

SCHOOL OF SCIENCE OP JINDAL UNIVERSITY, RAIGARH

QUARTERLY REPORT

October – December 2023

*Knowledge
forLife*

SCHOOL OF SCIENCE

B SC (HONS) | M. SC | PH. D



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Five-Day Online Faculty Development Programme on "Recent Trends in Mathematics & Technology"

The Department of Mathematics organized Five-Day Online Faculty Development Programme on "Recent Trends in Mathematics and Technology" for the faculty members of different colleges and universities from 9-13 October, 2023. There were 832 registrations and participants from PAN India and abroad like Saudi Arabia, Morocco, Philippines, Nepal and Nigeria. Ten Eminent experts from various parts of India were invited to share their wisdom and vast experience on the different topics. The sessions were on various recent innovations and trends in mathematics and technology that enriched the participants and sparked multidimensional avenues for further research and brainstorming.



OPJ
UNIVERSITY OF STEEL TECHNOLOGY
AND MANAGEMENT



INSTITUTION'S
INNOVATION
COUNCIL



G20

A Five-Day Online Faculty Development Programme on Recent Trends in Mathematics & Technology

October 9-13, 2023

Speakers

 <p>Dr. Rajesh K. Pandey Associate Professor Mathematical Sciences IIT(BHU) Varanasi</p>	 <p>Dr. Sunil Kumar Prajapati Assistant Professor, Dept of Mathematics, IIT Bhubaneswar, Bhubaneswar</p>
 <p>Dr. J. P. Jaiswal Associate Professor, Dept of Mathematics, Guru Chandas Vishwavidyalaya, Bilaspur</p>	 <p>Dr. Balchand Prajapati Assistant Professor, School of Liberal Studies, Dr. B. R. Ambedkar University, Delhi</p>
 <p>Dr. Twinkle Singh Assistant Professor, Dept. of Applied Mathematics & Humanities, SVNIT, Surat</p>	 <p>Dr. Vinay Singh Associate Professor, Dept. of Mathematics, NIT, Mizoram</p>
 <p>Dr. Kalpana Shukla Assistant Professor, Dept. of Mathematics, Zakir Hussain Delhi College (evening), Delhi University, New Delhi</p>	 <p>Dr. Saroj Kumar Chandra Sr. Assistant Professor, Dept. of CSE, OPJU</p>
 <p>Dr. Bhupesh Ku Dewangan Associate Professor, Dept. of CSE, OPJU</p>	 <p>Dr. Rajesh Jha Associate Professor Dept. of Metallurgical Engg., OPJU</p>

