



OPJU

UNIVERSITY OF STEEL TECHNOLOGY
AND MANAGEMENT



OPJU NEWSLETTER

OP Jindal University, Raigarh

October 2023

Volume-3, Issue-10

(A) Events & Activities

- 1 OP Jindal University received AAA Rating, India's Best Engineering Institutes 2023 by Career 360.



- 2 OP Jindal University added a new feather to its crown by grabbing *Promising Private University for Research and Innovation* awarded by Indian Institutional Ranking Framework (IIRF) and the Federation for World Academics (FWA) in *Education Impact Award 2023* ceremony held on 18 October 2023 at New Delhi.

3 Happy Birthday to our beloved Mentor and inspirational leader - **Ms. Shallu Jindal** !
We are honored and blessed to have such an excellent leader with a generous heart as the university's Chancellor.

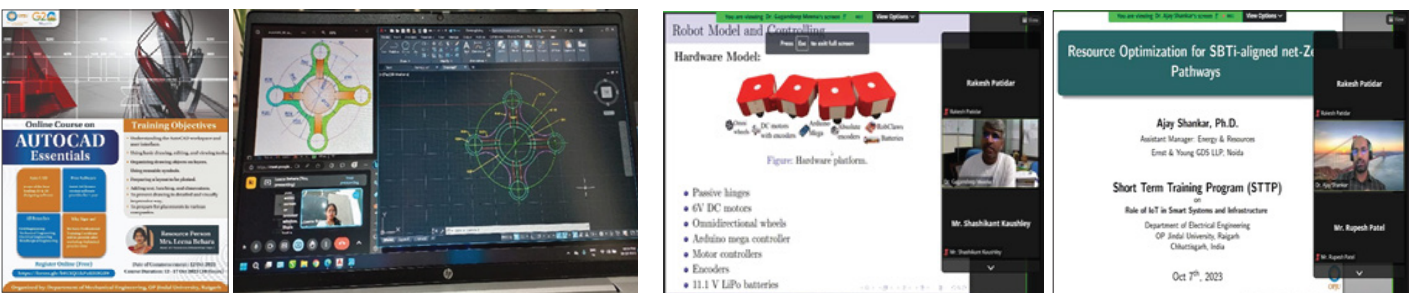
OPJU Innovation Center is thrilled to announce the Pre-Launch of new age Electric Vehicle D92 of its incubated start-up ERKEY Motors Pvt. Ltd. on this occasion in OPJU campus.



4 Students of the Mechanical and Electrical Engg. Dept. had the opportunity to participate in an insightful session on *Entrepreneurship and Innovation as a Potential Career Path* on 6 October 2023. The session focused on career and business opportunities for EV enthusiasts. The session was organized by the OPJU Innovation Center, in collaboration with Formula Bharat and IIC-OPJU, showcasing the commitment to foster innovation and entrepreneurship in the academic community. The event further aimed to inspire and educate the students about the exciting prospects available in the field of EV.



5 Dept. of Mechanical Engg. in association with the OPJU SAE Collegiate Club organised a 5-Days workshop (12 to 17 October 2023) on AUTOCAD for the final-year students. Such workshops play a vital role in preparing for the upcoming phase of their academic and professional journey.



6 Dept. of Electrical Engg. organized an online 5-Days STTP on *Role of IoT in Smart Systems and Infrastructure* during 3-7 October 2023. A total of nine keynote sessions were delivered on emerging topics related to IoT. **Prof. Rakesh Patidar** and **Prof. Rupesh Patel** were the convener and co-convener of the STTP respectively.

7 Dept. of Mechanical Engg. organized an interactive hands-on training session on *Fundamentals of Robotics* for the students of OP Jindal School (Tamnar) in its university campus on 19 October 2023. The event noticed the enthusiasm in the young creative minds towards designing and building robots.



8 **Dr. Ravindra Saluja** of the Mechanical Engg. Dept. conducted successfully a session on *Total Productive Maintenance* for the employees of MSP Raigarh on 30 October 2023.



9 OPJU and JIPT-JPL (Tamnar) organized a workshop on *Emission Control Strategies in Thermal Power Plants* on 31 October 2023 in hybrid mode in association with IEEE IRC, Institution Innovation Council & IEEE MP Section. The proposed workshop was aimed at creating opportunities for IEEE members, Academia, Industries, and Researchers to interact and network with each other for the development of sustainable technical solutions for the benefit of society. Nearly 100 participants joined the workshop.

