

Volume 8 | Issue 1

Jan - Jun 2026

VIBES

NISER NEWSLETTER

INSIDE THIS ISSUE

Discover the latest research,
awards, events, and campus
highlights.

40 +

FEATURES & HIGHLIGHTS

Research · Awards · Events ·
Student Life · Outreach ·
Achievements

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National Institute of Science Education
and Research, Bhubaneswar
www.niser.ac.in/about/newsletter



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Image from the Groundbreaking Ceremony of the CMRP Building.

Director's Message

Dear Friends and Well-Wishers of NISER,

It gives me great pleasure to present this edition of Vibes (January–June 2026), highlighting the achievements and vibrant activities of the NISER community over the past six months.

During this period, NISER strengthened its research profile through competitive research grants, impactful publications, and advanced research infrastructure. Academic life remained vibrant through conferences, workshops, distinguished lectures, and outreach programmes, while student-led activities in coding, robotics, literature, films, quizzes, nature, sports, and culture enriched campus life with creativity, leadership, and teamwork.

The achievements of our faculty, students, staff, and alumni through prestigious awards, recognitions, and professional accomplishments continue to bring pride to the institute and reflect the spirit of excellence that defines NISER.

I thank the entire NISER community and congratulate the editorial team for bringing together this edition of Vibes. Together, we will continue to advance scientific excellence, innovation, and education in the years ahead.

PROF. HIRENDRA NATH GHOSH
Director, NISER Bhubaneswar

NISER Newsletter Knowledge Exchange ACADEMIC EVENTS

Conferences, Workshops, Lectures & Scientific Meetings



Workshop on Earthquake Source: Mechanics, Seismology, and Geology →

The School of Earth and Planetary Sciences at NISER Bhubaneswar organized the **Workshop on Earthquake Source: Mechanics, Seismology, and Geology** from 7–9 January 2026. The workshop brought together researchers, academicians, and experts to discuss the fundamental processes governing earthquake generation, source mechanics, seismology, and geological perspectives. The event provided a platform for scientific exchange, fostering interdisciplinary discussions and highlighting recent advances in earthquake science and related geophysical research.



DiChron 2026 →

The **National Workshop on Diffusion Chronometry and its Application in Planetary & Terrestrial Systems (DiChron26)** from 13–17 January 2026 was organised by the School of Earth and Planetary Sciences. The workshop brought together researchers, faculty members, and students to explore the principles and applications of diffusion chronometry in Earth and planetary sciences.

Through expert lectures, hands-on sessions, and scientific discussions, the event fostered knowledge exchange on geochronology, geochemistry, and analytical techniques for understanding geological and planetary timescales. It also provided participants with exposure to advanced analytical tools and current research trends in the geosciences.



Editorial Talk on Ethical AI →

The Central Library, NISER, in collaboration with Thieme, organized an Editorial Talk on "**Ethical Writing in the Age of Artificial Intelligence: Navigating Integrity, Authorship, and the New Frontier**" on 16 January 2026. Delivered by Dr. Rohit Bhatia, Acquisitions Editor, Thieme Chemistry, the talk examined the ethical use of AI in research and academic writing, highlighting responsible authorship, plagiarism prevention, transparent AI disclosure, and research integrity in scientific publishing.



Metabolomics & Microbiome Conference →

The conference "**Metabolomics & Microbiome: Systems-Level Insights into Human Health and Disease**" was organized by the School of Biological Sciences (SBS), in collaboration with BREF & GATC Biotech, on 11–12 March 2026. Conference featured discussions on advances in metabolomics, microbiome biology, multi-omics integration, AI & computational approaches for precision medicine, translational healthcare, and biomarker discovery.



Odisha State Population-Based Cancer Registry →

The **Odisha State Population-Based Cancer Registry** was launched on 4 February 2026 (World Cancer Day) by the Centre for Cancer Epidemiology–ACTREC, Tata Memorial Centre, in collaboration with the Department of Health & Family Welfare, Government of Odisha, and NISER Bhubaneswar. The initiative aims to strengthen cancer surveillance, support research, guide public health planning, and improve cancer prevention and control across Odisha.



PTMC 2026 →

The Centre for Medical Radiation Physics (CMRP), NISER Bhubaneswar, organized the **Particle Therapy MasterClass (PTMC)** on 13 March 2026 in collaboration with the International Particle Physics Outreach Group and Samsung Medical Center. The programme featured expert lectures and hands-on training on particle therapy and MatRad-based radiotherapy planning for precision cancer care.





Vigyan Pratibha 1st Teachers' Training Workshop →

The **1st Teachers' Training Workshop** of the Vigyan Pratibha Program 2026–27 was organized at NISER from 20–24 April 2026. The workshop featured expert lectures, hands-on laboratory sessions, and interactive learning in the biological, physical, and mathematical sciences, promoting inquiry-based teaching, practical science education, and innovative classroom practices.

Acquaintance Program on Accelerator →

NISER Bhubaneswar, in collaboration with the Inter-University Accelerator Centre (IUAC), organized the **Acquaintance Program on Application and Use of Accelerators & Supporting Facility** on 17 April 2026. The programme introduced participants to advanced facilities such as FEL, HPC, and ion-beam technologies, highlighting their applications in materials science, nuclear and atomic physics, and collaborative research.



Workshop on Harmonic Analysis →

The School of Mathematical Sciences, NISER Bhubaneswar, organized the **Workshop on Commutative and Non-Commutative Harmonic Analysis** from 2–7 May 2026. The workshop brought together researchers, experts, and students to explore recent developments in harmonic analysis through lectures and discussions, covering applications in operator algebras, representation theory, and mathematical physics. The programme provided participants with exposure to advanced analytical techniques, current research trends, emerging developments, and interdisciplinary applications in the field.



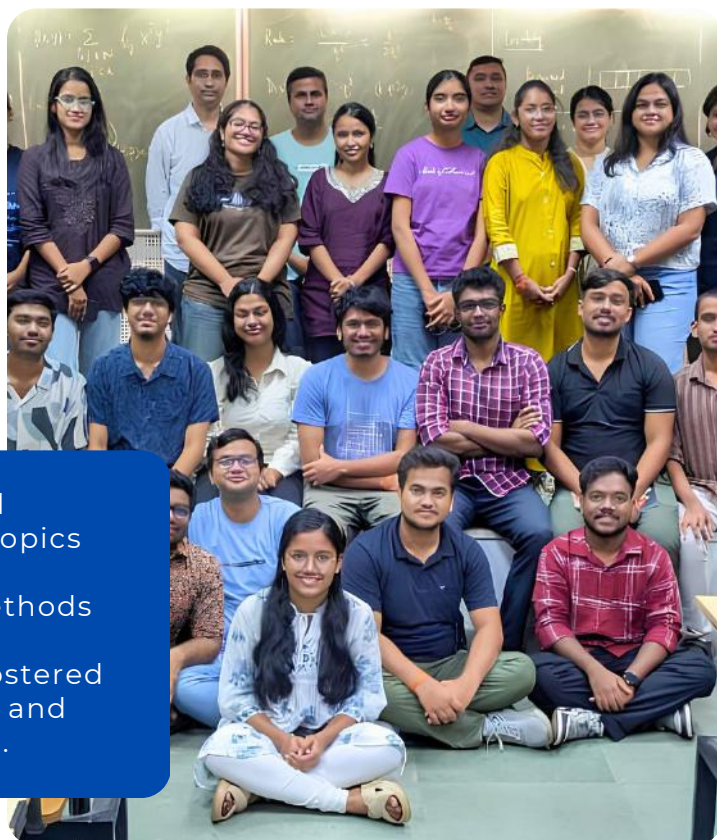
Instructional School for Teachers (IST 2026) →