Organized By
School of Science,
OP Jindal University, Raigarh



Dr. R. D. Patidar
Vice Chancellor, OPJU



Dr. Girish C Mishra
Dean,
School of Science, OPJU



Dr. Saumya Singh
Sr. Associate Professor,
School of Science, OPJU



Dr. Swati Verma
Associate Professor,
School of Science, OPJU



Dr. Debasmita Samal
Sr. Assistant Professor,
School of Science, OPJU



Prof. Manas Mishra
Sr. Assistant Professor,
School of Science, OPJU



Dr. Manik Das
Assistant Professor,
School of Science, OPJU

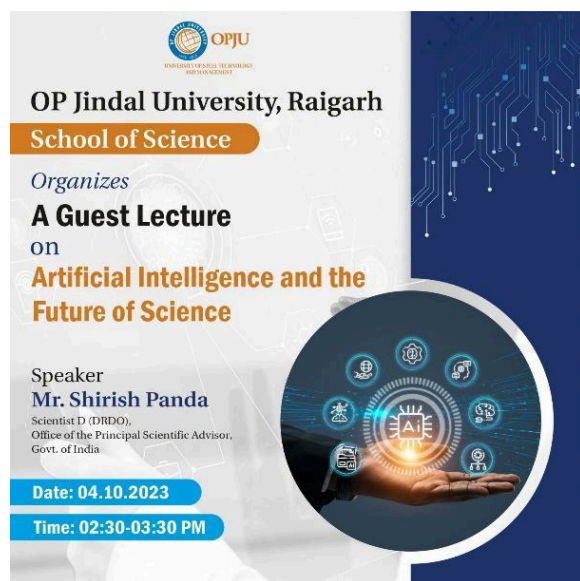


Prof. Shrikant Chaini
Assistant Professor,
School of Science, OPJU

Guest lecture/ Expert Talk Organized

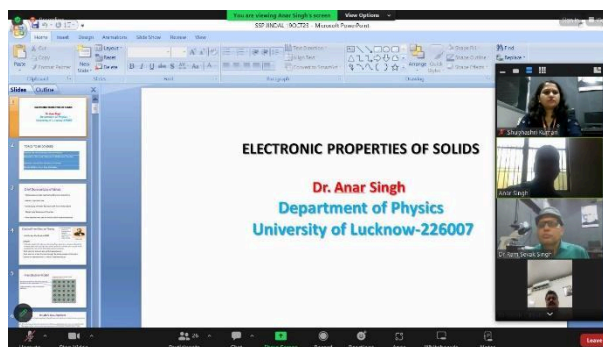
Guest lecture on Artificial Intelligence and the Future of Science on 4th October 2023

School of Science organized a guest lecture entitled “Artificial Intelligence and the Future of Science” on 4th October 2023. The resource person was Mr Shirish Panda, Scientist D (DRDO), Office of the Principal Scientific Advisor, Govt. of India. He discussed about the use of the latest AI technology in various fields and its relevance and importance in the fields of basic science and technology.



Expert talk on Electronic Properties of Solids on 19th October 2023

Online expert talk “Electronic Properties of Solids” organised by department of Physics, SoS on 19th October 2023. The resource person was Dr. Anar Singh, Assistant Professor- Physics, University of Lucknow, UP.



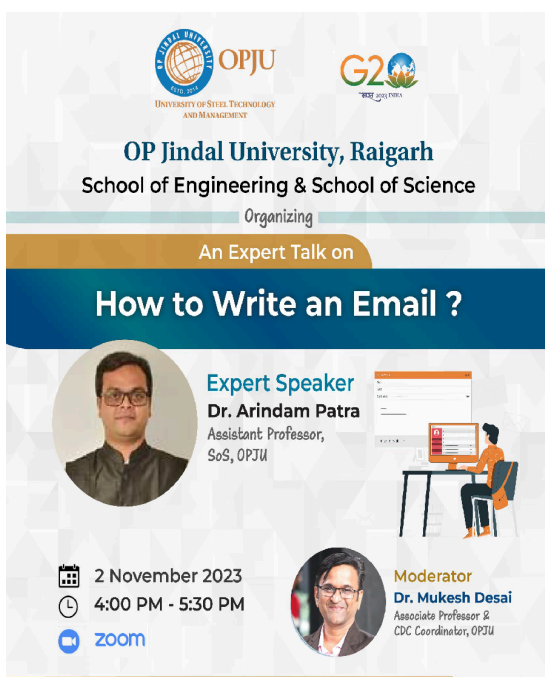
Expert talk on Solar Energy Technologies Opportunity and Challenges on 27th October 2023

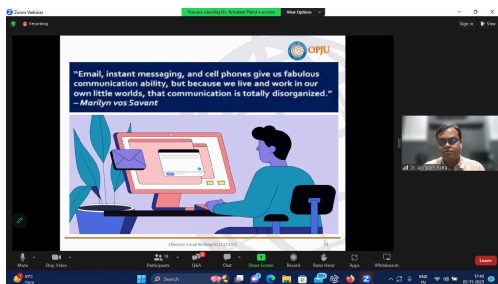
School of Science in association with Institutions Innovation Council (under the Ministry of Education's Innovation Cell), OP Jindal University, Raigarh organized an Expert Talk on **Solar Energy Technologies Opportunity and Challenges** on 27th October 2023. The objective of the session was to create awareness among the youth about Solar Energy Technology, importance of Solar Technologies and available opportunities.