10 Dept. of Computer Science & Engg. conducted following sessions to provide opportunities to UG, PG students and faculty members to augment their knowledge and skills in Problem Solving and Ideation process:

- *Data Processing and its Associated Challenges* by **Mr. Amandeep Singh Ghai** (Lead Solutions Architect, Vice Precedent Deutsche Bank Germany) on 2 October 2023.
- *Problem Solving and Ideation Workshop for Innovation* by **Mr. Hari Shankar Dewangan** (AGM and Team Lead, JSP-IT, Raigarh) on 30 October 2023.



11 OPJU conducted a motivational session on *My Journey, My Story*, with the founder of one of the World's Largest Humanitarian Volunteer Based Organizations by **Swami Omkarananda Ji**, Senior International Teacher, Art of Living, representing the Art of Living Foundation. The event was organized by the Institution's Innovation Council, Academic Staff College, and OPJU Innovation Center on 6 October 2023.

12 School of Management organized a Faculty Development Program on *Innovative Solutions to Research with SPSS* from 9-13 October 2023, exclusively for the faculty members, research scholars and students. This FDP enabled the participants to enhance their research and analytical skills using the statistical software package SPSS.



13 School of Management and the Center of Excellence for Logistic and Supply Chain Management organized a webinar on *Innovation on Supply Chain Management in Agriculture Sector* on 14 October 2023. **Dr. D. S. Chauhan** (Practicing Farmer, Ex- CGM, NABARD) delivered the session coordinated by **Prof. Manoj Ku Mishra**.

14 Admission team of OPJU conducted outreach program at- *Central School, Raigarh; Shiumandir School, Laxmipur, Raigarh; Govt. Middle School, Shankar Nagar, Raigarh; Buxar, Bihar; Kirodimalnagar, Raigarh; Civil Lines, Raigarh; OP Jindal School, Raigarh; Patna, Bihar; OP Jindal School, and St. Annes School, Tamnar, Raigarh; Aatmanand English Medium Higher Secondary School, Raigarh and Science college, Raigarh.*



15 Center for Corporate Education and Training delivered corporate training sessions in the month of october on:

- *Quantitative Technique* at JPL Tamnar and JSP Raigarh by **Prof. Manoj Ku Mishra.**
- *Theory of Constraints* at JSP-Raipur by **Prof. Bhupendra Tripathi.**
- *Vision, Mission, Core Values and PoSH at JSP* by **Dr. Shesadev Nayak.**



16 A 5-Days online FDP on *Recent Trends in Mathematics & Technology* organized by Dept. of Mathematics from 9-13 October 2023.



17 School of Science organized the Cultural Club event *Roots and Rhythms* based on the traditions and cultural diversities of INDIA on 9 October 2023.

18 Internal Complaints Committee (ICC) in association with Social Empowerment Club organized a webinar on *Sexual and Mental Harassment of Women at Workplace: Legal Outlook* on 27 October 2023. **Prof. Gagandeep Kaur** (School of Law, UPES, Dehradun) was the resource person.



19 School of Science organized:

- A guest lecture on *Artificial Intelligence and the Future of Science* on 4 October 2023. **Mr. Shirish Panda**, (Scientist D (DRDO), Office of the Principal Scientific Advisor, Govt. of India) was the expert.
- A session on *Electronic Properties of Solids* by **Prof. Anar Singh** (University of Lucknow, UP) on 19 October 2023.
- A session on *Solar Energy Technologies Opportunity and Challenges* by **Mr. Mayank Mishra**, (Solaris Technologies, Raigarh) on 27 October 2023.



20 Games and Sports Department of OPJU conducted the following:

- Pilates Exercise Session on 26 & 27 October (for female) and 30 & 31 October (for male) Faculty and Staff Members.
- Cycle Race on National Unity Day, ecofriendly on 31 October 2023.
- Outreach Programs at Raipur-based Universities.
- Volleyball Match of Fatafat Phase-II.



21 OPJU welcome **Mr. Barry** (CHRO-JSP) into an insightful discussion with its leadership team headed by the Vice-Chancellor and the Registrar. Mr. Barry appreciated the state-of-the-art laboratories, cutting-edge Centers of Excellence, and world-class facilities at OPJU.