In collaboration with the National Center for Mathematics (NCM), TIFR, the School of Mathematical Sciences, NISER Bhubaneswar, organized the **Instructional School for Teachers (IST)** from 1–13 June 2026. The programme featured interactive lectures on linear algebra, group theory, ring theory, and field theory, strengthening participants' understanding of core algebraic concepts.

Summer Outreach Program in Computing →

The **Summer Outreach Program in Computing (SOPC 2026)**, held from 8–19 June 2026, was organized by the School of Computer Sciences at NISER. The program was designed to inspire undergraduate and early-graduate students to pursue higher studies and research by introducing them to fundamental and advanced concepts in computer science and computational thinking.

Through lectures, interactive sessions, and hands-on learning, participants explored topics including data structures and algorithms, probabilistic algorithms, and algebraic methods in computation. The program provided a stimulating academic environment that fostered analytical thinking, problem-solving skills, and an appreciation for research in computing.



Utkal Dibasa Book Exhibition →

To commemorate Utkal Dibasa, the Central Library, NISER organized an **Odia Book Exhibition** from 1–15 April 2026. The exhibition showcased a diverse collection of Odia books spanning literature, history, culture, language, folklore, and biographies of eminent personalities. It encouraged students, faculty, staff, and researchers to explore Odisha's rich literary heritage, fostering greater appreciation for the state's language, culture, and intellectual traditions.



OBMT 2026 →

The **Organelle Biology & Membrane Trafficking Meeting (OBMT 2026)**, held from 14–16 March 2026 at NISER. It brought together researchers from across India to discuss advances in organelle biology, membrane trafficking, and cell biology. The meeting promoted interdisciplinary collaboration and scientific exchange in understanding cellular processes relevant to health and disease.



NISER Newsletter Scientific Dialogue

SPECIAL LECTURES

Distinguished Speakers • Colloquia • Invited Talks

NISER Bhubaneswar organized an Institute Colloquium on 13 March 2026 at the Pathani Samanta Auditorium, featuring Prof. Sagar Sengupta, Director, National Institute of Biomedical Genomics. His lecture, **"Linking Basic Biology Questions With Potential Translational Possibilities,"** focused on the DNA Damage Response (DDR) pathway and the role of ATM signaling and p53 in maintaining genomic stability.

Prof. Sengupta also highlighted recent advances in peptide-based DDR activation and p53-mediated transcriptional repression, demonstrating their significance for cancer research and therapeutic development. The colloquium provided valuable insights into the translation of fundamental biological research into innovative clinical applications and therapeutic interventions for human health.



The First Madhusudan–Soudamini Das Memorial Lecture on 17 March 2026 at the Pathani Samanta Auditorium, NISER. The inaugural lecture, **"Fundamental Rights in the Indian Constitution,"** was delivered by Hon'ble Justice (Retd.) Ananga

Kumar Patnaik. Justice Patnaik shared insights on Fundamental Rights, constitutional values, and the justice system. The event marked the beginning of the memorial lecture series with enthusiastic participation from the NISER community.



The School of Earth and Planetary Sciences, NISER Bhubaneswar, organized an Institute Colloquium on 10 April 2026 featuring Prof. Sunil Bajpai, IIT Roorkee. He delivered a lecture titled **"India's Unique Fossil Record: Evolutionary Story of a Wandering Continent from Whales to Giant Snakes."**

The talk highlighted early whales, giant snakes, and other vertebrate fossils, offering insights into India's geological and evolutionary history.



The School of Chemical Sciences, NISER organized a Chemistry Colloquium on 27 April 2026 featuring Dr. Ayyappanpillai Ajayaghosh, CSIR-Bhatnagar Fellow and Shanti Swarup Bhatnagar Chair Professor, SRM Institute of Science & Technology. He delivered the lecture **"Stimuli**

Responsive Supramolecular π -Systems and their Applications."

The lecture highlighted advances in stimuli-responsive supramolecular π -systems and their applications in advanced materials, molecular electronics, and sensing, offering insights into materials research.



The **4th P. K. Parija Lecture in Life Sciences** was held on 10 April 2026 at the Pathani Samanta Auditorium, NISER. The lecture, "**Cancer Metastasis: A Clinician's Perspective**," was delivered by Dr. Rajendra Achyut Badwe, former Director of Tata Memorial Centre, Mumbai.

Dr. Badwe discussed the mechanisms of cancer metastasis, advances in breast cancer management, and cost-effective treatment strategies. The lecture offered valuable clinical perspectives and fostered scientific interaction among students, researchers, and faculty members.

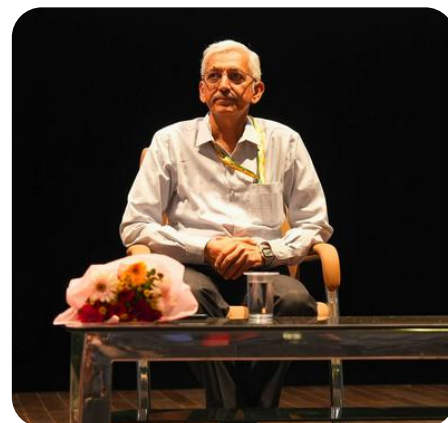


The School of Humanities and Social Sciences (SHSS), NISER Bhubaneswar, in collaboration with the Reflections Social Club and SOIL, organized a World Environment Day talk on "**The Cost of Change: Economic Realities and Social Choices in Fighting Climate Crisis**." The session focused on sustainable development and climate action.

NISER Bhubaneswar organized a colloquium on 20 April 2026 featuring Dr. V. S. Ramamurthy, Padma Bhushan awardee and former Secretary, Department of Science and Technology (DST), Government of India. His lecture, "**China: The Dark Horse of the 21st Century**," examined China's rise as a global economic power and its implications for science, technology, and innovation.



