

February 2024

IISER KOLKATA

MONTHLY NEWSLETTER



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.

Institute Open Day 2024



IISER Kolkata celebrated National Science Day on 28 February 2024 as Institute Open Day at its green campus in Mohanpur with great zeal and enthusiasm. Around 1200 visitors from across 40 schools and ten colleges from the districts of North 24 Parganas, Nadia, Hooghly, Kolkata and Bankura participated in the event. All the departments, centres, and student clubs, like Pixel, Nature Club and Ek Pehal, contributed a great deal to the success of the event. Teaching and research lab visits at the institute's departments, showcasing cutting-edge research facilities, setting up a telescope by CESSI, interactions with young researchers, students and professors, popular talks by professors and research students, displays, exhibitions and poster presentations enthralled all the visitors. The chief guest, former director of IISc Bangalore, Prof. P. Balaram, officially inaugurated the documentary, "Acharya Prafulla Chandra Ray: A Chemist, A Humanist", made by IISER Kolkata. His popular science talk, "The Origins of Life: The Evolution of Biochemistry and the Birth of Biology", captivated the audience at the R N Tagore Auditorium.

Achievements



Dr. Niladri Modak
(DPS) Roll No.16IP018

Dr. Niladri Modak, Roll No.16IP018 former PhD student of Prof. Nirmalya Ghosh, DPS has been selected as the winner of the Best Thesis Award at the National Physicists' Conclave 2024 (NPC 2024) by the esteemed jury members from the nation's top institutions. NPC 2024 is a prestigious gathering of physicists, physics enthusiasts, researchers, and experts from across India.



Jeeban Kumar Nayak
(DPS)
Roll No.19RS027

PhD student Mr. Jeeban Kumar Nayak's paper titled, "Spin-Direction-Spin Coupling of Quasi guided Modes in Plasmonic Crystals" has been selected as the Best Publication of the Year 2023 at the National Physicists' Conclave 2024 (NPC 2024). He is working under supervision of Prof. Nirmalya Ghosh, DPS.



Tanumoy Mandal
(DCS)
Roll No.17RS032

Mr. Tanumoy Mandal, PhD student of Dr. Suman De Sarkar, DCS received the best poster award at the recent International Symposium on Fostering Catalysis for Social Benefit (FCSB), an Indo-French Conference held at the University of Hyderabad during 15-17 January, 2024.



Dr. Aakash Anand
(DES)
Roll No.15RS003

Dr. Aakash Anand, former PhD student of Dr. Kajaljyoti Borah, DES has received European Geosciences Union (EGU) -Early Career Scientist's Travel Support for attending the EGU 2024 conference at Vienna, Austria. The grant covers a registration waiver for participating in the EGU General Assembly 2024. In addition, a financial support of the amount of 180 EUR together with the refund of the abstract processing charge (APC) of EUR 50 will be provided.



Subinay Adhikary
Roll no: 21RS094

Subinay Adhikary (CDS), PhD student under the supervision of Dr. Kripabandhu Ghosh and Dr. Dwaipayan Roy, has been selected for the prestigious Chanakya Ph. D. Fellowship at AI4ICPS Innovation Hub, IIT Kharagpur for 1 year. He will be offered Rs. 42,000.00 per month, a one-time contingency amount of Rs. 60,000.00, and HRA as applicable.



Souvik Karmakar
Roll no: 20RS069

Souvik Karmakar, a PhD student of Prof. Jayasri Das Sarma, Department of Biological Sciences, won the best oral presentation award at the 6th International Conference on Nutraceuticals and Chronic Diseases (INCD-2024) held at Panjab University, Chandigarh, India, from February 22-24, 2024. The presentation was titled "Understanding the Antiviral Potential of Azadirachta indica Bark Extract and Tinospora cordifolia Stem Extract against Murine β -coronavirus Infection."



4 students from 22MS batch, who had participated for Mimamsa 2024, conducted by IISER Pune on 28th January, 2024, an all-India science competition on all different disciplines, Physics, Chemistry, Mathematics, Biology and Earth Sciences, have been declared as the Zonal Toppers for Zone Kolkata. (From left to Right - Arpan Mukherjee, Roll No.22MS151; Shamba Chakraborty, Roll No.22MS135; Shuvam Banerji Seal, Roll No. 22MS076; Pritam Sadhu, Roll No.22MS140).