22 Career Development cell conducted training and preparatory sessions for:

- M.Tech. Civil Engineering Student by **Mr. Vishnu Tamrakar** for the placement drive of *RKM Powergen Pvt. Ltd.*
- MBA 2023 by **Mr. Vishnu Tamrakar** for the placement drive of *HDFC Bank Ltd.*
- B.Tech (Mech, Electrical and Civil) by **Mr. Vishnu Tamrakar** for the placement drive of *Amalgam Steel Pvt. Ltd.*
- B.Tech Mechanical Students by **Mr. Vishnu Tamrakar** and **Dr. L. R. Bhandarkar** for the placement drive of *JSP*.
- MBA 2023 by **Mr. Rajneesh Tiwari** for the placement drive of *JSW-BPSL*.

23 OPJU organized JALSA- the Garba Night to celebrate the Navratri Festival in its playground on 20 October 2023.



24 Team *INNOVATORS* (from Govt Higher Secondary school Ghughuwa) led by **Mr. Ayush Joshi**, incubated by OPJU Innovation Center, secured the 51st position in *Atal Marathon Challenge 2023* amongst above 1200 teams. It also bagged 5th position in CG State Ranking organised by NITI AYO, under Atal Innovation Mission on 5 October 2023. This brought the INNOVATORS, the pride for securing an exclusive position under Atal Entrepreneurship program (AEP) of Ministry of Education.

Dr. R. D. Patidar, Vice-Chancellor of OPJU motivated and **Dr. Deepayan Priyadarshi** facilitated the Team INNOVATORS and felicitated both the team and its mentors for their creative idea and prototype. They were further encouraged to support their patenting process. The INNOVATORS went through a 2-Days workshop at OPJU-IC FAB Lab under the guidance of **Dr. Umesh Viswakarma**, **Prof. Dharmendra Saini**, **Dr. Satish Kanhed** and **Dr. Biranchi Prasad Panda**.



OPJU Innovation Center and IIC-OPJU conducted :

- A session on *Career and Business Opportunities for EV Enthusiasts* in association with Formula Bharat on 6 October 2023. A total of around 50 students participated from both Electrical and Mechanical Engg. streams. The session was coordinated by **Dr. Swapna Sarit** and **Prof. Dharmendra Saini**.
- A special session for INNOVATORS on the occasion of the Institution's Innovation Day i.e. 92nd Birth Anniversary of Dr. APJ Abdul Kalam (Former President of India and Missile Man) on 15 October 2023.




25 Center for Social Empowerment of OPJU headed by **Dr. Sanjay Singh** conducted the following activities:

- Workshop on Awareness on Personal Health & Hygiene at Govt. Pre-Middle School, Tumidih Raigarh on 5 October 2023 followed by distribution of sanitary Napkins. The Center also conducted similar activity in the university campus by **Dr. Saumya Singh**, **Dr. Debasmita Samal** and **Dr. Kavita Patel** on 11 October 2023.
- Digital Skills Development Programme for the students of Govt. Pre-Middle School, Tumidih by the Dept. of CSE-OPJU on 5 October 2023.
- Created Awareness on Cleanliness in the OPJU Campus by the Dept. of Mechanical Engg. on 5 October 2023.
- A Health Check-up Programme at Govt. Middle School, Chharratangar, Raigarh on 31 October 2023.



(B) Placement

1 Placement Drives conducted by CDC in the campus of OPJU

	<p>Company Name: JSW_BPSL</p> <hr/> <p>Students' Background: MBA_HR_2024 Batch</p>		<p>Company Name: HDFC Bank Ltd.</p> <hr/> <p>Students' Background: MBA 2023 Batch</p>		<p>Company Name: Amalgam Steel Pvt. Ltd.</p> <hr/> <p>Students' Background: B.Tech_Elect & Mech 2023 Batch</p>
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2 Vijay Puneekar of B.Tech. Metallurgy stream got selected for *Mahindra & Mahindra Ltd.*

3 Aman Kumar, Swati Kumari, Anikesh Prasad and Akash Upadhyay of Diploma Electrical, Mechanical and Metallurgy stream got selected for *Jindal Steel and Power.*

