

OPJU O.P. Jindal University, Raigarh

NEWSLETTER

October 2024 • Volume-4 • Issue-10



A Night of Grace and Beauty: **Dandiya Celebration at OPJU**



On the auspicious occasion of Navratri, the University community came together to celebrate Dandiya Night on 9th October 2024. Students, staff, and faculty members graced the campus with their presence, creating a vibrant and festive atmosphere. The night was filled with energy, color, and the rhythmic beats of dandiya sticks.









Events and Activities

The School of Management Triumphantly Hosted ICRIEMSD-2024

The School of Management, in collaboration with Sohar University (Oman), Jose Maria College Inc. (Philippines), and Metropolia University of Applied Sciences (Finland), successfully hosted the 5th *International Conference on the Role of Innovation, Entrepreneurship, and Management for Sustainable Development (ICRIEMSD-2024)* on October 17-18, 2024. The hybrid event brought together experts from around the world to discuss sustainable development.





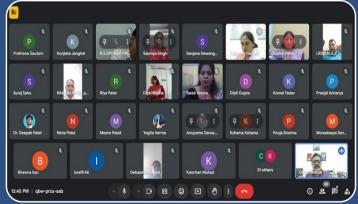
Over 180 Delegates from 7 Countries Participated in ICRIEMSD-2024

A diverse group of over 180 researchers, faculty members, students, and industry experts from seven countries, including Oman, Nepal, the USA, Zimbabwe, and India, converged at ICRIEMSD-2024. They presented research papers across four technical sessions with 16 thematic tracks, showcasing a wide range of expertise and perspectives.

2 Celebrating Student Success: Online PTM by Department of Computer Science & Engineering

The Department of Computer Science & Engineering, SoE, successfully organized an online *Parents-Teacher Meeting (PTM)* on October 23-24, 2024, for 3rd and 5th-semester students. The meeting aimed to discuss academic performance and achievements, fostering open dialogue between parents and teachers.





Successful Virtual Parent-Teacher Meeting by the School of Science

The School of Science successfully hosted a virtual *Parent-Teacher Meeting (PTM)* on October 28, 2024, to foster strong communication between parents and the institution. The meeting was divided into three sessions to cater to the specific needs of 1st, 2nd, and 3rd-year students. A total of 175 parents actively participated in the event, engaging in discussions about their wards' progress and addressing any concerns.

4

Webinar on Earthquake Resistant Structural Design Software

The Department of Civil Engineering, SoE, in collaboration with the OPJU Eco-Club, organized a webinar on October 7, 2024, to *introduce MvDad Cloud-based RC Building Earthquake Resistant Structural Design Software.* The webinar featured Mr. B.P. Karamchandani, the founder and CEO of MvDad Software, as the key speaker. Dr. Anurag Sharma served as the coordinator of the event.





5 Webinar on Sustainable Road Designs

The Department of Civil Engineering, SoE, in association with IC ACI OPJU Students Chapter and IIC, organized a webinar on *Sustainable Road Designs: Green Construction and Materials Practices* on October 18, 2024. The speaker of the workshop was **Dr. Vandana Tare**, and the event was coordinated by **Ms. Tulika Gupta**.



Project Model Competition on Engineers Day

The Department of Electrical Engineering, SoE, successfully organized a *Project Model Competition* on Engineers Day, October 15, 2024. The event showcased the innovative talents of students from various engineering fields, who displayed twelve impressive hardware projects. Mr. Rakesh Patidar and Mr. Shashikant Kaushalay coordinated the competition.

Himanshu Tripathi secured the first prize, while **Anshuman** and his team and **Ajay Kumar Soni** were awarded the second and third prizes, respectively.





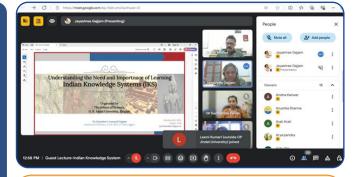
7 Celebrated Navratri Through Cinematic Expression

The School of Science, in association with the Cine Club, organized a competition called *Reel Tales* based on the theme of Navratra on September 26, 2024. The event was judged by Dr. Mahashakti Mahamaya and Dr. Deeptimayi Swain. Dr. Arindam Patra, Dr. Suchismita Panda. Dr. Kavita Patel, and student members of the Cine Club actively contributed as coordinators and moderators.