NISER Bhubaneswar celebrated National Technology Day 2026 on 11 May 2026 with a special lecture, "**India's Atomic Energy Programme: A Perspective**," delivered by Shri K. N. Vyas at the Pathani Samanta Auditorium, attended by students and faculty.



The lecture traced the growth of India's atomic energy programme, highlighting key milestones, indigenous technological advancements, and the nation's journey towards technological self-reliance in nuclear science.

NISER Bhubaneswar, through the Optica Student Chapter, celebrated the International Day of Light 2026 with lectures by Prof. Rupamanjari Ghosh on "**Harnessing Light+Matter Interactions**" and Prof. Ravindra Pratap Singh on "**Free-Space Quantum Communication**." The talks highlighted advances in quantum technologies, photonics, and optical science.

NISER Newsletter Campus Development NEW FACILITIES

Modern Spaces • Advanced Infrastructure • Better Services



CMRP Building Groundbreaking Ceremony →

On 20 February 2026, NISER Bhubaneswar marked a major milestone with the groundbreaking ceremony for the Centre for Medical and Radiation Physics (CMRP) Building. The ceremony formally launched the construction of the state-of-the-art facility, which will be built by the Central Public Works Department (CPWD).

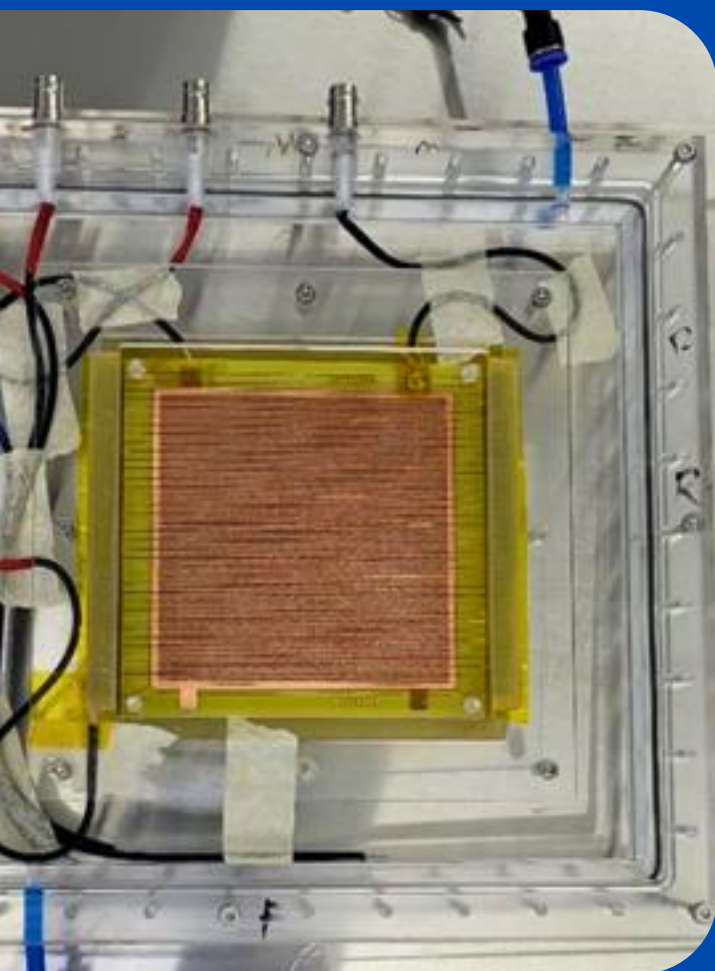
The upcoming CMRP Building is envisioned as a dedicated centre for advanced education, research, and innovation in medical and radiation physics. It will house modern laboratories, research facilities, academic spaces, and infrastructure to support interdisciplinary scientific activities.



The facility will strengthen research in radiation science, medical imaging, detector technologies, radiation dosimetry, and healthcare applications. It is also expected to promote collaboration among researchers, clinicians, and industry partners while supporting the development of next-generation technologies in medical physics and radiation instrumentation.

The new infrastructure reflects NISER's commitment to expanding world-class research facilities and fostering scientific excellence. Once completed, the CMRP Building will play a vital role in advancing cutting-edge research, training skilled professionals, and contributing to India's growing capabilities in healthcare technology and radiation sciences.





MPGD Laboratory Established at CMRP →

The Centre for Medical and Radiation Physics (CMRP), NISER Bhubaneswar, has established a Micro-Pattern Gaseous Detector (MPGD) Laboratory to advance research in radiation imaging, detector instrumentation, and medical physics. The facility supports the design, fabrication, and testing of next-generation radiation detectors for healthcare applications.

The laboratory focuses on developing low-dose X-ray imaging detectors using Thick Gas Electron Multiplier (THGEM) technology. It is equipped with detector fabrication facilities, cleanroom-compatible infrastructure, gas-handling systems, and detector characterization setups.

The MPGD Laboratory strengthens NISER's capabilities in medical imaging and radiation detection. It supports collaborative research, student training, and indigenous detector development.

Well-Equipped Dining Facility at Flatlet →

NISER has established a well-equipped dining facility at the Flatlet to enhance hospitality services for visiting delegates, guests, academic collaborators, and dignitaries. The facility features a modern kitchen, dining space, and comfortable seating to support conferences, workshops, meetings, and other institutional events.

The new facility strengthens NISER's capacity to host national and international visitors, ensuring quality catering services and a comfortable environment for academic interactions, official gatherings, and collaborative engagements.

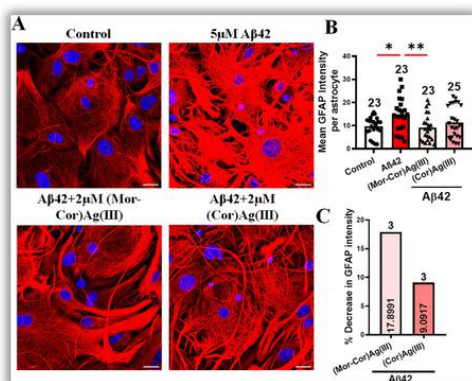
The facility was planned and operationalized under the supervision of Dr. Liton Majumdar and Dr. Narayan Rana, whose dedicated efforts were instrumental in its

successful establishment. It represents another step towards enhancing NISER's campus infrastructure and visitor support facilities. It reflects NISER's continued commitment to enhancing campus amenities and supporting academic excellence.