4 Daneshwar Chandra, Santosh Paswan and Ravi Shankar Singh of Diploma Metallurgy stream got selected for *Arjas Steel.*

5 Aditya Raju Bhorde of B.Tech. Metallurgy stream got selected for Subodh Materials Technologists Pvt. Ltd.



(C) Research & Publications

1 **Prof. Neeraj Verma** of Metallurgical Engg. Dept. published a research article *Unfolding the Hydrogen Gas Sensing Mechanism across 2D Pnictogen/Graphene Heterostructure Sensors, Sensors and Actuators B: Chemical.*



2 **Dr. Prasenjit Biswas** of Metallurgical Engg. Dept. published a research article titled *Effect of Low Degree Electromagnetic Field on Solidification Mechanism and Mechanical Properties of Twin Roll Cast Al 7075 Alloy* in the journal of *The Minerals, Metals & Materials Society.*



3 **Dr. Taniya Sengupta Rathore** of SoS published book chapters:

- *CRISPR: An Advance Technique of Gene Editing*, in *Current Advances in Biosciences*, Thanuj International Publishers (ISBN: 978-93-94638-64-8).
- *Emerging Microbial Enzymes for Future Industrialization* in an edited book, *Microbial Products for Future Industrialization*, Springer Nature (ISBN: 978-981-99-1739-6)



4 **Dr. G Madhusudhana Rao** of Electrical Engg. Dept. presented a paper titled *ANFIS-based Optimisation for achieving the Maximum Torque per Ampere in Induction Motor Drive with PI Controllers* in 1st International Conference on *Advances in Electrical, Electronics and Computational Intelligence (ICAEECI 2023)* held at KSR College of Engineering, Tiruchengode, Tamil Nadu, India during 19-20 October 2023.



5 **Dr. Siddharth Chakrabarti** of Mechanical Engg. Dept. published a paper *Heat Transfer Analysis in Sound-Enhanced Fluidized Beds Containing Geldart BC Binary Mixtures* in *International Journal of Membrane Science and Technology.*



6 Arjun Kundu, Prasenjit Biswas, Deepak Patel, Jagadish Nayak, Rupesh Kumar Verma, Archana Mallik and Sanjeev Das published a paper *Effect of Low Degree Electromagnetic Field on Solidification Mechanism and Mechanical Properties of Twin Roll Cast Al 7075* in *JOM* (2023) <https://doi.org/10.1007/s11837-023-06173-y>



7 Dr. Debasmita Samal and M. R. Mishra of SoS published a research paper titled *A Ramp-Type Deterioration EOQ Model with On- Hand Inventory* in a Scopus indexed journal: *Kepes*, 21, 763 (2023).



8 Dr. R. S. Singh of SoS published as research paper titled *X-ray Photoelectron Spectroscopy and Tunable Photoluminescence Study of Gold Nanoparticles Embedded in PVA Films*, in a SCI indexed journal: *Luminescence*, 2023 (Wiley). DOI: <https://doi.org/10.1002/bio.4607>



9 Dr. Kavita Patel of SoS published a paper titled *Comparative Study of Physico- Chemical Parameters of Ground Water of Residential and Industrial Area of Sirgitti in Bilaspur District* in a Scopus indexed journal: *International Journal of Membrane Science and Technology*, 10, 1128 (2023).



10 Dr. Dipti Shukla of SoS published a book chapter titled *Antenna Design for IoT and Biomedical Application* in an edited book, *Array and Wearable Antennas Design, Optimization, and Application*, CRC Press.



11 Dr. Mukesh Shamkant Desai of Mechanical Engg. Dept. published a paper *The Compatibility Gap Between the Steps of Single Minute Exchange of Die and Activities of Ambulance Response Time* in the *Industrial Engineering Journal*.



(D) Achievements

1 Mr. Pratik Singh, a 7th Sem Mechanical Engineering student won *Gold Medal in PowerLifting (115 Kg)* in a district-level championship organised at Jamshedpur.

2 Prof. Jitesh Singh of Mechanical Engg. Dept. successfully completed a 5-Days training program on *Role of IoT in Smart Systems and Infrastructure* organised by the Dept. of Electrical Engg., OPJU during 3-7 October 2023.

3 Dr. Satyabrata Das, Steel Chair Professor and Head of Metallurgical Engg. Dept. got listed in the *Top 2% Scientists of the World* as per the latest research survey by Stanford University.