Ammu J K
Roll no.20RS147

Ammu J.K. (Roll No.20RS147), a PhD student of Dr. Kathakali Bhattacharyya, Department of Earth Sciences, has received the Best poster award at the 'Deformation mechanisms, processes, and fabric analysis in Earth materials from the global to the nanoscale-methods and applications' workshop organized by International Association

for Structural Geology and Tectonics (IASGT) at IIT Kharagpur from 26-28 February 2024. The title of the poster is: "Investigating relative roles of increasing structural distance from fault zone and mechanical anisotropies in localizing fractures: Insights from fracture characterization and attribute study, Ramgarh thrust, Sikkim Himalaya"



Pradip Pattanayak
Roll No.19RS051

Pradip Pattanayak (Roll No.19RS051), a PhD student of Prof. Pradipta Purkayastha, Department of Chemical Sciences was selected and participated in the 31st State Science and Technology Congress, held on 28-29th February, 2024 at Science City, Kolkata. His presentation was awarded as "Outstanding Paper" in the Chemical Science category. Prior to

this he received the "Outstanding Paper" award in the Regional Science Congress held at Kalyani University, where he was selected to compete in the State Level.



Avijit Mainan
Roll No.20RS116

Avijit Mainan (Roll No.20RS116), a Ph.D. student of Dr. Susmita Roy, Department of Chemical Sciences, has won American Chemical Society (ACS) best poster award at the Inter IISER NISER Chemistry Meet 2024 (IINCM 24) held in IISER Kolkata during February 23-25, 2024.

A few of our students have been successfully placed at M/s Macleods Pharmaceuticals Limited following the Campus Interviews conducted by the company on 10th January 2024.

Here are the names of the successful students:

Debabrata Biswas (16IP003)
Sourabh Biswas (18RS107)
Saikat Bag (19RS041)
Tanumoy Mandal (17RS0032)
Ms. Trizal Pal (18RS066)

Dr. Surashree Dutta, Jr. Translator Rajbhasa received Anuvad Sahitya Samman 2024 from the Honourable Governor at EZCC, Saltlake



Prof. Adrian Kent, Department of Applied Mathematics and Theoretical Physics, University of Cambridge, visited IISER Kolkata on 05.02.2024 and delivered an Institute Colloquium on the topic "Quantum Theory, Relativity, and Reality."

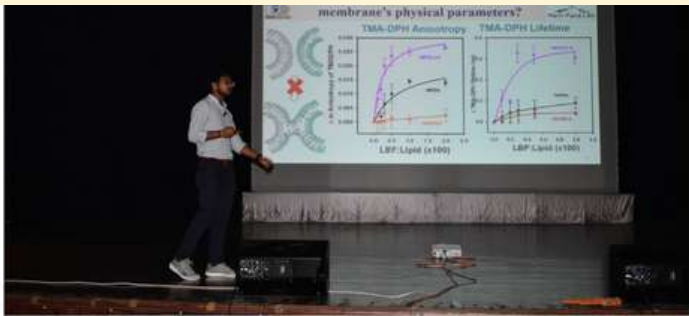


IISER Kolkata recently signed an MoU with Central Drug Research Institute (CDRI) Lucknow.



IISER Kolkata celebrated International Day of Women and Girls in Science with Prof. Vibha Tandon, Director, CSIR- Indian Institute of Chemical Biology (IICB) as the speaker for the Day.

DCS Day 2024



The DCS Day 2024 was observed on February 22, 2024, with inspiring talks from mainly the students, with presentations ranging from innovative synthesis to groundbreaking discoveries in materials science, fostering collaboration & enthusiasm, showcasing a vibrant research culture within the department.

Darwin Day 2024



On the 12th of February, 2024, the Indian Institute of Science Education and Research (IISER) Kolkata organised its first momentous celebration of Darwin Day. This day highlights Darwin's contributions to the natural sciences and commemorates the birthday of Charles Darwin on 12 February 1809.