NISER Newsletter Advancing Science RESEARCH IMPACT

Innovation • Breakthroughs • Scientific Impact



Advanced Science
Vol. 13, Iss. 8

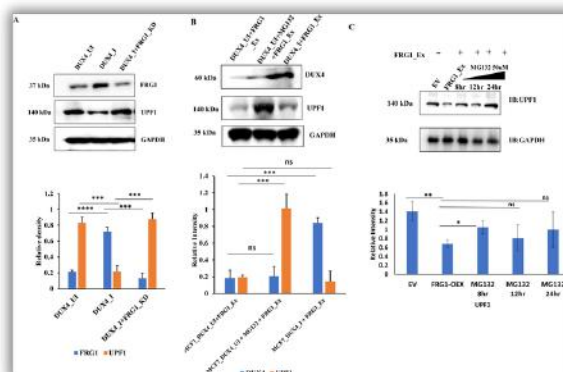
A novel silver(III) corrole complex shows promise for Alzheimer's disease therapy.

A collaborative study by researchers from the Schools of Chemical Sciences and Biological Sciences at NISER has developed a novel silver(III) corrole complex with significant therapeutic potential against Alzheimer's disease. Led by **Prof. Sanjib Kar** and **Dr. Swagata Ghatak**, the work was published in **Advanced Science**.

elife
Volume 15:
RP109138

FRG1 regulates RNA quality control, revealing new insights into disease mechanisms.

New research from **Dr. Manjusha Dixit's group** at the School of Biological Sciences has identified a previously unknown role of FRG1 in RNA quality control and gene regulation. Published in **eLife** (15:RP109138), the findings provide fresh insights into FRG1-associated disorders and open new avenues for therapeutic research.



Asian Myrmecology
Volume 19: 019003

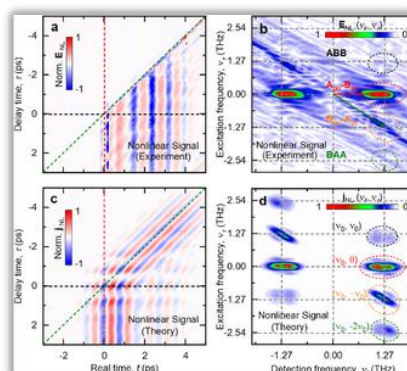
Two new army ant species discovered, expanding India's documented biodiversity.

Expanding India's documented biodiversity, researchers led by **Dr. Aniruddha Datta-Roy** (School of Biological Sciences) have discovered two new species of army ants from Andhra Pradesh. Published in **Asian Myrmecology** (19:019003), the study provides important taxonomic insights into the genus *Aenictus*.

Advanced Functional Materials
Vol. 36, Iss. 46

Revealed the ultrafast mechanism driving terahertz transparency in metamaterials.

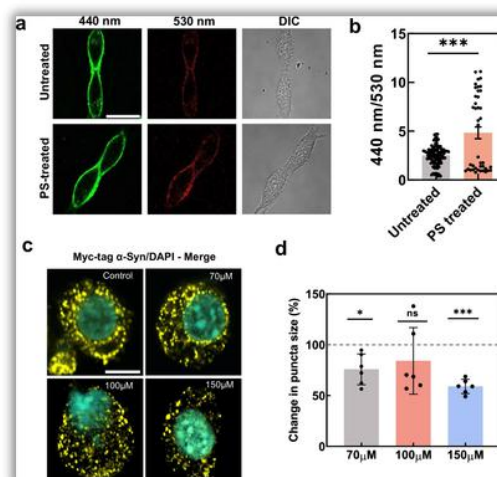
Dr. Shovon Pal and his research team have uncovered the ultrafast mechanism responsible for electromagnetically induced transparency in terahertz metamaterials. Reported in **Advanced Functional Materials**, the study advances our understanding of light-matter interactions with potential applications in future photonic technologies.



Nat
Commun
Volume 17

Researchers uncovered how lipid membranes drive α -synuclein aggregation.

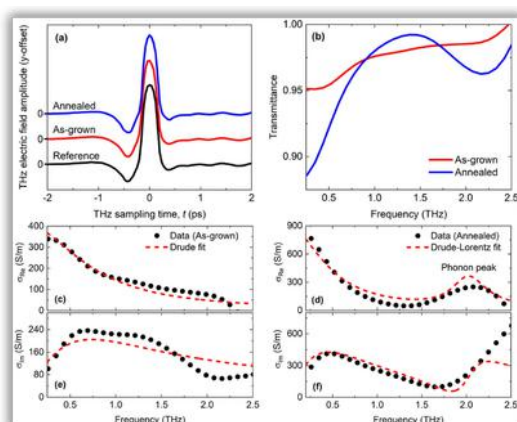
A collaborative study involving **Dr. Mohammed Saleem** and **Dr. Swagata Ghatak** has revealed how lipid membrane interfaces regulate α -synuclein condensation and aggregation associated with Parkinson's disease. Published in **Nature Communications**, the findings shed new light on the molecular mechanisms underlying neurodegeneration.



small
Volume 22
Issue 31

Researchers revealed how annealing tunes excitonic properties in 2D perovskites.

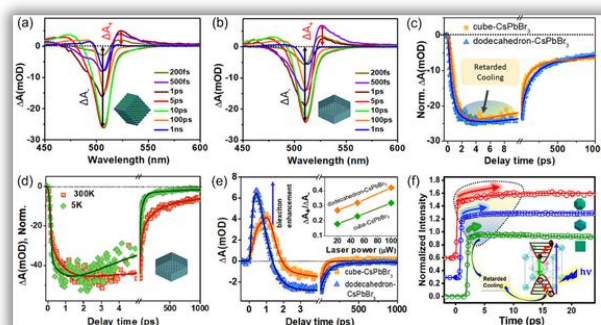
Research led by **Dr. Shovon Pal** demonstrates how thermal annealing alters the structural and excitonic properties of the 2D halide perovskite BA_2PbI_4 . Published in **Small** (2026, Vol. 22), the work highlights enhanced exciton-phonon coupling and longer carrier lifetimes, offering new possibilities for optoelectronic devices.



small
Volume 22
Issue 27

Morphology engineering boosts the performance of CsPbBr_3 perovskite nanocrystals.

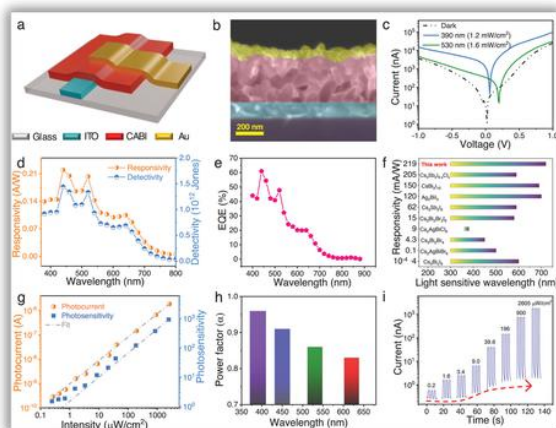
A study led by **Prof. Subhadip Ghosh** shows that morphology engineering significantly improves the photophysical properties of green-emitting CsPbBr_3 perovskite nanocrystals. Published in **Small** (2026, Vol. 22, Issue 27), the work provides valuable insights for next-generation optoelectronic applications.

