



Special Activities and New Initiatives

Monthly Report of November 2023

Doon University, Dehradun

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Department of Physics, School of Physical Sciences

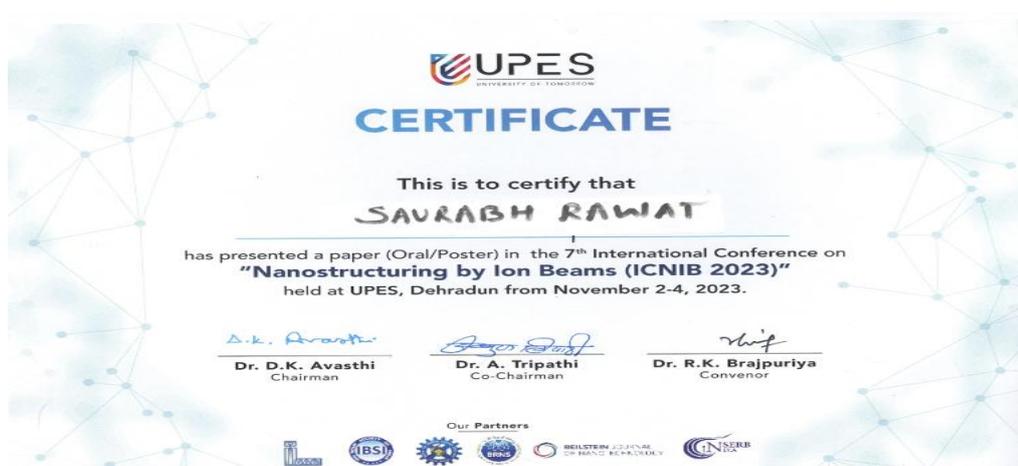
Acceptance of Research Paper

Title: Light-Assisted Ag and Pd MoS₂Hybrid Gas sensors for room temperature detection of Ammonia

Authors: Saurabh Rawat, Priyanka Bamola, Shreya Negi, Manika Khanuja, Mohit Sharma, Charu Dwivedi, Rajesh Kumar, Himani Sharma

ACS Applied Nanomaterials (**Impact Factor – 6.14**)

Mr. Saurabh Rawat (research scholar) presented his paper entitled “Temperature Dependent Raman Spectroscopy and Gas sensing on Few- Layer 2D MoS₂ triangular Domains” in an International Conference on Nanostructuring by Ion Beams (ICNIB 2023) held at UPES Dehradun from **November 2-4, 2023**



Ms. Karishma (research scholar) presented her paper entitled “**Comparative Analysis of NiO and Potassium -Doped NiO Nanocrystals Synthesized Via Co- Precipitation**” in an **International Conference on Energy & Advanced Materials (ICEAM 2023)** held at Jaypee Institute of Information Technology, Noida from **November 2-4, 2023**



Dr Himani Sharma was organizing committee member in a FDP program entitled “Quality Measures for Teaching and Research in Higher Education Institutions” held at Doon University on **Nov 18, 2023**.



Dr. Khushboo Singh participated in a FDP program entitled “Quality Measures for Teaching and Research in Higher Education Institutions” held at Doon University on **Nov 18, 2023**.



Dr. Vikas Sharma successfully completed a refresher course in Physical Sciences and Nano Sciences held from 20-09-2023 to 05-10-2023 at JNU Delhi

School of Environment & Natural Resources

1. **Prof. Surendra Singh Suthar** attended ACS Workshop jointly organized by the American Chemical Society and UPES, Dehradun on **9th November 2023** at UPES, Dehradun.
2. **Prof. Surendra Singh Suthar** acted as a resource person in the “Hands-on Training Workshop on Vermicomposting Procedure and Its Application” organized by the Punjab State Council of Science & Technology, Chandigarh and MOEFCC, GoI, New Delhi at Khalsa College, Amritsar during **23-24th November, 2023**.
3. **Dr. Achlesh Daverey** delivered an invited talk and chaired a session at “National Bioengineering Conference – 2023” with a theme “Bioengineering in Healthcare and Environment” (**November 9-11, 2023**) organized by the Department of Biotechnology & Medical Engineering, National Institute of Technology (NIT) Rourkela, Odisha.

