



# Prajñanam प्रज्ञानम

Dec. 2023

CONTINUING EDUCATION | IMPORTANT EVENTS |  
STUDENTS' CORNER |  
FACULTY ACCOMPLISHMENTS | RESEARCH  
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**National Institute of Technology, Uttarakhand**  
A Quarterly Newsletter: Dec. 2023 Issue



## निदेशक के डेस्क से...

### एनआईटी, उत्तराखंड की ओर से शुभकामनाएं !



मैं आपको और आपके परिवारों को नव वर्ष की हार्दिक शुभकामनाएं देता हूँ, आशा करता हूँ कि यह वर्ष आपके सपनों को पूरा करेगा और आपको अपने करियर में नई ऊंचाइयों पर ले जाएगा। हमारे इंस्टीट्यूट न्यूज़लैटर के अक्टूबर से दिसंबर 2023 संस्करण के पन्ने उस उल्लेखनीय यात्रा को दर्शाते हैं जो हमने इस अवधि के दौरान तय की है। राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड नई ऊंचाइयों पर पहुंच गया है, जो 2022 में 37.76 (रैंक 131) के समग्र स्कोर से 2023 में प्रभावशाली 40.48 (रैंक बैंड - 101-150) तक उल्लेखनीय सुधार से स्पष्ट है। मैं हमारे समर्पित संकाय सदस्यों, अनुभवी और युवा, दोनों के प्रति अत्यधिक गर्व और सराहना व्यक्त करता हूँ, जिन्होंने संस्थान की उन्नति के लिए अथक प्रयास किया है।