4 Dr. Guru Prakash and Dr. Rajesh Jha of Metallurgical Engg. Dept. delivered talks on *Fundamentals of Iron and Steel Making* and *Fundamentals of Secondary Steel Making and Continuous Casting of Steels* respectively at Jindal Steel and Power, Raigarh.

5 Dr. Saroj Kumar of Mechanical Engg. Dept. got recognized as an associate editor in the *Advances in Robotic Technology Journal* of Medwin Publishers, USA.

6 Prof. Vinod Nagpure of Civil Engg. Dept. attended a webinar on *Creating New Age Indra to be Corrosion Free and Provide Major-Maintenance Free Life (M.F.L.): Experience from Auritius Metro PR* on 27 October 2023 jointly organised by Indian Concrete Institute Kochi Centre and QCRETE Readymix India Pvt. Ltd.

7 Prof. Shikha Tiwari of Civil Engg. Dept. attended an FDP in *Recent Trend in Mathematics and Technology* from 9 to 13 October 2023.



8 Mr. Manish Gupta, a 7th Semester CSE Student participated in the session *WITT: Cyber-Security Trends and Threats and Career Perspective*.

He also completed 1 month Internship on *Machine Learning* with outstanding remarks at *Prodigy InfoTech*.



9 Ms. Kajal Gupta, a 7th Semester CSE Student was adjudged as the *Best Intern of the Month* at the Unit of Stuvally Technology Pvt. Ltd. for her outstanding dedication, creativity and exceptional performance.

10 Prof. Narendra Kumar Dewangan of CSE Dept. recognized as a Reviewer at *3rd International Conference on Innovative Sustainable Computational Technologies (CICST-2023)* organized by Graphic Era (Deemed To Be University, Dehradun (India), AICTE and SERB).

He also got selected as a Reviewer for *2023 IEEE 2nd International Conference on Industrial Electronics: Developments & Applications (ICIDEa 2023)* organised by the Electrical Engineering Department, NIT Manipur in association with the IEEE Student Chapter, NIT Manipur.



11 Dr. Saroj Kumar Chandra of CSE Dept. successfully delivered an expert talk in the 5-Days online FDP on *Recent Trends in Mathematics and Technology* held on 9-13 October 2023.

12 Prof. Asimkiran Dandapat of CSE Dept. successfully participated in the 1-Week FDP in Hybrid *Future of AI and ML in Cyber Security* organized by NIT Patna.

He also got selected as a Reviewer for *2023 IEEE 2nd International Conference on Industrial Electronics: Developments & Applications (ICIDEa 2023)* organised by the Electrical Engineering Department, NIT Manipur in association with the IEEE Student Branch, NIT Manipur.



13 Prof. Pradeep Kumar Shrivas of CSE Dept. participated in a 5-Days FDP on *Recent Trends in Blockchain Technology & Cyber Security* organized by the Dept. of Computer Science & Engg. of JIS University, Kolkata (India).

14 Dr. Sanjay Kumar Singh and Prof. M R Mishra of School of Science delivered an invited talk for UG & PG students on *Skills for Spoken English and MATLAB*, Govt. KG Arts & Science College, Raigarh on 13 October 2023.

15 Dr. Bhupesh Kumar Dewangan of CSE Dept. successfully presented papers in the *Springer 5th International Conference on Computer & Communication Technologies (IC3T-2023)* organized by the Dept. of ECE, Kakatiya Institute of Technology & Science, Warangal, Telangana during 6-7 October 2023.

- *A Lightweight Encryption Method for Preserving E-Health Care Data Privacy Using Dual Signature on Twisted Edwards Curves*
- *Reinforcement Learning Approach to Solve PBL Markov Model Comparative Analysis of ARIMA Time Series Model and other Techniques for Cloud Workloads Performance Prediction*

He also delivered an expert talk in the 5-Days online FDP on *Recent Trends in Mathematics and Technology* held on 9-13 October 2023.

He also presented 6 papers in the IEEE and Scopus Indexed *7th International Symposium on Multidisciplinary Studies and Innovative Technologies* during 26-28 October 2023, Radisson Blu Hotel, Ankara, Turkey.



16 Dr. Dipti Shukla of SoS attended one-week National Level Faculty development program on Cloud Infrastructure (AWS) organized by department of CSE, JNTUK University College of Engineering Narasaraopet, AP.



17 Dr. Arindam Patra and Ms. Suchismita Panda of SoS completed the NPTEL-AICTE Faculty Development Program course *Developing Soft Skills and Personality* with a consolidated score of 75 and 62 %, respectively.