Online Expert Talk “How to Write an Email? Organized on 2nd November 2023

School of Science and School of Engineering, OPJU organized an Online Expert Talk on “How to Write an Email?” on 2 November 2023 4.00-5:30 pm for all the students preferably final and pre-final year with an intended outcome of inculcating effective principles of email writing with its etiquette. Dr Arindam Patra, Assistant Professor, Humanities, School of Science was the resource person.





Guest lecture on “Green Approach for Sustainable Future” organized on 14th December 2023

School of Science organized a guest lecture on **Green Approach for Sustainable Future** on **14th December 2023** with an objective to make students aware about the concept of sustainability, understand the various sustainable development goals and how to adopt them. **Dr. Anupama Gautam**, Associate Professor, Shri Venkateshwara University, Gajraula, UP was the resource person. Around 70 UG & PG students of Chemistry and Biotechnology attended the lecture.



Value Added Course Organized on "Mathematics for Competitive Examinations-I"

Department of Mathematics, School of Science organized a Value-Added Course on "**Mathematics for Competitive Examinations-I**" from **24 Sept. to 31 Oct. 2023**. The course is designed for the students of UG level to nurture the fundamental Mathematical skills for preparing and qualifying for various state and national level competitive examinations, and it will kindle the problem-solving ability of the aspirants at the same time.





Research Activities

Book Chapter Publication

- **Dr Dipti Shukla**, Associate Professor- Physics published a book chapter entitled "**Antenna Design for IOT and Biomedical Application**" in an edited book, Array and Wearable Antennas Design, Optimization, and Application, CRC Press.
- **Dr Taniya Sengupta Rathore**, Associate Professor- Biotechnology published a book chapter entitled "**Emerging Microbial Enzymes for Future Industrialization**" in an edited book, "Microbial Products for Future Industrialization", Springer Nature.
- **Dr Taniya Sengupta Rathore**, Associate Professor- Biotechnology along with the students, Sahana Singh, Sheenat Chawla, Humaira Jasmin, published a book chapter entitled "**CRISPR: An Advance Technique of Gene Editing**", in Current Advances in Biosciences, Thanuj International Publishers (ISBN: 978-93-94638-64-8), September 2023.



Paper Publication

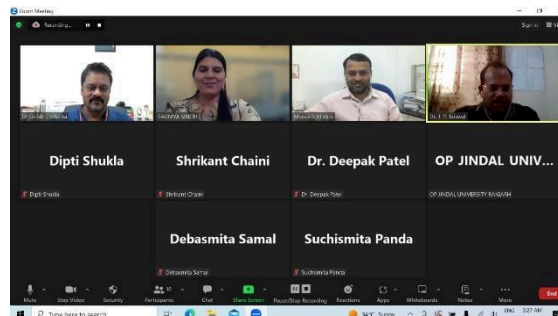
- Anurag Gautam, **Ram Sevak Singh**, Prabhat Gautam, Syed Modassir Hussain, Vustikayala Sivakumar Reddy, **X-ray photoelectron spectroscopy and tunable photoluminescence study of gold nanoparticles embedded in PVA films**, Luminescence, Wiley, October 2023.
- Rajani Patel, Renu Nair, **Kavita Patel** and Sandeep Kumar Tandon, **Comparative Study of Physico-chemical Parameters of Ground water of Residential and Industrial area of Sirgitti in Bilaspur District**, International Journal of Membrane Science and Technology, Vol (10) No. (4), pp 1128-1134, September 2023.
- **S. Dewangan**, P. Mundeja, B. Deshpande, B. K. Dewangan, T. Choudhury and K. Kotecha, "**Electronic Equipment Waste Generated by Computers and its Effect on Public Health in India**" 2023 7th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkiye, 2023, pp. 1-6, DOI: 10.1109/ISMSIT58785.2023.10304954.
- Poonam Shrivastava, Neeta Tripathi, Bhupesh Kumar Dewangan, Bikesh Kumar Singh, Tanupriya Choudhary, Ketan Kotecha, **Sanjana Dewangan**, **Autonomic Computing Based Respiratory Disorders Assessment Using Speech Parameters:**

A Systematic Review, 2023 7th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), Ankara, Turkiye, 2023, pp. 1-6, DOI: 10.1109/ISMSIT58785.2023.10304972.