"सी2पी अनुभाग" की स्थापना अत्यधिक प्रभावी साबित हुई है, जिससे 2022-23 प्लेसमेंट सत्र के दौरान 7.5 लाख के औसत वेतन पर 80% से अधिक छात्र प्लेसमेंट की सुविधा मिली है। विशेष रूप से, 2023 में छात्रों के औसत वेतन में उल्लेखनीय सुधार हुआ है, जो छात्रों की वृद्धि और विकास के प्रति हमारी प्रतिबद्धता का प्रमाण है। वर्ष 2023 में, हमारे संस्थान ने अनुसंधान और परामर्श प्रयासों में पर्याप्त प्रगति देखी। संकाय सदस्यों ने एससीआई/स्कोपस अनुक्रमित पत्रिकाओं में 170 से अधिक पत्र प्रकाशित किए हैं और प्रतिष्ठित फंडिंग एजेंसियों और अनुसंधान संगठनों से 1.5 करोड़ रुपये से अधिक का अनुसंधान अनुदान प्राप्त किया है। इस वर्ष अनुसंधान अनुदान प्राप्त करने वाले सभी संकाय सदस्यों को मेरी हार्दिक बधाई। मैं हमारे संस्थान समुदाय के प्रत्येक सदस्य से प्रकाशन, पेटेंट, बाहरी वित्त पोषित परियोजनाओं, कॉपीराइट, डिजाइन, नए प्रयोगों, प्रयोगशाला उपकरण, परामर्श और सोशल मीडिया उपस्थिति में योगदान से संबंधित मापने योग्य लक्ष्य निर्धारित करके संस्थान की प्रगति की दिशा में काम करने का आग्रह करता हूँ। यूजी और पीजी छात्रों के लिए प्रवेश और प्लेसमेंट में सुधार करना भी हमारे सामूहिक विकास के लिए महत्वपूर्ण है। 4 नवंबर 2023 को माननीय लेफ्टिनेंट जनरल गुरमीत सिंह की अध्यक्षता में सफल चौथे दीक्षांत समारोह में 12 पीएचडी, 13 एम.टेक, 90 बी.टेक डिग्री और 01 पीजी डिप्लोमा सहित 115 डिग्रियां प्रदान की गईं, जो राष्ट्रीय शिक्षा नीति 2020 के निर्देशों का पालन करती है। विशेष रूप से, एकेडेमिक एक्सीलेंस पुरस्कारों ने 06 बी.टेक और 04 एम.टेक छात्रों की असाधारण उपलब्धियों को सम्मानित किया। इन योग्य छात्रों को अकादमिक उत्कृष्टता पुरस्कारों से सम्मानित करने में उत्तराखंड के माननीय राज्यपाल लेफ्टिनेंट जनरल गुरमीत सिंह के सराहनीय कदम ने शैक्षणिक विशिष्टता के प्रति संस्थान की प्रतिबद्धता को महत्वपूर्ण रूप से उजागर किया। संस्थान के स्पोर्ट्स क्लब ने 16 से 19 अक्टूबर 2023 तक इंटर एनआईटी 5-ए साइड फुटबॉल टूर्नामेंट का सफलतापूर्वक आयोजन किया, जिसमें विभिन्न टीमों के 152 लड़के और लड़कियों की उत्साहपूर्ण भागीदारी देखी गई। यह आयोजन खेल भावना का एक शानदार प्रदर्शन था, जिसमें पुरुषों का खिताब चौथे वर्ष की टीम ने जीता और महिलाओं का खिताब दूसरे वर्ष की आदिशक्ति टीम ने जीता। इसके अलावा, 21 अक्टूबर 2023 को आयोजित "गरबा नाइट" का सांस्कृतिक उत्सव एक जीवंत उत्सव था, जिसमें पारंपरिक नृत्य प्रदर्शन, रैंप वॉक प्रतियोगिता और शाखा-वार प्रतियोगिताओं का प्रदर्शन किया गया, जिससे छात्रों, शिक्षकों और कर्मचारियों के बीच खुशी और परंपरा की भावना पैदा हुई। सदस्य. 5वीं पूर्व छात्र बैठक और "भौतिक विज्ञान में हालिया प्रगति" (एनसीआरएपीएस-2023) पर 5वां राष्ट्रीय सम्मेलन वर्ष के अंत में महत्वपूर्ण कार्यक्रम थे। इसके अलावा, एनआईटी उत्तराखंड हमारे संस्थान की प्रतिष्ठा और धारणा को आगे बढ़ाने में हमारे साथ शामिल होने के लिए सम्मानित शिक्षाविदों और प्रशासकों को आमंत्रित करता है। एनआईटी उत्तराखंड में, हम शैक्षणिक उत्कृष्टता और नवाचार के माहौल को बढ़ावा देने के लिए गहराई से प्रतिबद्ध हैं। हमारी संस्था की स्थिति को और मजबूत करने और हमारी उपलब्धियों को बढ़ाने के लिए, हम सोशल मीडिया, ई-मीडिया और प्रिंट मीडिया जैसे विभिन्न प्लेटफार्मों पर हमारे प्रयासों को बढ़ावा देने में सक्रिय भागीदारी को प्रोत्साहित करते हैं। जैसे ही हम इस संस्करण को समाप्त करते हैं, आइए हम सभी प्रयासों में उत्कृष्टता के लिए प्रयास करते हुए और हमारे प्रतिष्ठित राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड की वृद्धि और प्रतिष्ठा में सामूहिक रूप से योगदान करते हुए अपनी यात्रा आगे जारी रखें।

जय हिंद, जय भारत!!

प्रोफेसर ललित कुमार अवस्थी, निदेशक, एनआईटी उत्तराखंड





## FROM THE DIRECTOR'S DESK

Greetings from NIT, Uttarakhand!



I extend my heartfelt New Year wishes to you and your families, hoping that this year brings fulfilment of your dreams and propels you to greater heights in your careers. The pages of the October to December 2023 edition of our Institute Newsletter reflect the remarkable journey we've traversed during this period. The National Institute of Technology Uttarakhand has soared to new heights, evident in the notable improvements from an overall score of 37.76 (Rank 131) in 2022 to an impressive 40.48 in 2023 (Rank Band – 101-150). Our institute has garnered significant recognitions, being acknowledged as "India's Best Engineering Institute" with a AAAA (4A) rating by Careers 360 and securing the 21st position in India Today's ranking 2023.