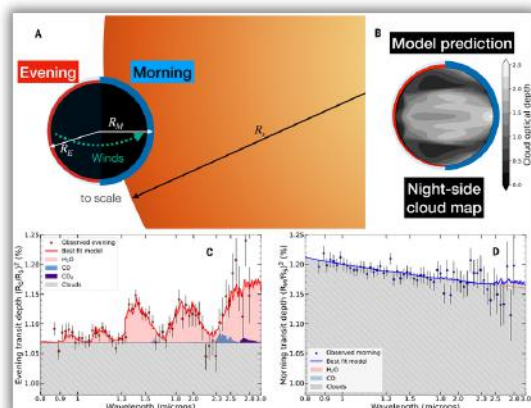


small
e73983

Lead-free $\text{Cs}_2\text{AgBi}_2\text{I}_9$ thin films enable self-powered sensing and neuromorphic functionality.

Researchers, including **Dr. Satyaprasad P. Senanayak** of NISER, have demonstrated that light-induced charge-ion interactions in lead-free $\text{Cs}_2\text{AgBi}_2\text{I}_9$ thin films support self-powered photodetection, X-ray sensing and artificial synaptic behaviour. Published in **Small** (2026, e73983), the study advances sustainable materials for future optoelectronic and neuromorphic technologies.





Science
Volume 392
Issue 6800

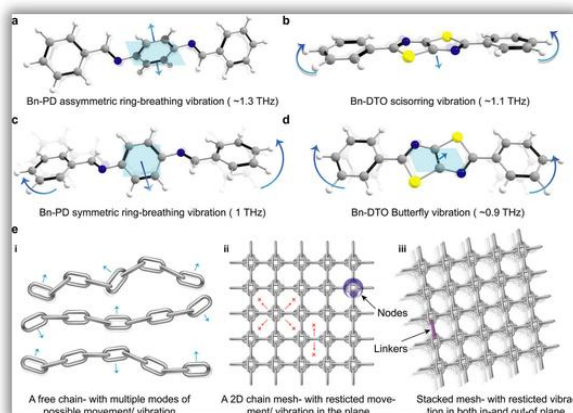
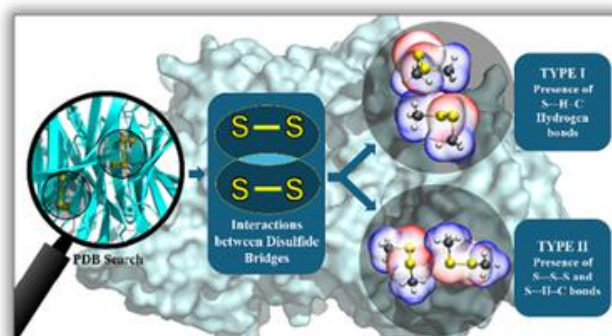
Cloud cycling shapes the atmosphere of the exoplanet WASP-94A b.

An international collaboration, including **Dr. Jayesh Goyal** at NISER, has shown that day–night cloud cycling plays a dominant role in shaping the atmosphere of the exoplanet WASP-94A b. Published in **Science** (Vol. 392, Issue 6800), the findings improve our understanding of distant planetary atmospheres.

J. Phys.
Chem. B
Volume 130

S...S chalcogen bonding plays a key role in enhancing protein stability.

Prof. Himansu Sekhar Biswal and his team have reported the first evidence of S...S chalcogen bonding between disulfide motifs in proteins. Published in **The Journal of Physical Chemistry B** and featured on the **journal cover**, the study demonstrates how these interactions contribute to protein stability and molecular design.



Angew.
Chem. Int. Ed.
Vol. 65, Iss. 25

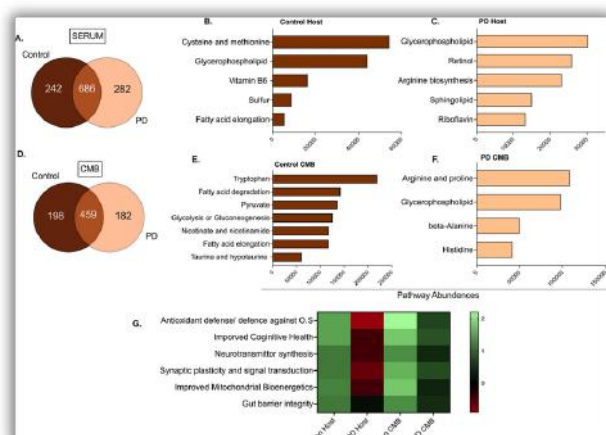
Terahertz spectroscopy provides deeper insights into charge transport in porous materials.

Research led by **Dr. Bishnu Prasad Biswal** demonstrates the application of frequency-domain terahertz spectroscopy to investigate charge transport in covalent organic frameworks. Published in **Angewandte Chemie International Edition** (2026, Vol. 65), the work provides a powerful complementary approach for developing advanced electronic and energy materials.

Experimental
Neurology
Volume 400

Gut microbiome metabolites emerge as promising biomarkers for Parkinson's disease.

A study led by **Prof. Palok Aich** has revealed how gut–metabolite–brain interactions influence the progression of Parkinson's disease. Published in **Experimental Neurology** and featured on the **journal cover**, the research identifies microbiome-derived metabolites as promising biomarkers and therapeutic targets, strengthening our understanding of the gut–brain axis.



NISER Newsletter Building Partnerships NEW ALLIANCES

Collaboration • Innovation • Shared Excellence



GALL BLADDER
CANCER RESEARCH

NISER Signs MoU with CCRH →

The National Institute of Science Education and Research (NISER), Bhubaneswar, signed a Memorandum of Understanding (MoU) with the Central Council for Research in Homeopathy (CCRH) on 10 April 2026 at Vigyan Bhawan, New Delhi, during the World Homeopathy Day 2026 celebrations. The collaboration aims to evaluate the anti-cancer potential of homeopathic medicines against gall bladder cancer through comprehensive laboratory and preclinical studies.

Collaborative Cancer Research

The partnership establishes a joint research programme to investigate the anti-cancer efficacy of homeopathic medicines using in vitro, in vivo, and mechanistic studies.

Institutional Partnership

The MoU was signed by Dr. Subhash Kaushik, Director General, CCRH, and Dr. Pranaya Kumar Swain, Acting Registrar, NISER, marking a significant step in collaborative biomedical research and scientific innovation.

Advancing Biomedical Innovation

With Prof. Manjusha Dixit serving as the Principal Investigator from NISER, the collaboration brings together expertise from both institutions to explore innovative approaches to cancer therapeutics and translational research.