- **Dipti Shukla, Luminescence Properties of Ce doped Di- Calcium Magnesium Disilicate $\text{Ca}_2\text{MgSi}_2\text{O}_7$** , Research Journal of Chemistry and Environment, Nov., 2023
- **Dipti Shukla, Mechanoluminescence and Its Recent Applications**, Current Materials Science 2024; 17, DOI: 10.2174/0126661454252093231127102414

Six-monthly progress review meeting organized

- Department of Mathematics organised a six-month progress review meeting of **Mr Manas Ranjan Mishra**, Ph.D. Scholar on **14th October 2023** in online mode.



Talk Delivered

- **Dr Kavita Patel and Dr Ankur Rastogi** delivered an invited talk in department of Chemistry, Govt. KG Arts & Science College (affiliated to Shaheed Nand Kumar Patel University) Raigarh on 14th October 2023.



- **Dr S K Singh**, Department of Humanities and **Prof. M R Mishra**, Department of Mathematics, School of Science delivered an invited talk for UG & PG students on the topic Skills for Spoken English (UG/PG Level) and MATLAB (UG/PG Level Mathematics), Govt. KG Arts & Science College (affiliated to Shaheed Nand Kumar



Patel University) Raigarh on 13th October 2023.

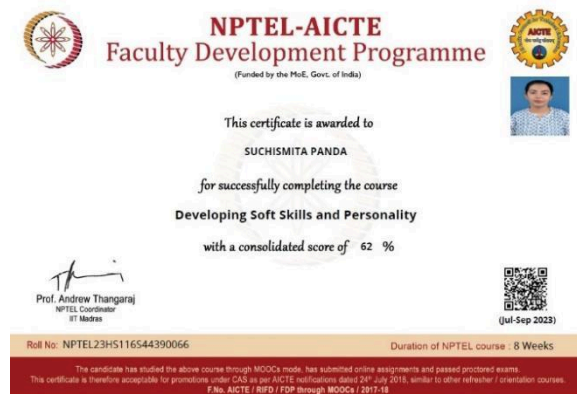
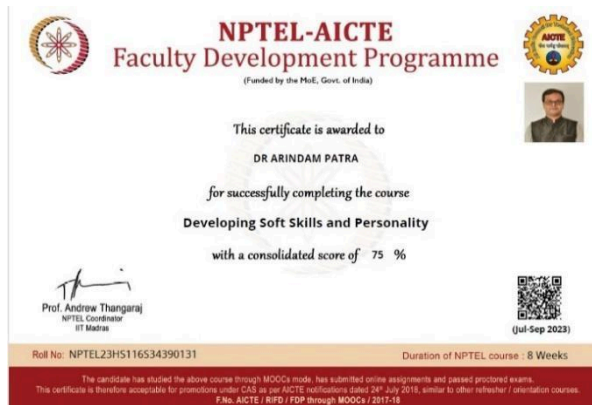
- **Dr R. S. Singh**, School of Science, delivered an Invited Talk entitled “**Hydrogen Storage in Sulphur-doped SiC nanotubes**” in the 10th Global Conference on Polymer and Composite Materials (PCM 2023) held from October 27-30, 2023 in Shenzhen, China.

FDP Attended

- **Dr Dipti Shukla**, Department of Physics, School of Science attended one-week National Level Faculty development program on Cloud infrastructure (AWS) organised by department of CSE, JNTUK University College of Engineering Narasaraopet, AP during 21-25 August 2023.