18 Mr. Jagannath Thawait of CSE Dept. successfully participated and upskilled with the *Data Analytics using Pandas and Matplotlib* Masterclass on 28 October 2023.



19 Dr. R. S. Singh of SoS delivered a talk on *Hydrogen Storage in Sulphur-Doped SiC Nanotubes* in the *10th Global Conference on Polymer and Composite Materials (PCM 2023)* during 27-30 October 2023 in Shenzhen, China.

20 OPJU acknowledges its students' effort and accomplishment to draw the attention of following corporate bodies in getting Long-term internships:



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OP Jindal University, Raigarh

School of Engineering

Thanks our Industry Connects for providing long-term Internship opportunities to our students

					
					
					
					
					
					
					
					
					
					
					
			and many more.....		

(E) Emerging Techniques and Technologies

1 Gamification – A New Area in Skill Development

[Source: Dr. Arindam Patra; Adopted from: Hamari, J. (2019). Gamification, Blackwell Pub, In the Blackwell Encyclopedia of Sociology, pp.1-3. <https://doi.org/10.1002/9781405165518>.]

Gamification is a unique technique used in the process of skill development. This is useful in shaping human behaviour, driving and improving innovation and productivity leading an enhanced engagement and skill development. This is a strategic endeavour to augment services, systems and activities in an organization by creating similar experiences to those experienced when playing games in order to motivate and engage users.

Gamification is essential for powerful planning of framework. It normally utilizes the components of the game plan to further develop client commitment, hierarchical efficiency, flow, learning, knowledge retention, employee recruitment and evaluation, usefulness of systems, physical exercise, traffic control, voter apathy, public attitudes about alternative energy, and more. An assortment of examinations on gamification shows that a greater part of gamification emphatically affects people. HR Managers have found that gamification increases engagement by up to 50% and improves talent retention by up to 35%. It provides a safe and controlled environment for learners to practice and apply new skills with healthy competition.



2 Artificial Intelligence for Biotechnology

[Source: Dr. Taniya Sengupta Rathore; Adopted from: AI for life: Trends in Artificial Intelligence for Biotechnology (<https://www.sciencedirect.com/science/article/pii/S1871678423000031>)]

Artificial Intelligence has a long tradition in computer science centered on the general goal of creating *intelligent* machines. Due to popularity and success, AI is on everyone's lips today. When advances in biotechnology are combined with advances in AI unprecedented new potential solutions become available. This can help resolving many global problems and contribute to Sustainability Development Goals. Current examples include Food Security; Health and Well-being; Clean Water; Clean Energy; Responsible Consumption and Production; Climate Action; Life below Water; Protect, restore and promote sustainable use of terrestrial ecosystems; Sustainably manage forests; Combat against Desertification; Halt and reverse land Degradation and Halt biodiversity loss. AI is ubiquitous in the life sciences today. Topics include a wide range from machine learning and Big Data analytics, knowledge discovery and data mining, biomedical ontologies, knowledge-based reasoning, natural language processing, decision support and reasoning under uncertainty, temporal and spatial representation and inference, and methodological aspects of explainable AI (XAI) with applications of biotechnology. AI in agriculture can provide a solution for food security by adapting agricultural management to a changing climate. This includes identification of resistant crops that are more resilient to environmental changes and extremes such as drought periods. AI can be used to analyze data on the presence and spread of diseases and pests in forests, as well as to predict their likely impact on the health and productivity of trees. This can help to identify areas that are at risk and to implement preventative measures to protect forests. AI can be useful in medical biotechnology to analyze data from various sources, such as genomic data and protein-protein interaction data, to identify potential therapeutic targets for the treatment of diseases. This can involve the use of machine learning algorithms to identify patterns and correlations that may not be apparent to human beings.

AI is a very broad term that is used today generally and practically for everything where any Digital Information Processing System processes any data. These are becoming increasingly important in biotechnology, as they can be used to analyze large datasets and make predictions about complex biological systems.

New Additions to OPJU-Talent Pool



Mr. Gagan Gupta

*Assistant Professor
Dept. of Mining
B.Tech, M.Tech, Ph.D*

Editorial Team

Chief Editor



Dr. Biranchi Prasad Panda

*Professor, School of Management,
OP Jindal University, Raigarh*

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