For the first time, on Darwin Day 2024, IISER Kolkata opened its gates to students of classes VII and VIII from local schools. The enthusiastic crowd meticulously partook an interactive workshop on the theme "Gene, genome and me" by the ever zealous and charismatic Professor of Biology, Gautam Basu. "This is the best way to celebrate - inculcate curiosity and evolutionary thought in the young minds. I am sure the workshop will be a delightful one.", said Dr. Anindita Bhadra (associate professor of the Department of Biological Sciences at IISER Kolkata and one of the main organizers of the event), in anticipation and excitement.

By 1:00 o'clock in the afternoon, IISER Kolkata was filled with the expectant hustling and bustling of enthusiastic and inquisitive students from nearby schools, including Satish Chandra Memorial School (Chakdaha), Bongaon High School, Ghoshpara Saraswati Trust Estate School, Anandanagar High School (Barajaguli), Delhi World Public School (Kalyani), Don Bosco (Kalyani), Nagendra Bala Balika Vidyalaya (Chandmari), and many others. Over 500 students accompanied by their teachers from over 30 nearby schools joined the workshop to make it a huge success.

The workshop included a detailed lecture on how evolution and genetic molecules contribute to making us the way we are. Language was no bar, as the proceedings were entirely in the local vernaculars, focussed mostly on Bengali. This was followed by a fun paper folding activity in making a DNA strand by the Japanese paper folding art, origami.

As a surprise later on, Arpan Bhattacharya and Srijaya Nandi, 3rd year PhD students quizzed the students on fundamental facts mentioned throughout the day, something that the students participated in with vigour.

The discussions led to long-drawn question and answer sessions at times which Prof. Basu attended to in great detail and to the satisfaction of the eager audience. "It was a matter of delight to be the speaker on 12th of February 2024, the Darwin's Day, organized at IISER Kolkata. I was happy to interact lucidly with hundreds of school children and give them insights about Darwin's theory of evolution of life that was revolutionary which brought about a paradigm shift in Biology.", commented Prof. Basu, when asked about his experience.

An awestruck Pinki, from the eighth grade, said she had heard about Darwin's research in bits and pieces before but this was the first time she had been taught about his work to such detailed extent and she loved it. Her friend Paromita chipped in saying she loved the quiz because she answered two questions correctly back-to-back, and happily showed off her prizes. Shriparna Chattopadhyay, one of the hosts for the event, said, "It was an utterly pleasant experience to host the Darwin's Day programme on 12th of Feb 24, and I feel privileged to witness Dr. Gautam Basu, his talk and interaction with hundreds of school children. Looking for more such events from IISER Kolkata...".

Darwin Day 2024 was celebrated at IISER Kolkata this year with an outreach event for local schools. The first of its kind, this event received overwhelming appreciation and IISER Kolkata hopes to carry forward the trend, and through initiatives like this, inspire young minds and the general public to take up studies on the natural sciences with passion.

Seminars and Colloquia:

[STED workshop] STED workshop -- STED workshop, Date: Thursday, Feb 01, 2024.

[DPS Seminar] Dr. Bhaskar Mukherjee (UCL, London) -- Iskinetic constraint sufficient to generate quantum many-body scars ? Date: Thursday, Feb 01, 2024.

[Seminar of Dr Jana] Kaushik Jana -- Causal Analysis at Extreme Quantiles, Date: Friday, Feb 02, 2024.

Workshop on Waste to Wealth, Date: Friday, Feb 02, 2024.

[DES Seminar] Dr. Mukund Sharma (Birbal Sahni Institute of Palaeosciences) -- Understanding the Origin and Evolution of Early Life, Date: Monday, Feb 05, 2024.

[Institute Colloquium] Prof. Adrian Kent (Cambridge University) -- Quantum Theory, Relativity, and Reality, Date: Monday, Feb 05, 2024.

[DPS Seminar] Dr. Sibasish Ghosh (The Institute of Mathematical Sciences) -- General teleportation channel in Fermionic Quantum Theory, Date: Tuesday, Feb 06, 2024.

[DMS Seminar] Dr. Debashis Samanta (Department of Mathematics & Statistics, Aliah University), Date: Wednesday, Feb 07, 2024.

[Women in Science Day Celebration] Prof. Vibha Tandon (CSIR-Indian Institute of Chemical Biology (IICB)), Date: Wednesday, Feb 07, 2024.