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



- **Dr Arindam Patra** and **Prof. Suchismita Panda**, Assistant Professor, Dept. of Humanities, SoS have successfully completed the Five-Day Online FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education (AICTE) from 6-10 November 2023



Awards & Recognitions

- **Dr. R. S. Singh**, Sr. Associate Professor of Physics, received Best Oral Presentation Award in The 10th Global Conference on Polymer and Composite Materials held from October 27-30, 2023 in Shenzhen, China for the speech titled “Hydrogen Storage in Sulphur-doped SiC Nanotubes”.
- **Dr. Dipti Shukla**, Associate Professor, Physics, SoS received certificate of Excellence in Peer-Reviewing by BP International.
- **Dr. Swati Verma**, Associate Professor- Mathematics, was awarded certificate of excellence in Reviewing by Journal of Engineering Research and Reports.



Outreach Activity

- **Dr Kavita Patel** and **Dr Ankur Rastogi** interacted with the 10+2 level science students of Swami Atmananda School, Raigarh and discussed about the career opportunities on 14th October 2023.



- **Dr SK Singh, Dr Saumya Singh, Dr Kavita Patel and Dr Debasmita Samal** interacted with the Science Students of Govt. Hr. Sec. School Chharratangar.



Sanskar Public School Exposure Visit

On 15th December 2023, an exposure & interaction visit of the 11th & 12th standard students of **Sanskar Public School, Raigarh** was organized by School of Science in association with Admissions & Outreach department. They visited state-of-the art engineering and science laboratories and got an exposure of various courses and programs offered, and other



basic amenities like gymnasium, sports facilities, hostel and mess available at the campus.



Club Activity

Roots & Rhythms organized by Cultural Club

Cultural Club-SoS organized an event “**Roots and Rhythms**” to refocus and revisit the traditions and culture of this diversified nation INDIA on **9th October 2023**. School of Science consistently promotes its students to nurture and churn out their hidden talents, creativity, and potentiality in a guided and amicable environment. Students researched, understood, and inculcated the values, customs, and rituals of varied streams of culture through practicing and showcasing excellent performances in the forms of classical dance, song, and playing instruments.





Webinar organized by Social Empowerment Club

Internal Complaints Committee (ICC) in association with **Social Empowerment Club, Sahrudaya** and **IQAC Cell, OPJU** organized a **webinar on Sexual and Mental Harassment of Women at workplace: Legal Outlook** on **27th October 2023**. The resource person was **Dr Gagandeep Kaur**, Associate Professor in Law, Cluster Head School of Law & Social Sciences, UPES, Dehradun.

Internal Complaints Committee (ICC)
in Association With
Social Empowerment Club (Sahrudaya) - SoS, SoE, SoM & IQAC Cell, OPJU
Organizing a Webinar
on
Sexual & Mental Harassment of Women at Work Place: Legal Outlook

Coordinator: Dr. Saumya Singh, Chairperson-ICC, OPJU
Moderator: Prof. Sanjana Dewangan, Assistant Professor, School of Science, OPJU
Facilitator: Dr. Bhupesh K. Dewangan, Associate Professor, CSE, OPJU
Speaker: Dr. Gagandeep Kaur, Associate Professor in Law, Cluster Head Law & Social Sciences, School of Law, UPES

Scan and join webinar
27.10.2023
11:00 AM to 12:00 PM
<https://shorturl.at/knR03>

Frame & Fame organized by Pixel Diary Club

An event “**Frame & Fame**” was organized by **Pixel Diary Club, School of Science** during **6th -26th October 2023** to discover the students having photography as interest and provide a platform to them. A total 12 participants registered themselves out of which 10 participants shared their best 3 photographs. Subsequently on 6th November 2023 an exhibition was organized to showcase their talent.