NISER Alumnus Joins IIT Mandi →

Dr. Milan Pramanik, a Ph.D. (2022) graduate of the School of Chemical Sciences at NISER, has joined IIT Mandi as an Assistant Professor. Guided by Prof. Prasenjit Mal during his doctoral research, he received the Outstanding Doctoral Student Award in 2022. His appointment reflects NISER's commitment to nurturing future academic leaders.



NISER Newsletter Celebrating Success

HALL OF HONOUR

Recognition • Achievement • Excellence



PROF. C. GUNANATHAN

Selected as an **INSA Distinguished Lecturer** for contributions to sustainable catalysis.



DR. JAYESH GOYAL

Selected as an **INSA Young Associate 2026** for contributions to exoplanet and atmospheric sciences.



PROF. SUBHANKAR BEDANTA

Received the **Samanta Chandra Sekhar Award 2024** for advances in Physical Sciences.



PROF. HIMANSU SEKHAR BISWAL

Recognized among the World's **Top 5% Scientists** in the 2025 SciRank Global Registry.



PROF. PALOK AICH

European Patent granted; MicrobioTx Health named **Visionary Organization of the Year 2026**.



DR. PRANAY KUMAR SWAIN

Nominated to the Governing Body of the **Odisha Research Centre (ORC)**, Bhubaneswar.



**DR. SANJIT
CHAKRABORTY**

Joined the **editorial boards** of JETAI and the Journal of Scholarly Publishing.



DR. AMARENDRA DAS

Appointed to the **State Level Expert Appraisal Committee (SEAC)**, Odisha, and **MoSPI's** Sub Group on Mineral Accounts.



DR. NARAYAN RANA

Appointed **Guest Editor** of EPJST and **Editorial Board Member** of Discover Particle Physics.

Distinguished APPOINTMENT:



PROF. V. CHANDRASEKHAR

Distinguished Professor & Former Director, TIFR Hyderabad and NISER Bhubaneswar

Appointed as **President** of the **Chemical Research Society of India (CRSI)**

A globally recognized scientist and Fellow of INSA and TWAS, Prof. Chandrasekhar has made pioneering contributions to inorganic and organometallic chemistry.

Celebrating visionary leadership in chemical sciences!

CRSI PRESIDENT 2026

Scientific Leadership & Innovation

These achievements reflect the exceptional talent, dedication, and leadership of NISER's faculty across diverse disciplines. From prestigious national and international recognitions to editorial appointments, patents, and scientific leadership roles, these honours underscore the Institute's growing impact on research, innovation, academic excellence, and its expanding influence in the global scientific community.

STUDENT ACHIEVEMENTS – STUDENT ACHIEVEMENTS – STUDENT ACHIEVEMENTS

MR. SAIPRAKASH ROUT

Received the **Best Poster Award** at ETCS-2026.



SCHOOL OF CHEMICAL SCIENCES

MR. DILSHAD K

Awarded **The Habitats Trust Seed Grant** for Biodiversity.



SCHOOL OF BIOLOGICAL SCIENCES

MR. SMARAN BANERJEE

Received the **Best Poster Award** at EVOLVE 2026.



SCHOOL OF BIOLOGICAL SCIENCES

MR. YALEMBER DEWAN

Received the inaugural **HCWN Fellowship** for climate science.



SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

MR. SWAPNIL SAHOO

Received the **Best Poster Award** at Protistology Open 2026.



SCHOOL OF BIOLOGICAL SCIENCES

MR. DIPAM NASKAR

Received the **Best Poster Award** at COINS 2026, UNSW, Sydney.



SCHOOL OF BIOLOGICAL SCIENCES

MS. RUPALIPRIYADARSINI CHHATOI

Received the **Best Poster Award** at ICMAGMA 2026.



SCHOOL OF PHYSICAL SCIENCES

MS. SWETAPADMA TRIPATHY

Awarded **Best Poster** at HBNI Chemistry Symposium 2026.



SCHOOL OF CHEMICAL SCIENCES

DR. SWATI SAHA

Awarded the prestigious **ALICE Thesis Award** 2026 at CERN.



SCHOOL OF PHYSICAL SCIENCES

NISER LAUNCHES SUMMER INTERNSHIP PROGRAM – NSIP 2026

“

NSIP 2026 laid the foundation for nurturing the next generation of researchers by fostering curiosity, innovation, and excellence through immersive scientific training at NISER.

”

The **NISER Summer Internship Program (NSIP)** 2026, conducted from 18 May to 17 July 2026, marked the beginning of a flagship institutional initiative aimed at providing talented undergraduate and postgraduate students with an immersive, interdisciplinary, and research-intensive experience. The program enabled participants to work alongside NISER faculty on cutting-edge research projects, gain hands-on laboratory training, and interact with scientists through lectures, discussions, and institute colloquia. It offered a unique opportunity to explore interdisciplinary science in a vibrant, collaborative, and intellectually stimulating research environment.



NISER Newsletter **Funding Innovation**

GRANT HIGHLIGHTS

Innovation • Collaboration • Scientific Impact

During 2025–26, NISER faculty secured numerous competitive research grants from leading national funding agencies, including the Anusandhan National Research Foundation (ANRF), the Science and Engineering Research Board (SERB), and the Department of Biotechnology (DBT). These awards reflect the Institute's excellence in attracting support for high-impact fundamental and interdisciplinary research.



The funded projects span the biological, chemical, computational, mathematical, and physical sciences, addressing important scientific and societal challenges. They will advance cutting-edge research, strengthen interdisciplinary collaborations, promote knowledge creation, support emerging scientific innovations, and further enhance NISER's research and innovation ecosystem.

Understanding the Immunoregulatory Role of Transient Receptor Potential Ankyrin 1 (TRPA1) Channel during Chikungunya Virus Infection (ANRF)

PI: **Dr. Subhasis Chattopadhyay**

Metalloporphyrins as Catalytic Antioxidants for Mitigating Amyloid- β -Induced Neurotoxicity in Alzheimer's Disease (ANRF)

PI: **Prof. Sanjib Kar**

Co-PI: **Dr. Swagata Ghatak**

Phage-Encoded Antimicrobials for Combating Antibiotic Resistance (ANRF-PMECRG)

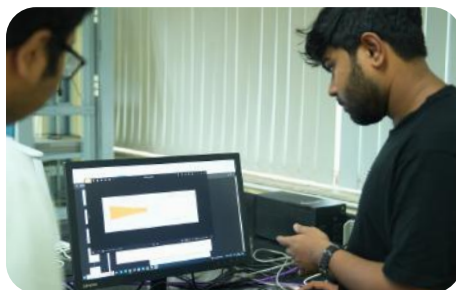
PI: **Dr. Tridib Mahata**

Fluorescent Tropolonyl-DNA: Pd-Catalyzed Nucleobase Arylation for Biochemical Applications (ANRF)