4. **Dr. Ujjwal Kumar** attended a UNEP (United Nations Environment Program) TEEBAgriFood (The Economics of Ecosystems and Biodiversity for Agriculture and Food Program) symposium in Bangkok, Thailand during **7-9 Nov, 2023** as a special expert invitee from UNEP.



The UNEP's TEEBAgriFood Global Symposium at UN Conference Center, Bangkok, Thailand during 7-9 Nov, 2023.

Publications

1. Singh V, Negi R, Jacob M, Gayathri A, Rokade A, Sarma H, Kalita, J., Tasfia, S.T., Bharti, R., Wakid, A., Suthar, S., Kolipakam, V., Qureshi, Q. (2023) Polycyclic Aromatic Hydrocarbons (PAHs) in aquatic ecosystem exposed to the 2020 Baghjan oil spill in upper Assam, India: Short-term toxicity and ecological risk assessment. PLoS ONE 18(11): e0293601. Published: November 29, 2023. [Impact Factor =3.7] <https://doi.org/10.1371/journal.pone.0293601>
2. Sharma, A., Swami, S., Pawaiya, A., Mishra, A., Chaudhary, M., Bhatt, N., Khan, A.A., Mutiyar, P.K., **Suthar, S. (2023)**. Developing slow-release fertilizer based on pyrolysis of domestic biogas digestate cake: A circular economy approach for rural farmers. *Biomass & Bioenergy (Elsevier)* 178, 106966 [Impact Factor=6.00].

School of Biological Sciences

Symposium Organized

A symposium on “**The Quest of Life in the Universe**” was organized on **30th November** at Senate Hall by School of Biological Science (SoBS), Doon University, Dehradun. Dr. Sohan Jheeta, Founder & Chairman of NoRCEL, Leeds, UK, and Dr. Ram Karan Sharma, Associate Professor, Department of Microbiology, Delhi University, were the expert speakers in the event. The Symposium was organized by the faculties of School of Biological Sciences, Prof. S.S. Suthar (Dean, SoBS), Dr. Achlesh Daverey (Coordinator, SoBS) and Dr. Babita Saroha, Dr. Vivekanand Bahuguna, Dr. S. Bhopen Singh, Dr. Charu Thapliyal, Dr. Vijendra Shah and Dr. Jyotsana Singh. The event was attended by the academicians and B. Sc students of Biological Science, Doon University. The symposium provided a stimulating platform for exploring the profound mysteries of life's origins and the resilience of organisms in the face of extreme conditions.



Faculty Achievements

1. **Dr. Babita Saroha**, faculty of School of Biological Sciences (SoBS) received “**Best Oral Presentation**” at an **International E-Conference on “Recent Advances in Science and Technology**” organized by IITyam Science Tech, held on **4th - 5th November, 2013**.



2. **Dr. S Bhopen Singh**, faculty of School of Biological Sciences (SoBS) attended an online workshop on “**Cryo-Electron Microscopy Technique for Structural Biology**” organized by NIT Warangal and SASTRA University, Tanjavur on **18th November, 2023**.

3. **Dr. Vijendra Shah**, faculty of School of Biological Sciences (SoBS) attended a Five Day Faculty Development Programme (Online Mode) on “**Development of e-Content and MOOCs**” organized by Internal Quality Assurance Cell, Shri Guru Ram Rai University, Dehradun on **16th – 20th November, 2023**.

Students' Achievement

Many students from the school of Biological Sciences participated at the “**Sur Mohotsav**” organized by Doon University Student Council, held on **28th – 29th November, 2023**. They got “**third position**” in **Folk Singing and Western Dance**.



Department of Chemistry, School of Physical Sciences

1. Royal Society of Chemistry invited Dr. Arun Kumar to the Roundtable's Select Committee of Experts (to be held on 9th December 2023) to share his insights as well as explore potential research, industrial and/or training collaborations. The organizers of the program are the Royal Society of Chemistry (RSC), in partnership with the Office of the Principal Scientific Adviser and the Delhi Research Implementation & Innovation (DRIIV) cluster.