I express immense pride and appreciation to our dedicated faculty members, both seasoned and young, who have tirelessly worked towards the advancement of the Institute. The establishment of the "C2P section" has proven highly effective, facilitating over 80% student placements at a median salary of 7.5 Lakhs during the 2022-23 placement session. Notably, the median salary of students in 2023 has shown remarkable improvement, a testament to our commitment to student growth and development. In the year 2023, our institute witnessed substantial strides in research and consultancy endeavours. Faculty members have published over 170 papers in SCI/Scopus indexed journals and secured research grants exceeding Rs. 1.5 Crores from prestigious funding agencies and research organizations. My heartfelt congratulations to all faculty members receiving research grants this year. I urge each member of our institute community to work towards the institute's progress, setting measurable targets related to Publications, Patents, External funded projects, copyrights, Designs, new experiments, lab equipment, consultancy, and contributing to social media presence. Improving admissions and placements for UG & PG students is also crucial for our collective growth. The 4th Convocation held on November 4, 2023, was a significant milestone, graced by the presence of the esteemed Hon'ble Lt. Gen. Gurmit Singh. This distinguished ceremony awarded a total of 115 degrees, encompassing 12 Ph.D., 13 M.Tech., 90 B.Tech. degrees, and 01 PG diploma, following the guidelines outlined in the National Education Policy 2020. Notably, Academic Excellence awards recognized the outstanding achievements of 06 B.Tech. and 04 M.Tech. students. The commendable gesture of Hon'ble Governor Uttarakhand, Lt. Gen. Gurmit Singh, in honoring these deserving students with academic excellence awards significantly highlighted the institute's commitment to academic distinction. The Institute's Sports Club successfully organized the Intra NIT 5-A side Football Tournament from 16th to 19th October 2023, witnessing enthusiastic participation from 152 Boys & Girls students across different teams. The event was a great display of sportsmanship, with the Men's title won by the fourth-year team and the Women's title claimed by the Adishakti Team from the second year. Furthermore, the cultural festivity of "GARBA NIGHT" held on 21st October 2023 was a vibrant celebration, showcasing traditional dance performances, a ramp walk competition, and branch-wise competitions, fostering a sense of joy and tradition among students, faculty, and staff members. The 5th Alumni Meet and the 5th National Conference on "Recent Advancements in Physical Sciences" (NCRAPS-2023) were significant events at the end of the year. Further, NIT Uttarakhand invites esteemed academicians and administrators to join us in advancing our institution's reputation and perception. At NIT Uttarakhand, we are deeply committed to fostering an environment of academic excellence and innovation. To further fortify our institution's standing and amplify our achievements, we warmly encourage active participation in promoting our endeavors across your diverse platforms such as social media, e-media, and print media. As we conclude this edition, let us continue our journey forward, striving for excellence in all endeavours and collectively contributing to the growth and reputation of our esteemed National Institute of Technology, Uttarakhand.

Jai Hind, Jai Bharat!!

Prof. Lalit Kumar Awasthi, Director, NIT Uttarakhand



## Convocation



The 4th Convocation of the Institute was successfully completed on 4th Nov. 2023. Lt. Gen. Gurmit Singh, Hon'ble Governor Uttarakhand was the Chief Guest of the function. In this convocation a total number of 115 Degrees were awarded out of which 12 were Ph.D, 13 were M.Tech, 90 were B.Tech degrees. In addition 01 PG diploma was also awarded as per National Education Policy 2020. The Academic Excellence award were distributed to 06 Eligible students of B.Tech and 04 Eligible students of M.Tech Programme. Hon'ble Governor Uttarakhand, Lt. Gen. Gurmit Singh has awarded the academic excellence award to all the eligible students.