SCHOOL OF SCIENCE
OP Jindal University, Raigarh
PIXEL DIARY CLUB
Presents
“frame & Fame”
Intra-School Photography Contest

Entries Open till 26th October 2023
Register yourself
<https://forms.gle/KEYGnTAwka/SBf8>

RULES

1. Only photos clicked through mobile will be accepted
2. All participants should send their best 3 photos
3. The purpose and message behind each photograph should be mentioned accordingly
4. Email your photos to the following email id: pixeldiaryclubsos@gmail.com
5. This competition is only for SoS students

Student Coordinators
Amit Chatterjee : 7470906224
Vijaylaxmi Kaiwartya
Kanchan Yadav
Ranu Sahu

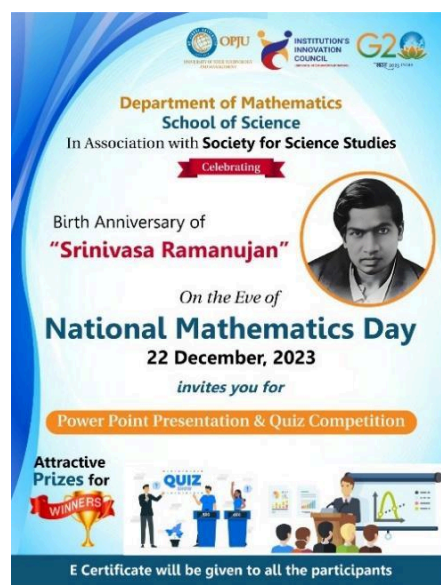
Faculty Coordinators
Dr. Ankur Rastogi
Dr. Dipti Shukla
Prof. Suchismita Panda

SCAN HERE



Celebration of National Mathematics Day-2023

To commemorate **136th birth anniversary of the Srinivasa Ramanujan**, Department of Mathematics, School of Science OPJU celebrated **National Mathematics Day** by organizing Power Point Presentation Competition and Quiz Competition for all students of OP Jindal University on **22nd December 2023**. 30 students participated in Quiz Competition and 12 students gave presentations on various topics.



Industrial Visits

- BSc (H) Biotechnology 3rd semester students visited **JSP Subhangi Sanitary Pad Manufacturing Unit**, Raigarh on **1st December 2023**. This Visit offered a holistic understanding to students regarding the manufacturing process, from raw materials to the final product, distribution and marketing and have wide-ranging implications for education, industry knowledge, innovation, and fostering a deeper understanding of menstrual hygiene management.



- BSc (H) Biotechnology 3rd semester students visited **O P Jindal Fortis Hospital**, Tamnar on **8th December 2023**. This visit offered first-hand experience of the laboratories of modern healthcare system but also expanded the knowledge of clinical processes- diagnostics and testing to the students.



- BSc (H) Biotechnology 1st semester students visited **Rabo Dam Horticulture and Dairy Department**, O P Jindal Power Tamnar on **27th December 2023**. Students explored the variety of plants and their medicinal importance. Students also learned about the breeding, feeding, and treatment methods of dairy animals. They also came across the collection, packaging, and distribution of milk from the dairy farm.



Student's Achievements

- 14 students of B.Sc.(H) Biotechnology 3rd semester qualified the NPTEL Course “**Biomedical Nanotechnology**” out of which 9 qualified under Elite category.
- 6 students of B.Sc. (H) Physics 5th semester qualified the NPTEL course “**Solid State Physics**” out of which 1 qualified under Elite category.
- 1 student of B.Sc. (H) Chemistry 3rd semester qualified NPTEL course “**Developing Soft Skills and Personality**”.
- 5 students of B.Sc. (H) Chemistry 5th semester qualified NPTEL course “**Quantum Chemistry of Atoms and Molecules**” out of which 2 students secured Elite grade.
- 3 students of M.Sc. Chemistry 3rd semester qualified NPTEL course “**Quantum Mechanics and Molecular Spectroscopy**” out of which 1 student secured Elite grade.

- 11 students of B.Sc. (H) Mathematics 5th semester qualified and received certificate for the NPTEL course “**Rings and Modules**”.