

O.P. Jindal University, Raigarh

Quarterly Report [July-September 2023]

Department of Mechanical Engineering Major Activities

A Events and Activities Organized by Dept. of Mechanical Engineering

1. The Department of Mechanical Engineering congratulates the talented members of student team “VIDYUT (VAYU)” of esteemed SAE collegiate Club for representing OPJU at the prestigious SAE-SUPRA Formula Contest organised during 10th to 13th July 2023 at Buddha International Circuit, Greater Noida. This challenging event was not just about competition; it was a chance for our student team to gain invaluable real-life experience. Our students participated in a series of challenging rounds, and demonstrated their exceptional technical and professional skills. SAE-SUPRA provided an incredible platform for our students to grow and learn. It was an opportunity like no other, where they were exposed to new horizons and expanded their knowledge beyond the classroom.



2. The Department of Mechanical Engineering in association with the Centre of Excellence in Manufacturing and Automation (CoEMA) at OPJU, organized a Training Programme (Certificate Course) on “Codes and Standard in

Welding” from 6th to 7th July 2023. The training covered various topics namely– Basics of welding, WPS and PQR as per AWS D1.1 and IS standards, EN ISO 1090, EN ISO 3834, ISO 5817, Grouping of materials, Welder qualification, Welding procedure qualification, Welding operator qualification, NDT-personnel, Welding coordination, Inspection & testing during welding. The training was conducted for the Steel structural division of Jindal Steel & Power.

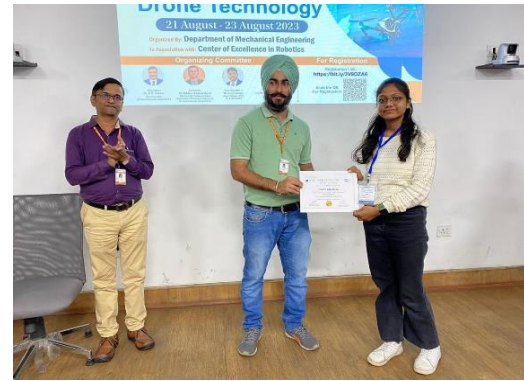


3. OPJU congratulates Mr. Somesh Chandra, 7th Semester student of Department of Mechanical Engineering and Mr. Sarang Suhas Bakare 7th semester student of Department of Metallurgical Engineering for participating in World Robotics Championship 2023 organised by All India Council for Robotics & Automation (AICRA) along with Ministry of Youth Affairs & Sports Govt of India at New Delhi. They designed and fabricated a groundbreaking robot that demonstrates their ingenuity and problem-solving abilities.



4. Department of Mechanical Engineering, OP Jindal University organized a workshop cum hands-on training on “Drone Technology” from 21st – 23rd August 2023. This event was conducted in collaboration with the Centre of Excellence in Robotics (CoER) and the Institutions Innovation Council (IIC OPJU). 60+ participants, both from within and outside the university, actively took part in the workshop. During the workshop, participants ventured into the fascinating world of drones. The workshop provided attendees with valuable

insights into the most recent advancements and hands-on applications within this rapidly evolving field.



5. The Department of Mechanical Engineering in collaboration with the Centre of Excellence in Manufacturing and Automation, OP Jindal University Raigarh has organized a one-month Industrial Internship program sponsored by the Science & Engineering Research Board (SERB), Department of Science and Technology (DST), Govt of India, under the Accelerate Vigyan Vritika scheme from August 1, 2023. During the inaugural address, Dr. R. D. Patidar underscored the importance of our commitment to equipping learners with practical skills, industry exposure, and ample chances for personal and professional growth. This reflects our unwavering dedication to nurturing a generation of confident and competent professionals. The internship commenced with an introductory session on welding technologies. Prior to engaging in actual welding, students had the opportunity to practice on a Virtual Welding Simulator. Through the simulator, they were able to perform SMAW, MMAW, and GTAW welding techniques in various workpiece positions. Following a substantial amount of practice on the simulator, students were provided with real welding equipment. The internship will conclude on August 31, 2023.



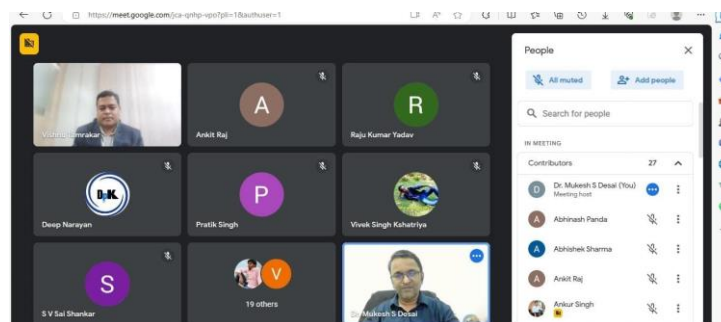
6. On 5th September 2023, the Department of Mechanical Engineering at OP Jindal University was honored to host a distinguished delegation of senior officials from TATA Hitachi, Kharagpur. The visit was a significant event aimed at fostering collaboration, sharing knowledge, and strengthening the industry-academic partnership. The visit served as an opportunity for industry leaders to witness the university's commitment to producing competent, job-ready engineers.



