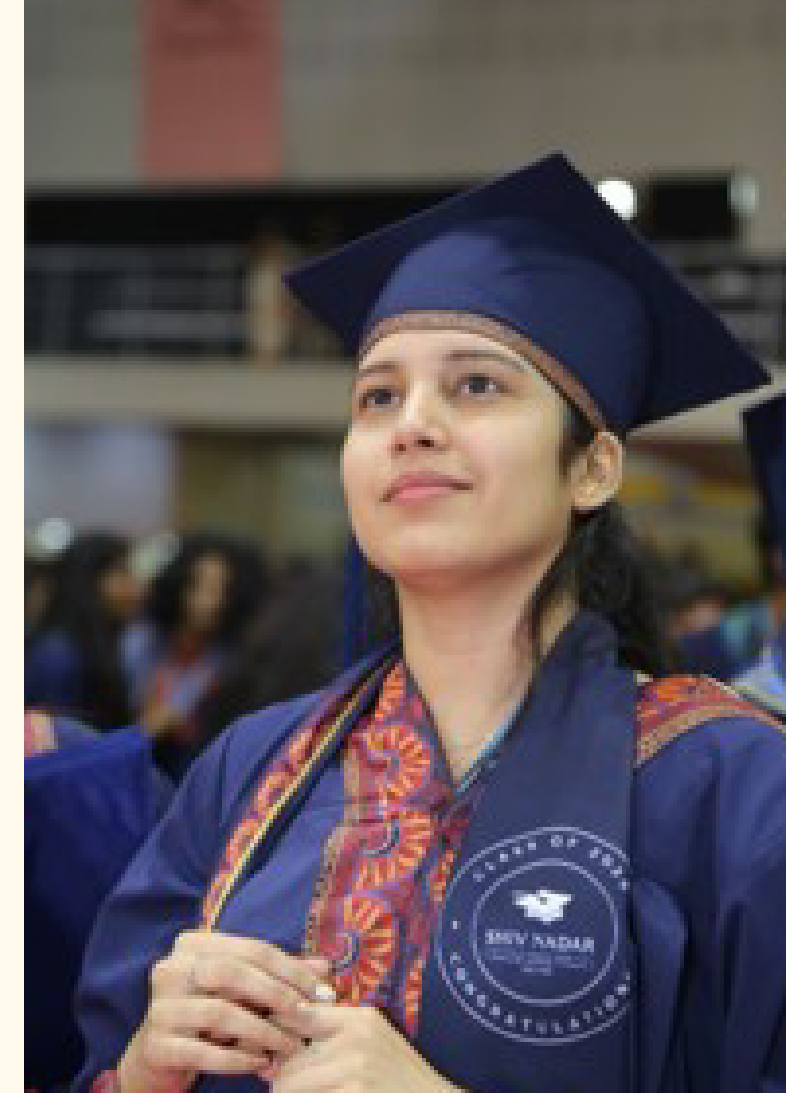
• Shamim Shah, Shovon Chatterjee, Subarna Samanta, **Tushar Debnath**. Trion-Mediated Sequential Charge Separation in Functionalized CsPbBr₃/AgInS₂ Hybrid Nanocrystals. *Journal of Physical Chemistry Letters* (2026).

• A. Kumar, E. Bora, **Tushar Debnath**. Energy Transfer Mediated Rabi Splitting in Ag@CsPbCl₃ Nanohybrids. *Journal of Materials Chemistry C* (2026).

• Sonalin Senapati, Ankita Halder, Manoranjan Ojha, Manwar Box, Subhendu Jena, **Naiwrit Karmodak**, Suranjan De, and Sandeepan Maity. Contrasting Effect of Metal Ions on Thermal and Photo-Isomerization of Spiropyran. *Journal of Photochemistry and Photobiology A: Chemistry*, 481, 117469 (2026).