8 Webinar on TOEFL/IELTS Insights for Undergrads

The School of Science organized a webinar on October 8, 2024, to guide students in their pursuit of international education. The session, titled *Navigating Your Academic Journey Abroad: TOEFL/IELTS Insights for Undergrads*, featured **Dr. Ravi Shankar Panicker**, Principal of BIT Raipur College of Commerce Arts and Management, as the expert speaker. **Dr. Suchismita Panda** served as the coordinator of the event.





Expert Session on Indian Knowledge System: Unravelling the Wisdom of the Past

The School of Science organized an expert session on *Understanding the Need and Importance of Learning Indian Knowledge System* on October 9, 2024. The resource person for the webinar was **Dr. Jayshree Aanand Gajjam**, Assistant Professor at IIT Kharagpur. The event was coordinated by **Dr. Arindam Patra**.

10 Quiz Competition on Ancient Mathematics

The School of Science, in collaboration with the Technical Club (Tech X), organized a captivating *Quiz Competition* on October 16, 2024, to dive into the fascinating world of ancient mathematics.



OPS Hap Camer.

Beyond the Classroom: Green and Healthy Initiative Mechanical Department Serve the Community

Twenty-six enthusiastic 3rd semester Mechanical Engineering students, under the guidance of **Dr. Jitesh Singh** and **Dr. Hemant Naik**, actively participated in a community outreach program on October 22, 2024. The program, organized by the Department of Mechanical Engineering in association with NSS (OPJU) and under the AICTE Activity Points Programme, aimed to raise awareness about cleanliness, plantation, and women's health in Tumidih Village and Tumidih Middle School, Raigarh.

B.Tech Metallurgical Engineering Students Get Hands-On at TSD Rolling Mill

The Department of Metallurgical Engineering, organized an industrial visit for B.Tech 5th semester students to TSD Rolling Mill, JSP Raigarh on October 17, 2024. This visit provided students with a first-hand opportunity to witness the process of identifying various types of inclusions in casted products. A total of 13 students participated, accompanied by **Dr. Trinath Talapaneni**, and **Mr. Nishit Agrawal**.



13

A Metallurgical Engineering Field Trip at NALWA Steel and Power Limited

The Department of Metallurgical Engineering organized an insightful industrial visit for B.Tech 3rd semester students to NALWA Steel and Power Limited in Taraimal, Raigarh on October 24, 2024. This visit offered students a valuable opportunity to observe and learn firsthand about the various stages involved in the production of TMT bars. A total of 12 students participated, accompanied by Dr. Prasenjit Biswas, and Mr. Yallapu Santhosh Kumar.



14

Three-Day Workshop on Innovative Power Electronics Learning with Arduino

The Department of Electrical Engineering in association with IEEE MP Section, IIC OPJU, and IEEE PELS Society MP Section, organized a three-day workshop on *Innovative Approach of Learning Power Electronics with Arduino* from October 16-18, 2024. The workshop was led by **Prof.** (**Dr.**) **R. S. Tare**, Retired Professor from SGSITS Indore.





Day – Long Training on Emotional Competence for Jindal Power Limited Supervisors

Dr. Shesadev Nayak, Director of the Center for Development and Change, conducted a comprehensive full-daytraining session on *Managing Self and Organizational Effectiveness through Emotional Competence* and *Decision Making, Problem Solving, Creativity and Innovation* for the supervisors of Jindal Power Limited on October 23-24, 2024. This training aimed to empower supervisors with the essential skills to manage themselves effectively and enhance organizational performance through the development of emotional intelligence.

An Awareness Campaign by Mechanical Engineering

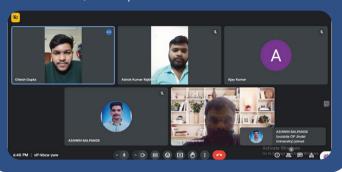
The Department of Mechanical Engineering, School of Engineering in association with NSS (OPJU) organized an Awareness campaign on *Carrer Opportunities, Clean Village, Dengue, and Save Soil*, under the AICTE Activity Points Programme at the Govt. Middle School of Samaruma Village on October 21, 2024. About 15 students of Mechanical 5th semester actively participated in the program. Dr Jitesh Singh and Dr Dharmendra Singh Saini coordinated the program.