7. The Department of Mechanical Engineering, OP Jindal University commemorated Engineer's Day on 15th September 2023, in honour of the birth anniversary of the renowned Bharat Ratna Shri Mokshagundam Visveswaraya. The occasion featured a series of technical events, including CAD modeling, technical quiz, and poster presentations, which allowed students to actively engage and display their inherent talents and technical skills.



8. The Department of Mechanical Engineering in collaboration with the Career Development Centre organized a session on “How to Prepare Professional Resume” on 14th September 2023. This event was organised for students in the 7th and 5th semesters, aimed at equipping them with the essential skills necessary for success in placement drives.





9. The Department of Mechanical Engineering in association with the Institutional Innovation Council (IIC) OPJU organised a session on “Innovation & IPR” for the students of 5th semester. Dr Satish Kanhed, Innovation Ambassadors & IPR coordinator of the University served as the facilitator, guiding students through the fundamental concepts of patents and fostering a deeper understanding of the subject.



10. Vishwakarma Pooja, a celebration that pays tribute to Lord Vishwakarma, the divine architect and craftsman, was organised with great enthusiasm and devotion by the Department of Mechanical Engineering at Central Workshop on 17th September 2023. The event marked a day of acknowledging and celebrating the contributions of craftsmen, artisans, and engineers to society.



11. The Department of Mechanical Engineering, in collaboration with the Career Development Centre, organized “Interview Readiness” session on 26th September 2023. This event was organised for the students of the 7th and 5th semesters. The aim of the session was to prepare students for the challenges of job interviews and equip them with essential skills and knowledge to secure their dream positions.



12. The Department of Mechanical Engineering, OP Jindal University launched its bi-annual newsletter “YANTRIKI” on 28th September 2023. This newsletter promises to be a comprehensive resource for all things related to the diverse facets of Mechanical Engineering. Whether you're a student, a professional, an enthusiast, or just someone curious about the latest developments in this field, our newsletter offers valuable insights and exclusive content designed to cater to a wide audience.



B Achievements

Awards & Recognitions

1. 100% students of the 7th semester of the Department of Mechanical Engineering have been selected for long-term internships (6-months) in renowned companies like - Tata Steel, Bhilai Steel Plant, SECL, JSW-BPSL, Ultratech Cement, SAIL, NTPC Lara, JSP Raigarh, JSP Raipur, JPL, TRL Krosaki, etc



2. Department of Mechanical Engineering congratulates Mr. Shikhar pandey, 5th semester student for successfully coordinating the workshop on “AI for students: Build Your own Generative AI Model” conducted at OPJU campus by NxtWave.



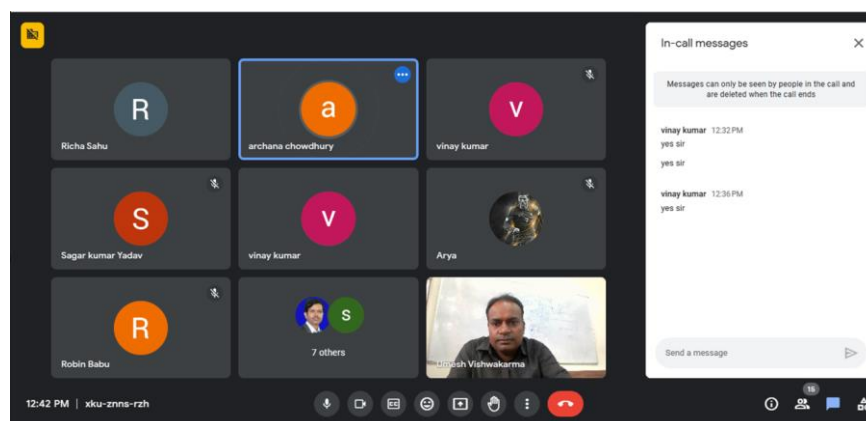
3. Dr Mithilesh Kumar Sahu, Associate Professor, Department of Mechanical Engineering delivered an Expert lecture on "Publication ethics" in the Five Day Short Term Training Program on "Scientific Writing and Publishing" from 31st July to 4th August 2023 organized by the Department of Civil & Environmental Engineering and the Department of Mechanical Engineering, Sarala Birla University, Ranchi.
4. Dr Mithilesh Kumar Sahu, Associate Professor and Dr Saroj Kumar, Assistant Professor, Department of Mechanical Engineering have attended the Five Day Short Term Training Program on "Scientific Writing and Publishing" from 31st July to 4th August 2023 organized by the Department of Civil & Environmental Engineering and the Department of Mechanical Engineering, Sarala Birla University, Ranchi.



5. Dr Mithilesh Kumar Sahu, Associate Professor, Mr. Akash Pandey, Sr. Assistant Professor, and Dr Kuber Nath Mishra, Assistant Professor of the Department of Mechanical Engineering delivered expert lectures at Jindal Institute of Power Technology (JIPT) Tamnar, during 14th - 17th August 2023



6. Dr Umesh Kumar Vishwakarma, Associate Professor (Sr. Grade), Department of Mechanical Engineering delivered a guest lecture on "Introduction to Ethics in Research" organized by Christian College of Engineering and Technology, Bhilai, Chhattisgarh on 17th August 2023.