## NCRAPS-2023



The 5th National Conference on “Recent Advancements in Physical Sciences” (NCRAPS-2023) was jointly organized by Departments of Chemistry, Physics and Mathematics, NIT Uttarakhand during December 19-20, 2023 via hybrid mode. NCRAPS-2023 is the fifth version in a series of conferences that commenced in 2019 and is now an annual tradition held on December 19-20. The conference organizing committee has invited 02 plenary speakers, 03 keynote speakers and 12 other invited experts to deliver their lectures. The 02 plenary speakers and 03 keynote speakers shall cover the different areas of the conference i.e. 1. Dr. Kaustabh Kumar Maiti (CSIR-NIIST, Trivandrum) will be talking on “Advancement of Surface-Enhanced Raman Spectroscopy in Cancer Management”, 2. Prof. S. K. Tomar (VC JC Bose University, Faridabad) will be discussing about “Rayleigh-Type Surface Waves In Nonlocal Micropolar Thermoelastic Half-Space Containing Void Pores”, 3. Prof. PVS Murthy (IIT Kharagpur) will be talking on “Solute dispersion in a non-Newtonian (Ellis) fluid flow in a circular tube” 4. Prof. G. P. Raja Sekhar (IIT Kharagpur) will speak on “Physical Insights On Hydrodynamics of Swimming Micro-Organisms”, 5. Prof. Manish K. Kashyap (JNU, New Delhi) will deliver a talk on “Investigation Of Novel 2d Magnetic Van Der Waals Heterostructures; A Dry Lab Approach” alongwith 12 invited lectures viz. Prof. Anantharaman (IIT Kanpur), Prof. Manoj Antil (Baba Mastnath University, Rohtak), Prof. Praveen Bhatt (Baba Mastnath University, Rohtak), Dr. R. Sivaraj (NIT Jalandhar), Dr. Ashok Kumar (HNB Garhwal University), Dr. Saral Kumar Gupta (Banasthali University), Dr. Amit Pratap Singh (NIT Delhi), Dr. Satyananda Panda (NIT Calicut), Dr. Jay Singh (BHU, Varanasi), Dr. Bhaskaran (HNB Garhwal University, Srinagar) Dr. Joginder (DIT) and Dr. Nidhi Naithani (Amity University Punjab) shall cover a wide interdisciplinary areas. The conference has received a total number of 120 extended abstract/paper submissions which were peer reviewed and around 110 abstracts have been accepted for oral presentation. The abstracts have been split between four technical sessions in conference broad subject areas of Chemistry, Mathematics, Physics and Engineering.



## 5th Alumni Meet:

The 5th Alumni Meet at the National Institute of Technology, Uttarakhand, convened on November 4, 2023, and marked an extraordinary convergence of esteemed alumni, faculty members, and current students, fostering a celebration of shared achievements and future collaborations. Prof. Chandra Shakher, Emeritus Professor at IIT Delhi, graced the occasion as the Chief Guest, alongside Prof. Lalit Kumar Awasthi, the Hon'ble Director of NIT Uttarakhand, and other esteemed dignitaries. The event commenced with a ceremonial lamp-lighting and warm traditional welcomes exchanged among the dignitaries. Dr. Mahiraj Singh Rawat, in his welcome address, highlighted the considerable presence of alumni, numbering around 1895, and emphasized the day's significance in reconnecting alumni with the institute's advancements and growth.



Dr. Dharmendra Tripathi, Incharge Registrar and Dean (SW), reiterated the paramount objective of revitalizing the alumni-institute connection, accentuating the institute's infrastructure advancements and future plans. Dean Jagrati Sahariya shed light on academic milestones, discussing the institute's alignment with the New Education Policy and plans to expand academic programs. Prof. Lalit Kumar Awasthi acknowledged the institute's stature in technical education and celebrated the achievements of distinguished alumni while urging their active involvement in nurturing institute-industry relationships. He highlighted mechanisms like the Alumni Association and urged alumni to contribute expertise, scholarships, and internships. Prof. Chandra Shakher delivered an engaging discourse on the transformative influence of dedicated research and underscored the vital role of alumni as a robust support network. The ceremony culminated with the inauguration of the alumni logo and certificate distribution for the logo design competition winners, followed by a vote of thanks expressing gratitude to all participants. The day concluded with a memorable group photograph, high tea, and campus visits, symbolizing a day replete with pride and connection.