Research Publications in International Journals:

- J. Rawat, H. Sharma, and C. Dwivedi, ‘*Enhanced photocatalytic activity and thermal conductivity of boron nitride quantum dots decorated TiO₂ nanograss composite*’ *Journal of Materials Science*, 2023, 58, 14788-14806.
- S. Dubey, C. Bhandari, P. Gurjar, S. Kumar, **A. Kumar**, and Asheesh Kumar, ‘*Investigating the Effect of Crown Ether on the Kinetics and Morphology of Natural Gas Hydrate Formation*’ *Energy Fuels* 2023, 37, 22, 17290–17300.

School of Design

Design Exhibition + Haat (3rd November, 2023)

All faculty and students of the School of Design organized a one day long Design Exhibition & Design Haat to display student work done in this semester. This event served as a kaleidoscopic showcase of artistic brilliance, bringing together a diverse array of design concepts and innovative expressions. The exhibition provided a platform for students and emerging designers to unveil their imaginative creations, spanning various disciplines within the realm of design, including graphic design, fashion, industrial design, and more. The Haat, a lively market-style addition to the exhibition, added an extra layer of cultural richness, offering visitors the opportunity to engage with and acquire unique, handcrafted artifacts and designs. The event not only celebrated the boundless creativity

nurtured within the School of Design but also fostered an environment of dialogue and appreciation for design's multifaceted impact on our aesthetic and functional experiences.

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Talk by Mr Venkat Varala on HCI in Design (4th November, 2023)

Mr Venkat Varala from IIT Guwahati & UPES University addressed the students of School of Design on the topic of HCI in Design as part of the lead up to International India HCI 2023 Conference being organized in Dehradun at the end of the month. It was a fantastic session that engaged the students with the most recent developments in the field of HCI and how students stand to gain from the advent of AI.

Creative Thinking Workshop with Ms Khyati Priya (30 Oct - 4 Nov, 2023)

Ms Khyati Priya, visiting PMRF Research Scholar from IIT Bombay, conducted an intensive week long workshop on Creative Thinking for the first year students of School of Design. Students were exposed to many techniques of creative ideation and quick innovation techniques.

Design of Convocation Collaterals for University Convocation 2023 (6th November, 2023)

Ms Dhriti Dhaundiyal & Ms Varda Thapa of School of Design designed the visual identity and all collaterals of the University Convocation 2023 to present cohesive visual identity of the event on this important landmark in the University calendar.

Virasat Craft Workshops (17th August, 2023)

First & Second year design students from School of Design visited the Virasat fair in Dehradun, the largest craft and cultural fair in all of Asia. They participated in workshops on Madhubani painting, leather footwear making, glass bangle making etc. under the guidance of Prof Lokesh Ohri from INTACH-REACH, the organizers of the workshop.



Rangoli Competition for Students (31st August, 2023)

Students of School of Design organised a Rangoli Competition for all University students on the eve of Chhoti Diwali. The theme was Vasudaiva Kutumbkam. The winning entry was created by final year students of School of Design Satwika Gupta, Yagyashree, Varda Thapa and Urooj Zaidi.

Participation in Workshop on ‘Artificial Intelligence in HCI’ (23 November, 2023)

Third and fourth year students of School of Design participated in a Workshop on ‘Artificial Intelligence in HCI’ organized at the International India HCI Conference organized at UPES University from 23-25 November, 2023. They interacted with industry UX/UI experts to understand future changes in design pipelines brought about by artificial intelligence.



Jury Panel Member in Arts Research Track at India HCI 2023 (24 November, 2023)

Ms. Dhriti Dhaundiya was invited as a jury member in the Arts Research Track at India HCI 2023 by the conference organizers, India HCI and UPES University. She judged entries from diverse researchers and institutions that spanned the latest developments in AR/VR augmented design as part of an interdisciplinary panel from IIT Hyderabad and IIT Roorkee.



Jury Member for MDes Assessments in Industrial Design at IIT Roorkee (27 November, 2023)

Ms. Dhriti Dhaundiyal was invited as a jury member for M.Des. Assessments of final semester students of Industrial Design at IIT Roorkee.