17

Interactive Session with the Alumni

The Department of Metallurgical Engineering conducted an interactive session on October 24 & 25, 2024 with Mr. Gitesh Gupta, Alumni working in Jindal Saw Gulf as a part of Pre-Placement Training to brief the existing process. Mr. Gitesh, along with Dr. Trinath Talapaneni (Dept. Faculty placement coordinator), has provided the technical information, clarified the gueries to the students, and helped them for the PI round.





Webinar on Indian Knowledge System and Indic Philosophy

Dr. Arindam Patra from the department of Humanities, School of Science delivered a Webinar Session as a Resource Person on Indian Knowledge System and India Philosophy organized by Nucleus of Learning and Development (NLD) on October 24, 2024.



Placement



Students selected through **Campus Drives**









LinkedIn Career Kickstarter Training Program for First-Year Students

CDC in collaboration with Face Prep, successfully organized two-day LinkedIn Career Kickstarter Training program on October 14 & 15, 2024. This in-person workshop was exclusively designed for first-year Diploma, Undergraduate, and Postgraduate students. The program offered a plethora of benefits, includ-

- Access to LinkedIn Premium features for six months, completely free of cost.
- Learning opportunities from a variety of courses across domains, with the chance to earn valuable certifications.
- Professional networking opportunities to connect directly with recruiters and industry leaders for mentorship through InMail credits.
- Internships, as LinkedIn has proven to be a great platform for networking and securing jobs and internships.



Placement Drives conducted at OPJU



Company Name:

McKinley Rice

For the Batch:

UG/PG 2025



Company Name:

Delta X

For the Batch:

UG 2025

Steel Infra Solutions

Company Name: Steel Infra Solutions

For the Batch:

B.Tech Mech 2025



Company Name:

Jindal Saw Gulf

For the Batch:

B.Tech Mech/Meta 2023 & 2024





Value Added Program for First-Year **Science Students**

Dr. Shesadev Nayak, Director of CDC, conducted sessions on Impression Management and Personal Branding during the value-added program for first-year students of the School of Science from September 23 to October 7, 2024. Mr. Rajneesh Tiwari led a session on Communication Skills, Mr. Rahul Pandey conducted a session on Leadership Skills and Mr. Soumitra Tiwari delivered sessions on Emotional Intelligence and Adaptability during the same program.

Research and Publication

Faculty members from Department of Computer Science & Engineering, SoE contribted in the book *Developing AI, IOT* and Cloud Computing-based Tools and Applications for Women's Safety in the Chapman and Hall/CRC Press.











- **Dr. Rakesh Nayak** and **Dr. Amit Jain** published a Book Chapter Cyber Security for Personal data as an author.
- **Dr. UmaShankar Ghughar**, edited the Book (as a Co-editor).
- Dr. Arti Vaish published a Book Chapter A Lightweight Fast-Four Q-Key Generation for Embedded Devices on Women's Safety, as an author.

https://doi.org/10.1201/9781003538172



Dr. R. S. Singh from the Department of Physics, School of Science published



- A book Carbon Nanotubes Based Nanostructured Materials for Lithium Ion Battery Applications: Recent Advances and Future Perspectives Nanostructured Materials for Energy Storage 1 (2024): 191-223 (Wiley).
 - doi.org/10.1002/9783527838851.ch6
- A book chapter **Electrospun Carbon Nanofibers Based** Materials for Flexible Supercapacitors: A Comprehensive **Review** Nanostructured Materials for Energy Storage 3 (2024): 1189-1218 (Wiley).

doi.org/10.1002/9783527838851.ch32



Dr. Swati Verma from department of Mathematics, school of Science published a book chapter titled Digital Forensics: Using Blockchain in Cryptocurrency Investigations (2024), (BenthamScience).



benthambooks.com/book/9789815256833



Dr. Laxminarayan R. Bhandarkar from the department of Mechanical Engineering published a patent Device for Filling of Bronze Utensils. (Application Number : 202421070774)





Dr. Dipti Shukla from department of Physics, school of Science published a book chapter titled Leading AI Applications in the Sustainable **Energy Sector** in Routledge Taylor & Francis Group book "Al and Blockchain in Smart Grids Fundamentals, Methods, and Applications" (ISBN: 9781032812960)



Dr. Ashish K Sharma from Department of Computer Science & Engineering, SoE, as Co-author, published a conference paper titled Heart Disease Preadiction using Data Mining Techniques in International Conference on Data Mining and Information Security (ICDMIS 2024) at Universitas AL Asyariah Mandar Indonesia.