## MoUs:



## LIST OF MOUS SIGNED IN 2023:

S.No	Name of the Organization	MoU Signing Date
1.	National Institute of Technical Teachers Training and Research, Chandigarh	23.01.2023
2.	THDC Institute of Hydropower Engineering & Technology, Uttarakhand	27-01-2023
3.	National Institute of Technology Hamirpur, Himachal Pradesh	06-02-2023
4.	Government Hydro Engineering Collage Bilaspur, Himachal Pradesh	20-02-2023
5.	Covalience India Pvt Ltd	22.02.2023
6.	Graphic Era University , Dehradun	23.03.2023
7.	Mahatma Gandhi Government Engineering College, Kotla (JEORI) Camp at JNGEC Sundernagar, Himachal Pradesh	01.07.2023
8.	Mody University of science and Technology, Rajasthan (MUST)	26.07.2023
9.	Govt. Institute of Electronics, Secunderabad	25.07.2023
10.	Advance Tech India Private Limited	10.08.2023
11.	DIT University, Dehradun	10.08.2023
12.	Aieze, Noida	10.08.2023
13.	Haridwar University, Uttarakhand	10.10.2023
14.	Punjab Engineering Collage, Chandigarh	19.09.2023
15.	Jaypee Institute of Information Technology, Noida	18.10.2023
16.	IILM University, Greater Noida	19.10.2023
17.	Indian Institute of Technology Mandi	07.11.2023
18.	Amity University , Noida	10.08.2023
19.	C-DAC	23.11.2023
20.	iHUB Divyasampark, IIT Roorkee	28.12.2023



## EVENTS:

Invited Talk on Mathematics for Machine Learning:  
An Overview:

The Department of Mathematics at NIT Uttarakhand commemorated the birth anniversary of the esteemed Indian Mathematician, Sh. Srinivasan Ramanujan, by conducting an insightful online invited talk titled "Mathematics for Machine Learning: An Overview" on December 22nd, 2023. The session catered to a diverse audience of UG, PG, and PhD students within the Institute. Ms. Piyushi Manupriya, an esteemed Alumnus from the CSE 2014 Batch and currently a 4th Year PhD scholar at the Department of Computer Science and Engineering, IIT Hyderabad, expertly navigated through fundamental aspects. Her comprehensive discussion included elucidating the basic concepts of AI and ML, emphasizing the crucial role of mathematics in the framework of Machine Learning. She further delved into the significance of Probability, Statistics, Linear Algebra, and Numerical Methods in shaping ML frameworks. Connecting undergraduate-level mathematics to contemporary research quandaries, Ms. Manupriya underscored the pivotal role of mathematical concepts in the development of ML-based models. The step-by-step breakdown of machine learning fundamentals coupled with the meticulous exploration of mathematical concepts' importance in model development highlighted the session's value. Ms. Manupriya concluded the session by addressing inquiries posed by both students and faculty members, ensuring a comprehensive understanding of the intricate association between mathematics and the development of ML-based models and concepts. Overall, the talk provided an informative overview, enlightening all participants on the integral role of mathematics in the realm of ML-based models and concepts.



**Unnat Bharat Abhiyan:** UBA Cell of NIT Uttarakhand have visited the villages of Janasu, Kaliyasaud and Dugripanth in Uttarakhand. The visit aimed to interact with the villagers, understand their daily life, and discuss the core vision and mission of UBA (Unnat Bharat Abhiyan). Our visit to these villages has highlighted the pressing issues of inadequate clean drinking water and limited crop production, compounded by the absence of younger generations. Addressing these challenges will significantly improve the quality of life for the villagers and promote the holistic development of the village in alignment with UBA's core vision and mission.