7. Dr Mukesh Desai, Associate Professor, Department of Mechanical Engineering attended a one-week International online workshop on "Research Methods and Methodology" from 17th to 24th August 2023 organised by Eudoxia Research University- USA, Eudoxia Research Centre, India.



8. 75 students of the Department of Mechanical and Metallurgical Engineering successfully completed the Industrial Course on “Introduction to Stainless Steel”, conducted by OPJU in partnership with Jindal Stainless Steels (JSL).
9. The Department of Mechanical Engineering congratulates Ms. Nikita Sahu, a 5th-semester student, for successfully coordinating the “Drone Technology” workshop conducted at the OPJU campus.



10. On the 18th of September 2023, during the Sixty-Two Teacher's Day Celebration, Dr. Sidharth S Chakarbarti, the Dean Academics and Dean- SoE, OPJU was honored with the prestigious "Excellent Teacher Award." This recognition was presented by the renowned national organization, "The Institution of Engineers (India), Chhattisgarh State Centre, Raipur." The event was graced by the presence of over 150 distinguished engineers, academicians, professors, scientists, and dignitaries representing various esteemed organizations.





11. The Department of Mechanical Engineering extends its hearty congratulations to Mr. Sushant Mukherjee, a 3rd-semester M.Tech student, and Mr. Aman Kumar, a 7th-semester B.Tech student, for securing long-term paid internship offers from TATA Hitachi, Kharagpur. Long-term internship provides our students with a unique platform to gain hands-on experience, apply their classroom knowledge, and develop essential skills that will serve them well in their future careers.



12. The Department of Mechanical Engineering congratulates Mr Rohan Sharma, a 5th-semester student for securing 1st position in the Technical Quiz and 3rd position in Poster Making and Presentation competitions organised by the Department of Mechanical Engineering on the occasion of “Engineers Day Celebration” (15th September 2023).



13. The Department of Mechanical Engineering congratulates Mr Vishal Pandey, a 5th-semester student for securing 2nd position in the Poster Presentation competition organised by the School of Engineering, OP Jindal University on the occasion of “Engineers Day Celebration” (15th September 2023).



14. The Department of Mechanical Engineering congratulates Mr Shishir Santosh Mishra, a 5th-semester Diploma student for securing 2nd position in the Poster Making and Presentation competition organised by the Department of Mechanical Engineering on the occasion of “Engineers Day Celebration” (15th September 2023).

15. The Department of Mechanical Engineering congratulates Ms. Nikita Sahu and Mr Prathmesh Gupta, a 5th-semester student, for successfully coordinating and organising various events during the “Engineer’s Day Celebration” on 15th September 2023.

C Research publications and patents data provided by CRE

Journal/Book Chapter Publications

Sr. No.	Faculty Name	School/ Department	Name of Journal/Book	Title of the Paper/Book Chapter	Month of Publication/ Acceptance
1	Prof. Dharmender Singh Saini	Mechanical	ACS Omega	TRIBOLOGICAL PERFORMANCE EVALUATION OF GREASES ON FOUR BALL TESTER WITH NANOPARTICLES GRAPHENE OXIDE	August
2	Dr. M.K. Bhiwapurkar	Mechanical	European Chemical Bulletin	Development and Analysis of Rolling Contact Fatigue Squat Crack in Wheel/Rail-Weld System Using Finite Element Modelling	August
3	Prof. Jitesh Singh	Mechanical	International Journal of Polymer Analysis and Characterization	Thermal stability and dynamic mechanical analysis of nano-biofillers blended hybrid composites reinforced	August

					by cellulosic Borassus flabellifer L. fiber	
4	Dr. Mithilesh Sahu	Mechanical	EVERGREEN - Joint Journal of Novel Carbon Resource Sciences & Green Asia Strategy		Design and Development of Novel Solar Concentrating Spittoon to Control the Spread of COVID-19 Virus at Public Places	August
5	Dr. Mithilesh Sahu, Dr. Siddharth Chakrabarti	Mechanical	AIP CP		Experimental investigation of blower speed and number of nozzle's effect on cooling tower performance	September
6	Dr. Mithilesh Sahu	Mechanical	AIP CP		A review on performance of the thermal power plant for optimized design of surface condenser	September
7	Dr. Mithilesh Sahu	Mechanical	AIP CP		Study of utilization of power plant fly ash in cement making process and reduction of power consumption	September
8	Dr. Saroj Kumar	Mechanical	Materials Today: Proceedings		Design and Development of a nano drone-A real-time UAV	September
Patent Applied/Published/Grant						
S. No.	IP Registration Number	Name of Faculty	School/ Department	File Date	National /International	Status
1	368188-001	Dr. Mukesh Shyamkant Desai	Mechanical	14/05/2023	National	Published on 14/07/2023
D	Placement data will be provided centrally by CDC					