Course Collaboration with NIEPVD (27 November, 2023)

School of Design and National Institute for the Empowerment of Persons with Visual Disabilities (NIEPVD), formerly known as NIVH, have collaborated on a Social Design course for final semester students. They will be working together on a documentary on peer sensitization and dissemination of braille books in schools and universities. The course faculty are Ms. Dhriti Dhaundiyal & Mr. Vineet Horo.

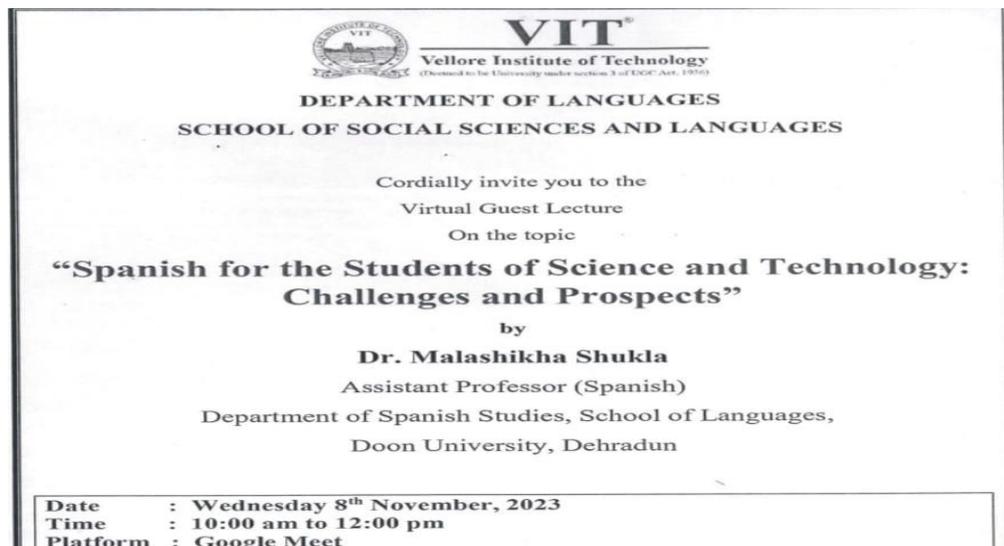
Visit to Lakad Mandi & Loha Mandi (6th November, 2023)

Third year product design students of Ms Dhriti Dhaundiyal went on a visit to Lakad Mandi and Loha Mandi as part of their Advanced Prototyping course.

Department of Spanish Studies

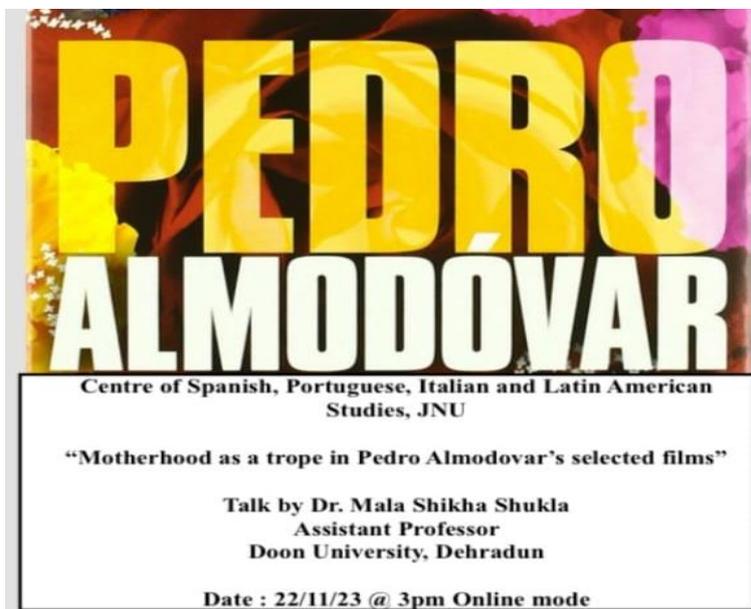
School of Languages

1. Dr. Mala Shikha delivered a virtual guest lecture at the Department of Languages, School of



Social Sciences and Languages, VIT, Vellore on 8 November 2023 on “Spanish for the Students of Science and Technology: Challenges and Prospects”.