## EVENTS:

## GARBHA NIGHT 2023:



The rhythmic echoes of tradition and jubilation reverberated throughout NIT Uttarakhand's ITI Campus on the splendid evening of 21st October 2023 during the exuberant celebration of "GARBA NIGHT." Organized under the aegis of the Cultural and Fine Arts Club within the Student Welfare Section, the event drew an exuberant gathering of spirited students, faculty, and staff, bedecked in resplendent traditional attire, adding a kaleidoscope of colors to the festivities. The occasion was honored by the esteemed presence of Chief Guest, Dr. Hariharan Muthusamy, Dean of Faculty Welfare, whose encouraging words echoed the essence of cultural celebration and unity. The event unfolded with fervor as students from diverse branches showcased their flair and finesse in captivating dance performances, skillfully embodying the spirit of Garba. Each dance presentation spoke volumes about cultural vibrancy and the participants' dedication, transcending barriers of language, fostering a sense of togetherness. The night escalated in excitement with a captivating ramp walk competition, where participants flaunted their grace and style with poise. The esteemed panel of judges diligently assessed each performance, skillfully acknowledging the winners of the branch-wise dance competition and the enthralling ramp walk contest. In the spotlight of achievement, Team Kaal Ratri stole the hearts of the audience, clinching victory in the Garbha Night Dance Competition for the 1st year. Meanwhile, Team Garbha Gear(MEC) emerged triumphant, claiming the top position in the fiercely contested branch-wise dance competitions, while Team Optimus Prime (ECE) and Taal Tarang (CIV) shone as runners-up, their performances leaving an indelible mark on the event. Amidst the cultural fervor, the evening also embraced elements of glamour and flair, acknowledging the style icons of the night. Nikita Meena - Vishal Rathi and Manish Adhikari - Kashish Sharma were honored as winners of the Rampwalk Competition and the online Selfie Competition, respectively, adding an extra sprinkle of excitement to the joyous affair. The event's resounding success lay not just in its cultural celebration but also in the display of disciplined revelry, epitomizing the perfect blend of cultural heritage and youthful exuberance. It stood as a beacon of unity, showcasing the institute's rich cultural tapestry and fostering a sense of camaraderie among the diverse NIT Uttarakhand community.



## EVENTS:

## UTKARSH 2023 (FRESHERS' EVE):

## UTKARSH (Fresher Eve -2023)



The Cultural and Fine Arts Club at the National Institute of Technology, Uttarakhand orchestrated a jubilant celebration titled "UTKARSH 2023 (Freshers Eve)" on December 11th, 2023, at the Auditorium, extending a warm welcome to the Batch of 2023. The event was meticulously crafted to foster a sense of inclusion and camaraderie among the incoming students, encouraging them to embark on their academic journey with enthusiasm and vigor. Radiant smiles and exuberant spirits set the tone for the welcome party, infusing the atmosphere with youthful energy and enthusiasm. Commencing with the customary lamp lighting ceremony and prayers to Goddess Saraswati, the event honored the institute's traditions. The presence of esteemed guests, including the Chief Guest, Dean of Student Welfare Dr. Dharmendra Tripathi, esteemed faculty members, and the vibrant student body, further elevated the occasion's ambiance. The electrifying ramp walk, accompanied by pulsating music and vibrant lights, kick-started the festivities, setting a lively tempo for the evening. Captivating performances graced the stage, escalating the excitement and exuberance among the attendees. As the dance floor beckoned, the enthusiastic students showcased their unrestrained energy, igniting an aura of pure joy and jubilation. The event was a testament to the unity and solidarity among the students, reinforcing the bonds within the NITUK community. Recognizing the remarkable talent and charisma among the newcomers, Hon'ble Chief Guest awarded gifts and sashes to deserving individuals: Rajnandini Mehra (M.Tech) as Fresher of The Night, Abhishekh Rana as Mr. Fresher, Shailly Gupta as Miss Fresher, Adi Agrawal as Spark King, Lisha Chaudhary as Spark Queen, and Manish & Kashish as Winners of Selfie Competition. The evening culminated in high spirits with a pulsating DJ session and concluded with a special dinner at the Institute Mess, leaving a trail of cherished memories and forging lasting connections among the students.



## EVENTS:

## PHOTOWALK:



The Klick Film and Photography Club of National Institute of Technology, Uttarakhand organised a Photowalk to Ghurdauri on 15th of October, 2023. Ghurdauri in Uttarakhand is one of the most scenic places in the Garhwal Region. This place is known for its natural uniqueness and exclusiveness. The purpose of the Photowalk was to draw the attention of students towards Creative Photography and to polish the Photography Skills of the students interested in photography. The participants were briefed about the basic camera settings and Exposure Triangle which comprises aperture, shutter speed, and ISO. The participants were also briefed about Photography Compositions. The participants also captured photos and tested all these knowledge with the real subjects around the Institute's campus in the supervision of Club Members and Co-ordinator.