PI: **Dr. Nagendra K. Sharma**

Ultrafast Spectroscopic Exploration of Novel Materials for Advanced X-ray Scintillators (ANRF-PMECRG)

PI: **Dr. Partha Maity**



Ultrafast Charge Carrier Dynamics in Metal Halide Perovskite Heterostructures (ANRF)

PI: **Prof. Moloy Sarkar**

Co-PI: **Prof. Hirendra N. Ghosh**



Beyond Optimality: Algorithms for Computing Diverse High-Quality Solutions (ANRF-ARG)

PI: **Dr. Aritra Banik**

FPT-Approximation Schemes for Constraint Satisfaction Problems (ANRF-ARG-MATRICES)

PI: **Dr. Abhishek Sahu**

Identity Testing for Algebraic Models (ANRF-PMECRG)

PI: **Dr. Anamay Tengse**

Automorphisms of Coxeter Groups and Artin Groups (ANRF)

PI: **Dr. Tushar Kanta Naik**

ASL Structure on the Homogeneous Coordinate Ring of the Affine Grassmannian (ANRF)

PI: **Dr. Rekha Biswal**





Local Smoothing of Fourier Integral Operators and Fourier Analysis on Vector-Valued Functions (ANRF)
PI: **Dr. Ramesh Manna**

Ergodic Theorems in the Non-Commutative Setting for Amenable Group Actions (ANRF)
PI: **Dr. Panchugopal Bikram**

Zeros of Automorphic L-functions (ANRF)
PI: **Dr. Jaban Meher**

Novel Phenomena in Periodically Driven Many-Body Systems Using Classical and Quantum Computing Simulations (ANRF)
PI: **Dr. Tapan Mishra**



Josephson Nano-Junctions with Spin-Orbit Interactions in the Barrier (ANRF)
PI: **Dr. Kartikeswar Senapati**

Engineered Molecular and Hybrid Ferroelectric Materials for Electronic Sensors and Artificial Neural Learning-Based Memtransistors (ANRF)
PI: **Dr. Satyaprasad P. Senanayak**

Design, Fabrication, and Characterization of Low-Gain Avalanche Detectors (LGADs) for Ultra-Fast Timing in Radiation Detection and Medical Imaging Applications (ANRF)
PI: **Dr. Ganesh Jagannath Tambave**
Co-PI: **Prof. Bedangadas Mohanty, Dr. Ranbir Singh, and Mr. Kirti Prakash Sharma.**

ADMISSIONS & RANKINGS – ADMISSIONS & RANKINGS – ADMISSIONS & RANKINGS

NISER continued to strengthen its position as a premier institution for science education and research through the successful conduct of NEST 2026 and its outstanding performance

in the Nature Index 2025. These achievements reflect the Institute's commitment to academic excellence, research leadership, and scientific innovation consistently.

NATIONAL ENTRANCE SCREENING TEST 2026

Candidates Appeared	Examination Centres	Examination Date	Results Declared
82,538	542	6 Jun 2026	24 Jun 2026

NATURE INDEX 2025: GLOBAL RECOGNITION

Government Institution in India	Contribution to HBNI Publications	HBNI in Physics (India)	HBNI in Asia-Pacific (Physics)
#3	58%	#1	#89

NISER Newsletter Celebrating Together

CAMPUS MOMENTS

Celebrations • Activities • Memories • Community



**JAN
26**

**Honouring the Nation,
Celebrating Excellence, Unity,
and Inspiration**

NISER marked the 77th Republic Day with a solemn national flag hoisting ceremony, bringing together students, faculty, staff and officials to celebrate the spirit of the Constitution and the nation's democratic values. The occasion also featured the Star Performer Awards, recognising members of the NISER community for their exceptional service, dedication and outstanding contributions towards institutional excellence.



**FEB
16-28**

**Clean Campus, Shared
Responsibility for a Sustainable
Future**

From 16-28 February 2026, NISER observed Swachhata Pakhwada with a series of activities promoting cleanliness, environmental awareness and sustainable practices. The fortnight included the Swachhata Pledge, awareness campaigns, competitions, a waste-to-wealth exhibition, a panel discussion and a Swachhata March, culminating in a closing ceremony that reaffirmed the Institute's commitment to a clean, green and environmentally responsible campus.



**JAN
26**

**Celebrating Fitness, Teamwork,
and Sporting Spirit Across
Campus**



The 3rd NISER Sports Day, held on 26 January 2026, brought together students, faculty, staff, and their families in a vibrant celebration of fitness and community spirit. The event featured a Marathon Race honouring the nation's martyrs, followed by competitions in athletics, badminton, basketball, cricket, football, kabaddi, lawn tennis, table tennis, volleyball, and a variety of recreational events for all age groups. The celebrations concluded with a prize distribution ceremony, reinforcing NISER's commitment to an active, inclusive, and healthy campus culture through sports and recreation.



APR
01

Celebrating Odisha's Heritage, Language, and Cultural Pride with Unity



NISER celebrated Utkal Dibasa on 1 April 2026, commemorating the formation of Odisha and honouring its rich cultural heritage, language, literature, and traditions. Organized by the Odia community at NISER, the event brought together students, faculty, staff, and researchers in a vibrant celebration of the state's unique identity. The programme featured an Odia Open Mic Poetry Recitation Session, organized in collaboration with Kalinga Bhasa Mukta Mancha, where participants showcased the richness of Odia literature through poetry. The celebration fostered cultural pride, strengthened community bonds, and encouraged appreciation of Odisha's enduring literary and cultural legacy.

APR
14-20

Building a Safer Campus Through Fire Safety Awareness and Preparedness

Observing Fire Service Week 2026 from 14–20 April, NISER organised a range of activities under the theme, "Safe School, Safe Hospital & Fire Safety Aware Society – Together for Fire Prevention." Fire safety drills, live demonstrations, awareness sessions, and poster- and slogan-writing competitions engaged students, faculty, staff and campus residents throughout the week. The observance reinforced the importance of fire prevention, emergency preparedness and collective responsibility in maintaining a safe and resilient campus.

JUN
21

Promoting Health, Harmony, and Mindful Living Through Yoga

NISER joined the nationwide celebration of the 12th International Day of Yoga on 21 June 2026, embracing the theme "Yoga for Healthy Ageing." Students, faculty, staff, researchers and their families participated enthusiastically in the Common Yoga Protocol, which included asanas, pranayama and meditation. The programme also featured a Y-Break Chair Yoga Session and a Yoga Competition, highlighting the role of yoga in promoting physical fitness, mental well-being and a balanced lifestyle.