Dr. Jitesh Kumar Singh from the department of Mechanical Engineering, published a paper titled Development and analysis of Fe-Doped ZnO nanoparticle-infused sisal fiber reinforced hybrid polymer composites for high-performance sound absorption and thermal insulation applications published in SCI Journal: Industrial Crops and Products with Impact Factor 5.6, Quartile 1 Journal.



Dr. Anurag Sharma from the department of Civil Engineering, published the book chapter Seismic Assessment of Vertically Irregular RC Buildings Designed Using DDBD and FBD Approaches in Recent Developments in Structural Engineering, Vol. 4, pp. 557-567, Springer (Scopus).

doi.org/10.1007/978-981-97-6603-1 53



doi.org/10.1016/j.indcrop.2024.119763



Dr. Prasenjit Biswas from the department of Metallurgical Engineering published a design patent on Bi-Directional Sea Wind Energy Generator (Patent No. 414473-001).



Dr. M. Kalyan Phani from the department of Metallurgical Engineering granted a design patent titled Locked Type Industrial Mechanical Trolley In Coke Dry Cooling Plant (Patent No.424755-001).





Mr. Shivam Pandey from the School of Science, published a paper titled Effect of process parameters on the rheological properties of banana (Musa acuminata) fiber and optimization using response surface methodology in a scipus indexed journal: Journal of Agriculture and Food Research. doi.org/10.1016/j.jafr.2024.101314



Dr. Girish C. Mishra from the School of Science, published a paper entitled Effect of Dopant Concentration on Luminescence Properties of Na3Ca2(SO4)3F: RE (RE = Eu3+, Dy3+) Phosphor for Solid- State Lighting published in SCOPUS indexed Journal of Luminescence: Biological and chemiluminescence(Wiley & Sons). <u>doi.org/10.1002/bio.4932</u>





Dr. Arindam Patra and Dr. Suchismita Panda from the department of Humanities, School of Science presented a Paper titled Exploring the Truth of Divinity With(in)out in Select Poems of Swami Vivekananda and An Exploration of Feminism in Manisankar Mukherjee's Thackery **Mansion** in a Two Day sNational Conference on the theme "Indian Ethos in English Writings" organized by the Dept. of English, School of Languages, Central University of Kashmir on October 24 to 25, 2024.

















The Conference Proceeding of the International Technology Conference (OTCON 2024) on **Smart Computing** for Innovation and Advancement in Industry 4.0 has been published in IEEE Xplore on 30 October 2024. It was edited by Dr. Bhupesh Dewangan and Dr. Rakesh Nayak.

ieeexplore.ieee.org/xpl/conhome/10685846/proceeding



Dr. Mukesh S. Desai from the department of Mechanical Engineering, SoE successfully granted a design patent titled 360 Degree Dumping Trolley (Patent No. 415258-001).



Achievements



Dr. Gagan Gupta from the department of Mining Engineering, SoE has been awarded a PhD degree in Mining Engineering on Stability Evaluation of Opencast Mine Dump Slope Structures from IIT BHU.



Dr. Neeraj Kumar Verma from the deptartment of Metallurgical Engineering, SoE has been recommended as a REVIEWER for International Journal of Low-Carbon Technologies an SCI-indexed journal and publisher of Oxford University Press, Oxford, United Kingdom.



Dr. Himanshu Vaishnaw from the School of Management presented research paper on Factors influencing continuance intention among health apps user mediating effect of satisfaction and moderating effect of health consciousness and Dr. Shradha Gupta from the school of Management on titled Financial Mindfulness as a Moderator in the Nexus Between Financial Literacy and Behavioral Biases: Evidence from Young Investors in India on The Role of Innovation, Entrepreneurship and Management for Sustainable Development organized by School of Management on October 17 to 18, 2024.