[DBS Seminar] Ms. Swagata Dey (PhD Student, Weizmann Institute of Science, Israel (* IISER Kolkata Alumni Talk)) -- Kinesin superfamily protein 2A gates nociception, Date: Wednesday, Feb 07, 2024.

[Placement Related Talk] Prof. Anant Kapdi (ICT Mumbai) -- Placement Related Talk, Date: Thursday, Feb 08, 2024.

[DES and NCHPS Seminar] Dr. Sujoy Ghosh (IIT Kharagpur) -- Formation of High-Pressure Minerals in Shocked Chondrites Date: Monday, Feb 12, 2024.

Celebration of Darwin Day, Date: Monday, Feb 12, 2024.

[DPS Seminar] Dr. Rajibul Shaikh (Seoul National University of Science and Technology) -- Black holes and their mimickers in light of the recently observed shadows of Sagittarius, Date: Feb 14, 2024.

[CESSI Colloquium] Shyama Narendranath (UR Rao Satellite Center, ISRO) -- Mapping lunar surface chemistry using X-ray fluorescence Spectroscopy, Date: Wednesday, Feb 14, 2024.

[DPS Seminar] Dr. Hemanta Kundu, Date: Thursday, Feb 15, 2024.

[DPS Seminar] Dr. Chandan De, Date: Friday, Feb 16, 2024.

[CESSI Colloquium] Amit Kumar Patra (National Atmospheric Research Laboratory, Tirupati) -- Dynamical Coupling in the Earth atmosphere-ionosphere system - some intriguing aspects Date: Friday, Feb 16, 2024.

[DBS Seminar] Dr. Prosenjit Pal (Senior Research Associate (Prof. Dario Alessi's Lab), MRC Protein Phosphorylation & Ubiquitylation Unit, University of Dundee, Scotland, UK) -- Phosphorylation of Rab GTPases, Lysosomal Dysfunction, and Parkinson's disease, Date: Friday, Feb 16, 2024.

[DPS Seminar] Dr. James Lourembam, Date: Monday, Feb 19, 2024.

[DCS Seminar] Prof. AK Mishra (IIT Madras), Date: Tuesday, Feb 20, 2024.

[DPS Seminar] Dr. Arka Santra (Weizmann Institute of Science, Israel) -- Search for periodic signals in the dielectron and diphoton invariant mass spectra using pp collisions with the ATLAS detector, Date: Wednesday, Feb 21, 2024.

[DMS Seminar] Dr. Baidya Nath Mandal (ICAR-Indian Agricultural Research Institute Jharkhand), Date: Wednesday, Feb 21, 2024.

[Institute Colloquium] Prof. Thorsten Schaefer (Friedrich-Schiller-Universität Jena, Germany) -- Current & future challenges of energy transition: global perspective, Date: Wednesday, Feb 21, 2024.

[DMS Seminar] Dr. Tanmay Sen (Ericsson India Global Services Private Limited), Date: Thursday, Feb 22, 2024.

[DCS Visitor Seminar] Prof. Kazuhiro Takanabe, Date: Monday, Feb 26, 2024.

[Institute Open Day Talk] Departmental (IISER Kolkata), Date: Wednesday, Feb 28, 2024.

[DMS seminar] Dr. Soumya Bhattacharya (IISER, Kolkata) -- Fingerprints of irreducible holomorphic eta quotients, Date: Thursday, Feb 29, 2024.

[DPS Seminar] Dr. Arghajit Jana (Universidad Diego Portales, Santiago, Chile) -- Exploring Changing-Look AGNs from Long-term Multiwavelength Observations, Date: Thursday, Feb 29, 2024.

[DBS Seminar] Dr. Amit Tuli (Principal Scientist, CSIR - Institute of Microbial Technology, Sector 39A, Chandigarh) -- Modulation of Rab7 GTPase activity by SARS-CoV-2 virulence factor ORF3a Date: Thursday, Feb 29, 2024.

[SPIE Talk] Dr. Avinash Kumar (Yale School of Medicine) -- Anomalous relaxation in colloidal systems, Date: Thursday, Feb 29, 2024.