MEET OUR NEW MEMBERS – MEET OUR NEW MEMBERS – MEET OUR NEW MEMBERS

 Assistant Professor Dr. Rakesh Ratnakar Pawar Joined the School of Mathematical Sciences (06 May 2026).	 Assistant Professor Dr. Pulak Banerjee Joined the School of Physical Sciences (19 May 2026).	 Assistant Professor Dr. Sanjit Chakraborty Joined the School of Humanities and Social Sciences (19 May 2026).
 Assistant Professor Dr. Ujjal Das Joined the School of Mathematical Sciences (29 May 2026).	 Assistant Professor Dr. Tirthankar Banerjee Joined the School of Physical Sciences (23 June 2026).	 Scientific Assistant - B (MLT) Ms. Sangeeta Rout Joined the Health Centre (05 June 2026).

RESEARCH PUBLICATIONS & CITATIONS – RESEARCH · IMPACT · VISIBILITY

Total Publications	Total Citations	H-Index	Nature Index
6,380+ Scopus Indexed	2,04,627+ Global Impact	169 Research Excellence	#3 Govt. Institutes (India)

NISER Newsletter Student Engagement CLUB CHRONICLES

Clubs • Activities • Culture • Community • Events

Coding Club: Think • Code • Solve →

The Coding Club promoted technical learning through workshops, programming sessions, and student-led projects, helping members strengthen coding skills and explore emerging technologies.

The Perna Technical Session introduced participants to peer-to-peer networking and torrenting technologies.

The DSA in C Series strengthened programming fundamentals through data structures, algorithms, and practical problem-solving exercises.

The Embedded Programming Workshop provided hands-on training in Arduino, bare-metal C, register-level programming, and assembly fundamentals.



The Competitive Programming Sessions helped members prepare for coding contests while enhancing analytical and logical thinking.

The Avarice City Project initiated the development of a multiplayer economy game, providing hands-on experience in game development and software engineering.

Film Club: Cinema • Culture • Creativity →

The Film Club continued to promote cinema as a platform for cultural exchange, critical thinking, and social awareness through curated film screenings and interactive discussions.



Oscar Marathon showcased internationally acclaimed films, introducing the NISER community to diverse global cinema.

Screening of Ek Jagah Apni and Amma's Pride encouraged discussions on gender identity, inclusion, and transgender rights.

Documentary Screening – The Mali and the Parasite highlighted indigenous rights, environmental conservation, and social issues through filmmaker discussions.



Literary Club: Read • Write • Inspire →

The Literary Club continued to foster creativity, critical thinking, and literary expression through engaging events, competitions, and interactive discussions.

KHAOS 3.0 promoted teamwork, strategy, and collaboration through an interactive social deduction game.

Letterbox(d) celebrated personal expression by encouraging participants to share handwritten letters and messages.

LitWit 2.0 tested literary knowledge through an engaging quiz conducted in collaboration with Quizzone.



Creative Writing Contest encouraged participants to showcase original prose and poetry inspired by nature.

Perspectives 2.0 & 3.0 fostered critical thinking through discussions on diverse literary interpretations.

"Me, in My Dreams" celebrated Pride Month by providing an inclusive platform for creative self-expression.

Challenge of the Week (COTW) recognized creativity, consistency, and active participation in the club's literary activities.



Oorna: Nature Club: Wildlife • Conservation • Biodiversity →



Oorna continued to promote environmental awareness, biodiversity conservation, and citizen science through nature walks, ecological monitoring, and community outreach activities.

Great Backyard Bird Count (GBBC) engaged participants in birdwatching and biodiversity documentation, recording 64 bird species on the NISER campus.

SeasonWatch Citizen Science Initiative contributed 172 observations of 56 trees, securing Rank 1 in the Campus Phenology Network.

Prerna Outreach Program introduced school students to camouflage, biodiversity, and wildlife conservation through interactive activities.

Nature Awareness & Community Engagement encouraged students to explore the campus ecosystem through nature walks, discussions, and biodiversity observation activities.

Oorna promoted environmental awareness and biodiversity conservation through nature walks, citizen science initiatives, and outreach activities, encouraging students to explore, appreciate, and protect the campus ecosystem through active participation.

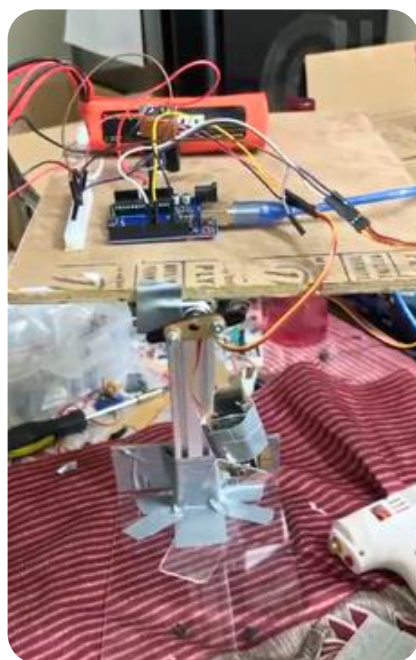


RoboTech Club: Build • Code • Create →

The RoboTech Club continued to foster innovation and hands-on learning through technical training, interdisciplinary competitions, and engineering projects, enabling members to develop practical skills in robotics, electronics, embedded systems, and real-world engineering applications.

Skill Development Program (SDP) equipped participants with practical skills in electronics, programming, microcontrollers, CAD, and 3D design.

ElectroLogic 2026 featured robotics- and physics-themed events that encouraged teamwork, interdisciplinary learning, scientific problem-solving, and creative innovation.



The Robotic Limb Project enabled members to design and develop a functional robotic limb, providing hands-on experience in robotics, embedded systems, engineering design, and prototype development.



Through these initiatives, the RoboTech Club continued to foster technical excellence, collaborative learning, and innovation, empowering students with practical engineering experience, problem-solving skills, and confidence to develop real-world technological solutions for future challenges.



Quizzone: Knowledge • Curiosity • Excel →

Quizzone continued to foster a vibrant quizzing culture through competitions, collaborative events, and intercollegiate participation, encouraging intellectual curiosity, teamwork, and general awareness.

Intercollegiate Achievements saw NISER teams emerge as finalists at IICM 2025–26 and secure Second Place in IIT Bhubaneswar's flagship quiz Que Sera Sera.

Alavidah – Farewell Quiz concluded the academic year with an engaging farewell event celebrating the spirit of quizzing and camaraderie.

Swachhata Pakhwada Quiz promoted sustainability and environmental awareness through an engaging thematic quiz.



LitWit celebrated literature through an interactive quiz organized in collaboration with the Literary Club, encouraging reading, critical thinking, and participation.

Front Cover Image By :

Subhodip Bandyopadhyay (PhD-2022)

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VIBES



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