Glimpses from Convocation 2026

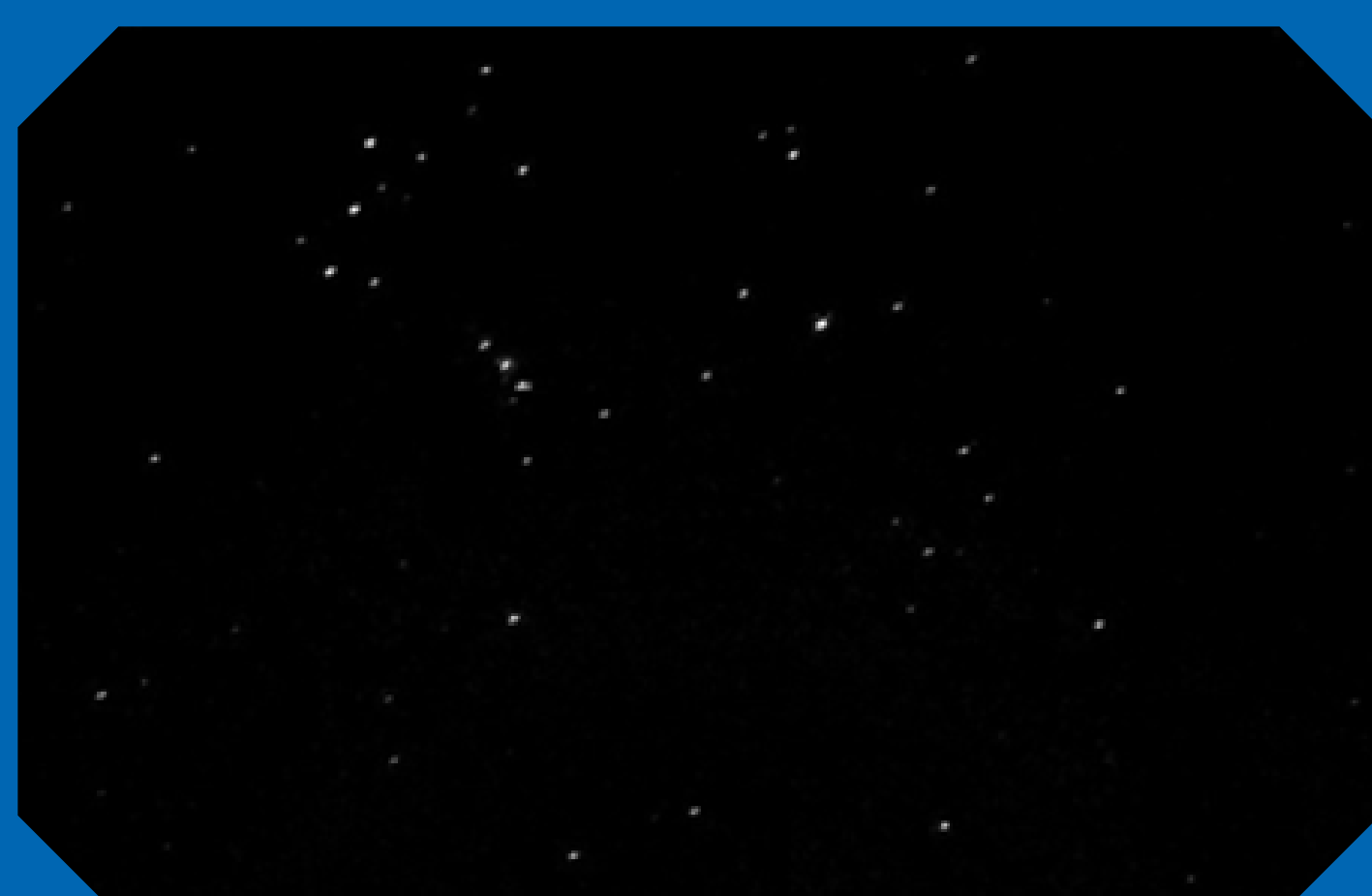
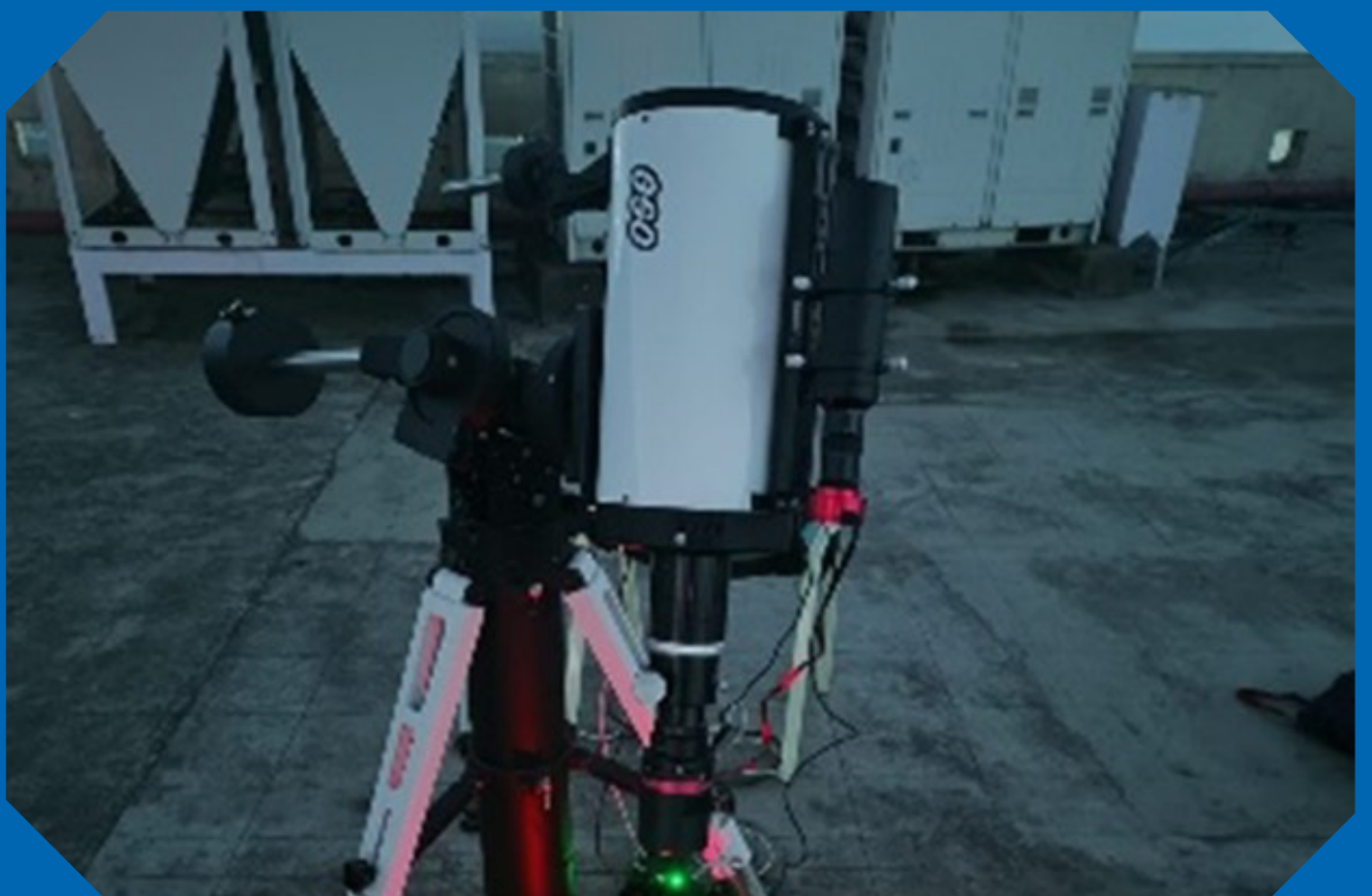
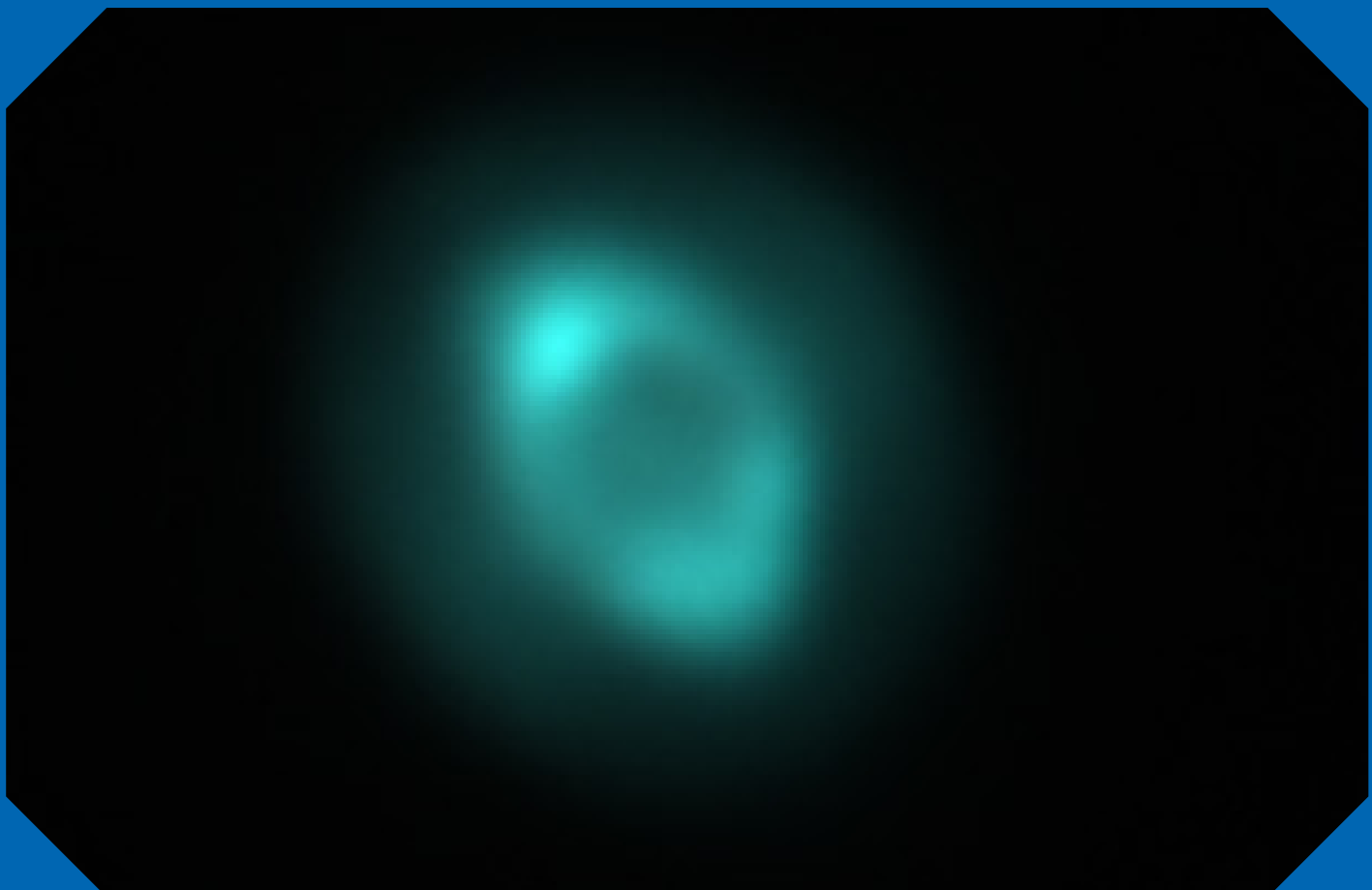




Look up. The vast, dark canvas of the night sky was humanity's first brush with curiosity. At Celestia Explora, the Astronomical Society of SNU, that curiosity is transformed into a shared experience. From the thrill of stargazing nights to astronomy discussions, film screenings, and other engaging events, members come together to explore the wonders of the cosmos.



Open to everyone—not just those in STEM—the club welcomes all who are fascinated by space and eager to understand how the universe works. We gratefully acknowledge the students of Celestia Explora for sharing these wonderful images with us.



Learn more about the
School of Natural Sciences

**Shiv Nadar Institution
of Eminence**