

IISER KOLKATA Newsletter



November, 2024

Indian Institute of Science Education and Research Kolkata (IISERK) is an Institute of National Importance established as an autonomous institute for higher education by the then Ministry of Human Resource Development (now Ministry of Education), Government of India, to promote high-quality education and research in basic sciences. It is one of the seven Indian Institutes of Science Education and Research and is one of the first IISERs to be established along with IISER Pune. In terms of research output, it is considered to be one of the leading institutes in India.

IISER Kolkata Shines in Nature Index 2024 Rankings

The Indian Institute of Science Education and Research (IISER) Kolkata proudly announces its outstanding achievement in being ranked 6th among the Top 10 Leading Research Institutes in India in the academic sector, as per the Nature Index 2024. This accolade reaffirms IISER Kolkata's unwavering commitment to advancing the frontiers of science through an exceptional synthesis of cutting-edge research and education.

The Institute has garnered remarkable recognition across key scientific disciplines, exemplifying its multidisciplinary strengths. IISER Kolkata's stellar performance in Biological Sciences is reflected in its 2nd position nationally, a testament to the pioneering research conducted in molecular biology, genetics and biochemistry. Similarly, the 4th rank in Chemical Sciences underscores the Institute's contributions to sustainable chemistry, material innovation and computational modeling.

The 6th position in Physical Sciences reflects sustained efforts in advanced materials, quantum studies and cosmology, while the 9th rank in Earth Sciences highlights the Institute's impactful research addressing critical challenges in geosciences, climate science and environmental sustainability.

While these rankings spotlight IISER Kolkata's exceptional performance in individual disciplines, they collectively illustrate a cohesive and impactful research ecosystem that bridges disciplines and fosters innovation. Together, these contributions underscore the Institute's leadership in driving high-impact, interdisciplinary science.

The 6th overall ranking among India's premier research institutions reflects not only the excellence of IISER Kolkata's individual departments but also the collective commitment of its faculty, researchers and students to advancing knowledge and addressing society's most pressing challenges. This recognition serves as a clarion call for continued dedication to scientific inquiry and innovation. IISER Kolkata remains steadfast in its mission to inspire the next generation of scientists and contribute meaningfully to the global scientific community, embodying the spirit of excellence that defines its ethos.



Director, IISER Kolkata was the Chief Guest at the Curtain Raiser Program for the India International Science Festival [IISF 2024] held at Indian Association for the Cultivation of Science, [IACS, Kolkata] on 20th November, 2024. Director emphasized the current research needs of the country and motivated the students for innovative solutions.

Students Achievements

Ms. Yoshita Baruah (Roll No. 19IP016) a student of the IPhD program of Department of Physical Sciences pursuing her PhD on space weather research at the Center of Excellence in Space Sciences India (CESSI) was featured as the Young Researcher of the Month in the 16th issue of Indian Network of Dynamical and Unified Solar Physicists (INDUS) newsletter.



Dr. Souvik Roy (Roll No. 18RS037), a recent PhD graduate from the Center of Excellence in Space Sciences India (CESSI) received full financial support from the organizers to participate in the European Space Weather Week (ESWW) 2024, held in Coimbra, Portugal, from November 4 to 8, 2024. He presented his PhD work on a theoretical and computational model based explanation of the observed seasonality of geomagnetic storms.

Faculty Members Achievements

Prof. Priyadarsi De has been selected as an IPUAC Iconic Polymerization Steering Committee Member to represent India. He has also been selected to receive the MRSI Medal for 2024.



Prof. Alakesh Bisai has been elected as the Fellow of the National Academy of Sciences (NASI), India.

Prof. Amitava Das has been selected as 'Distinguished Professional' based on the expression of Interest received under AICTE Distinguished Professional Scheme for a period of three years or on attaining the age of 75 years.