Dr. Shradha Gupta from the School of Management presented research paper titled Sustainable Finance and Risk Management for Individual Investors in the 2nd International Conference on Economics and Public Policy (ICEP-II, 2024) organized by IIM Shillong on October 4 & 5, 2024.



Dr. Arindam Patra and Dr. Suchismita Panda from the department of Humanities, School of Science Participated in the International Faculty Development Programme on Navigating the Future: Innovations and Strategies in Teaching and Research, organized by the Department of English, Kristu Jayanti College, Autonomous, Bengaluru, Karnataka, India from September 26, 2024 to October 5, 2024.







Dr. Shradha Gupta from the School of Management resented Research paper titled *Exploring the Chatbots' Impact on Banking Industry Customer Experience: A Descriptive Study* in 75th All India Commerce Conference 2024 organized by Indian Commerce Association on October 17-18, 2024.





Dr. Gagan Gupta from the department of Mining Engineering, SoE attended a webinar on *Integrating Sustainable Mining Practices with Zero Harm While Maintaining Robust Production Growth* organized by Skill Council for Mining Sector in joint collaboration with Dr. Sunil Kumar, Professor at IIT- ISM Dhanbad on October 22,2024.





Ms. Sujata Panda and **Dr. Shradha Gupta** from the School of Management participated in Faculty development Program on *Exploration of Nascent Pedagogical tools for updating teachers of Management Education* organized by AICTE (ATAL FDP) from October 21 to 26, 2024.





Emerging Technologies/ Techniques

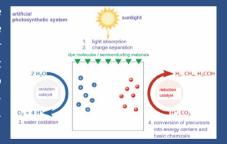
Artificial photosynthesis

By: Dr. Deeptak Patel, Sr. Assistant Professor. Department of Chemistry, School of Science (Source: news.uchicago.edu/story/chemists-create-artificial-photosynthesis-system-10-times-more-efficient-existing-systems)

"The biggest challenge many people don't realize is that even nature has no solution for the amount of energy we use."

Prof. Wenbin Lin

Artificial photosynthesis is a technology with immense potential that aims to emulate the natural photosynthetic process to create an efficient, clean, and cost-effective way to convert sunlight into storable energy forms, mainly hydrogen or other solar fuels. Generally, this is performed by developing photo-electrochemical cells that absorb light and split water into hydrogen and oxygen or by using solar energy to drive the reduction of carbon dioxide into carbon-based fuels. This endeavor, however, faces challenges because the technology to catalyze these reactions at a reasonable cost and with a high level of efficiency is still in development.



A Nature Catalysis study from six chemists at the University of Chicago shows an innovative new system for artificial photosynthesis that is more productive than previous artificial systems by an order of magnitude. Unlike regular photosynthesis, which produces carbohydrates from carbon dioxide and water, artificial photosynthesis could produce ethanol, methane, or other fuels.

Lin and his lab team thought that they might try adding something that artificial photosynthesis systems to date haven't included: amino acids. They were able to make improvements to both halves of the reaction: the process that breaks apart water and the one that adds electrons and protons to carbon dioxide. In both cases, the amino acids helped the reaction go more efficiently.

Even with the significantly improved performance, however, artificial photosynthesis has a long way to go before it can produce enough fuel to be relevant for widespread use. "Where we are now, it would need to scale up by many orders of magnitude to make an sufficient amount of methane for our consumption,"

The ongoing research and development in this field continue to push the boundaries of what's possible in sustainable energy production, making it a crucial area for addressing future energy needs and environmental concerns.

New Addition to OPJU Talent Pool



Dr. Hemant NaikAssistant Professor, Mechanical 2 years of work experience



Upcoming Event



1st International Conference on Sustainable Power and Energy 2024

28th -29th November, 2024 | HYBRID MODE

Organized by

Department of Electrical Engineering
O. P. Jindal University
Raigarh (C.G.)

Important Dates

Full-length Paper Submission

: September 30th 2024

: October 22nd 2024 (EXTENDED)

Notification of Acceptance

: October 30th 2024

Date of Registration

: November 5th 2024

Camera Ready Paper Submission

: November 15th 2024

Conference To Be Held

: November 28th -29th 2024

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