2. Dr. Mala Shikha delivered a talk virtually at the CSPILAS, SLL&CS, Jawaharlal Nehru University, New Delhi on 22 November 2023 on “Motherhood as a Trope in Pedro Almodóvar’s Selected Films”.
3. Faculty and Students of the Department of Spanish Studies, School of Languages, Doon University participated in the Kultura Festa 2023 organised on 23 November 2023 by the Department of Modern Foreign Languages at The Doon School. Dr. Mala Shikha was invited to judge the inter-



school competitions on Prose Recitation, Singing and Hands-on Creation. The Students of Doon University participated in the Food Festival and Prose Recitation.

Department of Economics
Doon University, Dehradun

Brainstorming Panel Discussion on Resurgent Uttarakhand, Pre-Conference Event of 6th World Congress on Disaster Management

07 November 2023 (2.30-5.30 p.m.)

Department of Economics, Doon University organised a thought-provoking panel discussion on “Resurgent Uttarakhand on 07 November 2023. Experts from a range of academic disciplines converged at Doon University as part of this pre-conference event to Sixth World Congress on Disaster Management to be organized in Dehradun later this month. In the opening address by Prof. Rajendra P Mangain, Dean, School of Social Sciences, Doon University and Convener of this pre-conference panel discussion, he detailed the theme of the conference and highlighted the need for preparing the communities towards resilience, disaster preparedness and to provide support, emergency services and trainings to the local people. He stressed on resilient development plans for the area at both individual and community levels so that the impacts of future incidents like the Kedarnath disaster can be mitigated.

The experts underlined the need to address the widening policy disconnect between state’s inherent geological instabilities, ever increasing vulnerabilities to natural disasters and climate change and the development strategies. Doon University Vice Chancellor Prof. Surekha Dangwal in her inaugural

address emphasised on the need for a holistic approach towards development, linking together economy, ecology and ethics. Tampering with ecology for personal and physical gains can be disastrous for humanity, she said adding that ethics and morality should guide our policies.



Internationally renowned expert on Himalayan ecology, Prof. S.P. Singh delivered a comprehensive lecture on various significant aspects of Himalayan ecology, disasters and incidents of climate change. Emphasising on the need for climate justice and to bring into policy eco-system services, Professor Singh stated that Himalayan region is producing very low emissions compared to cities and plane areas and poor people contribute almost zero to carbon emissions. He also highlighted the serious issue of border districts facing increase in migration due to changing climate and environmental challenges. This demographic shift raises important questions about resource allocation and resilience building in these areas. Furthermore, Professor Singh advocated for “carbon justice”. It is a concept that urges equitable distribution of the burdens and benefits associated with carbon emissions.

In his address, Uttarakhand Council for Science and Technology (UCOST) Director General Professor Durgesh Pant emphasized on the key issues related to disasters and emphasised on the need for safe investments that can create a sustainable ecosystem. Professor Pant drew attention to the important demographic dividend that can be harnessed in the context of natural disaster preparedness and recovery efforts.

Former Doon University Vice Chancellor Professor Gajendra Singh underlined the deep sensitivity of the agricultural sector towards such disasters. He said that there is an urgent need for comprehensive strategies and preparedness measures to protect a state like Uttarakhand so as to ensure global food security.

Renowned Geologist Prof Y P Sundriyal highlighted the need for resilient structures that can withstand the devastating impact of floods. Prof. Avinash C. Joshi stressed on the critical importance of site selection for infrastructure development and advocated for small hydro projects for energy in the Himalayan region. Prof. Swapnamitra underlined the need to prepare future geologists and geotechnical experts while highlighting the importance of creating smart villages where basic amenities are easily available.

Faculty members and research students of various departments participated in the programme, including Dr. Madhu Bisht, Dr. Sushant Kumar, Dr Sudhanshu Joshi, Dr Arun Kumar, Dr. Rashi Mishra, Dr. Savita Tiwari, Dr. Anshuman Mishra, Dr. Rajesh Bhatt, Dr. Sonu Kaur, Peeyush Sharma, Abhishek Badola, Mansi Nath, Richa Verma, Rohit Sharma and Roli Pandey.