Constitution Day Celebrations



The Constitution Day (संविधान दिवस) was celebrated at IISER Kolkata on 26th November 2024. The event began with an introduction by Dr. Kripabandhu Ghosh, Assistant Professor, IISER Kolkata, who highlighted the importance of the day and invited the dignitaries for the ceremonial lamp lighting. The ceremonial lamp was lit by the Dean of Academics, Prof. Rangeet Bhattacharyya, Dr. Kripabandhu Ghosh, Dr. Anirban Banerjee (Associate Professor), and the esteemed guest, Prof. Sumit Mukherji from Kalyani University.

Prof. Bhattacharyya then delivered the welcome address, providing an insightful overview of the significance of Constitution Day. He also felicitated Prof. Mukherji, the invited guest speaker. Following this, Prof. Mukherji delivered a special lecture titled "The Role of the Indian Constitution in Shaping Modern India," where he elaborated on the pivotal role the Indian Constitution has played in establishing a democratic society.

An interactive session was organized, where attendees engaged in discussions on constitutional rights and duties, fostering an atmosphere of active participation and thought-provoking dialogue.

The event concluded with a vote of thanks by Dr. Kripabandhu Ghosh and the singing of the National Anthem.

Jan Jatiya Gaurav Diwas Celebrations



On 21st November 2024, IISER Kolkata commemorated Jan Jatiya Gaurav Diwas in honor of the tribal leader Bhagwan Birsa Munda. The celebration began with a ceremonial lamp lighting, led by the Dean of Administration, Prof. Amitava Das, along with Dr. Kripabandhu Ghosh, Dr. Anirban Banerjee, and Dr. Debdatta Chowdhury (Assistant Professor, Centre for Studies in Social Sciences, Calcutta). Following the lamp lighting, floral tributes were offered to Bhagwan Birsa Munda, honoring his contribution to India's tribal communities. The Dean of Administration, Prof. Amitava Das, delivered the welcome address and felicitated the

invited guests, including Prof. Debdatta Choudhury. A speech on Bhagwan Birsa Munda was presented by Ms. Tanisha Nath, a BSMS student from IISER Kolkata, adding a student perspective to the event. Certificates were awarded to students and staff who participated in the essay competition held in connection with the celebrations. Dr. Kripabandhu Ghosh and Dr. Anirban Banerjee introduced Dr. Debdatta Choudhury, who delivered an inspiring speech on tribal heritage and the significance of Bhagwan Birsa Munda's leadership. The event concluded with a vote of thanks delivered by AR, SA and the singing of the National Anthem.

Celebrating Service and Aiding Humanity: Guru Nanak Jayanti Langar and Blood Donation Drive



Our campus embraced the values of service and compassion through two meaningful events, during this month, bringing together students, faculty, and the larger community.

On 15th November 2024, Guru Nanak Jayanti, marking the birth of Guru Nanak Dev Ji, the founder of Sikhism, was celebrated with a Langar organized at Gate 7 of IISER Kolkata. Langar, a traditional Sikh practice, involves serving meals to all, free of charge, irrespective of religion, caste, gender, or economic status. For the first time, such a large scale event led by the student-community, which involved serving meals to over 1,200 people, took place in a very grand manner, imbining satisfaction to everyone. This selfless effort aligned with the core values of Sikhism, emphasizing equality, unity, and the eradication of hunger. The contribution of students along with the Gurpurab Organizing committee was very vital in the success of this event.

Following this, on 21st November 2024, the Student Affairs Council: Food and Health Affairs (SAC FHH) organized a Blood Donation Drive at the RN Tagore Auditorium. This initiative encouraged students and faculty to contribute to a life-saving cause, demonstrating the power of collective efforts in making radical changes. The drive witnessed overwhelming participation, with 83 potential donors and crucial life savers, reaffirming our commitment to community welfare.

Both events highlighted the humanitarian values that define the culture of our campus. We extend our heartfelt thanks to everyone who contributed and participated, making these endeavors impactful and inspiring.



Seminars, Lectures and Colloquia

[DCS Seminar (Dr. Chayan Kr. De)] Dr:Chayan Kr.De (IISER-K) Date: Friday, Nov 01, 2024, Time: 1:45 p.m. - 4 p.m.

[DPS Seminar] Prof. Yuval Gefen (Weizmann institute) -- Can We Measure Entanglement in Particle Interferometers? Date: Monday, Nov 04, 2024.

[DCS Visitor Seminar] Dr. Jayanta Ghosh (Elettra Sincrotrone Trieste, Italy) -- Controlled Coherent Electronic Excitation in Molecules: Applications in Quantum Information and Molecular Chirality, Date: Wednesday, Nov 06, 2024.

[DPS Colloquium] Prof. Banibrata Mukhopadhyay (Indian Institute of Science, Bangalore) -- White dwarf and type Ia supernova: Chandrasekhar limit and its violation, Date: Wednesday, Nov 06, 2024.

[DMS seminar] Dr. Suratno Basu (IAI, TCG Crest, Kolkata) -- On Ulrich bundles. Date: Wednesday, Nov 06, 2024.

[DBS Seminar] Dr. Shilpak Chatterjee (Principal Scientist, DBT/Wellcome Trust India Alliance Intermediate Fellow, Cancer Biology and Inflammatory Disorder Division, CSIR-Indian Institute of Chemical Biology, Kolkata, India), Date: Wednesday, Nov 06, 2024.

[DPS Colloquium] Prof. Mustansir Barma (Tata Institute of Fundamental Research, Hyderabad, India) - Clustering and Correlations from Shared Histories and Long Range Interactions, Date: Thursday, Nov 07, 2024.

[DCS Visitor Seminar] Dr. Jatish Kumar (IISER Tirupati) -- Optically Active Molecules and Materials: From Chiral Light Absorption to Chiral Light Emission, Date: Friday, Nov 08, 2024.

[DPS Seminar] Dr. Sayan Choudhury (Reader F, HRI Allahabad) -- A Counterdiabatic Route to Entanglement Steering and Dynamical Freezing in the Floquet Lipkin-Meshkov-Glick Model, Date: Monday, Nov 11, 2024.

[DMS Seminar] Dr. Purvi Gupta (IISc, Bangalore) -- Topological rigidity (and flexibility) of rational and polynomial convexity, Date: Thursday, Nov 14, 2024.

[DPS Seminar] Dr. Sunil Kumar (Indian Institute of Technology Delhi) -- Photoinduced THz transient currents in solids and interfaces, Date: Wednesday, Nov 20, 2024.

[DBS Seminar] Dr. Rakhi Pal -- Harnessing the power of patient-derived iPSCs in neurological disorders- insights from neurodevelopment and stress, Date: Wednesday, Nov 20, 2024.

[DCS Colloquium] Dr. Arnab Maity (Technion, Israel Institute of Technology) -- Advanced Bioelectronic Device for Environmental, Oncological, Neurological and Chiral Quantum Technological applications, Date: Thursday, Nov 21, 2024.

[DCS Visitor Seminar] Dr. Sriloy Dey (The Ohio State University) -- Plastic pollution is a persistent challenge worldwide, Date: Thursday, Nov 21, 2024.

[DPS Seminar] Dr. Zyuzin Alexander (Aalto University, Finland) -- Electron transport and superconductivity in doped SrTiO₃, Date: Friday, Nov 22, 2024.

[DCS Visitors' Seminar] Professor Sundar Gopal Ghosh (IIT Madras), Date: Tuesday, Nov 26, 2024.

[DPS Seminar] Dr. Manohar Kumar (Aalto University, Finland) -- Half-quantized Hall Plateaus in the Confined Geometry of Graphene, Date: Wednesday, Nov 27, 2024.

[DPS Seminar] Dr. Saikat Chakraborty (Institute for Fundamental Study (IF) Thailand) -- Distinguishing Λ CDM-mimicking $f(R)$ models from the actual Λ CDM model, Date: Wednesday, Nov 27, 2024.

[Institute Colloquium] Prof. Nigel Mason (University of Kent, Canterbury) -- Humans as an extra-terrestrial species: Our next great adventure, Date: Wednesday, Nov 27, 2024.

[DPS Colloquium] Professor Nigel Mason (University of Kent, Canterbury) -- Atomic, Molecular and Optical physics. Understanding and controlling our world (and the Universe!), Date: Thursday, Nov 28, 2024.