### VISIT OF PM SHRI JAWAHAR NAVODYA VIDHYALAYA, POKHAL TO NIT UTTARAKHAND:

A group of 92 students from PM Shri Jawahar Navodya Vidhyalaya, Pokhal, accompanied by 78 additional students, undertook an educational visit to NIT Uttarakhand from December 12th to 13th, 2023. The purpose of this visit was to impart educational insights and guidance to students ranging from classes X to XII. During their visit, the students were given the opportunity to explore various departments within the institute,

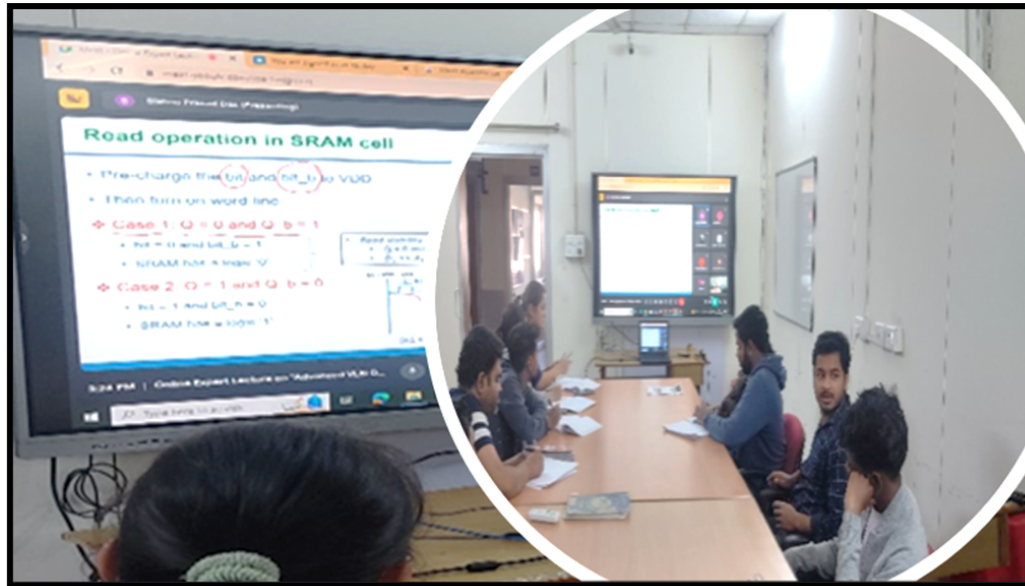


including the Department of Civil Engineering, Department of Computer Science & Engineering, Department of Electrical Engineering, Department of Electronics and Communication Engineering, and Department of Mechanical Engineering. The itinerary included immersive tours of laboratories, facilities, and the infrastructure of these departments. This hands-on experience offered the students a firsthand understanding of the academic and research environments across multiple disciplines within the institute.



## EVENTS:

## EXPERT TALK ON “ADVANCE VLSI DESIGN: MEMORIES”



In order to give the students of B.Tech, M.Tech and PhD an idea of advanced topics on VLSI design which will enable them to shape their career in core areas of VLSI, an Expert lecture was organized by Dr. Sarita Yadav in online mode on 09.11.2023 at Department of Electronics Engineering on the topic of “Advance VLSI Design: Memories”. The lecture was delivered by Dr. Bishnu Prasad Das, Associate Professor in the Department of Electronics & Communication Engineering at Indian Institute of Technology Roorkee (IIT Roorkee).

## WEBINAR ON "ATOMISTIC MODELING USING SYNOPSIS QUANTUM ATK FOR NANOMATERIALS/NANO DEVICES"

TNIT Uttarakhand's Department of Electronics Engineering, under the guidance of Dr. Vivek Kumar, hosted an illuminating webinar on November 29th, 2023, exploring "Atomistic Modeling using Synopsys Quantum ATK for Nanomaterials/Nano devices." This webinar offered a deep dive into the world of nanotechnology, spotlighting the intricate applications of Quantum ATK in nanomaterials and nano-device simulations. Dr. Kumar's expertise provided attendees with invaluable insights into cutting-edge advancements, showcasing the pivotal role of atomistic modeling in this dynamic field.



## EVENTS:

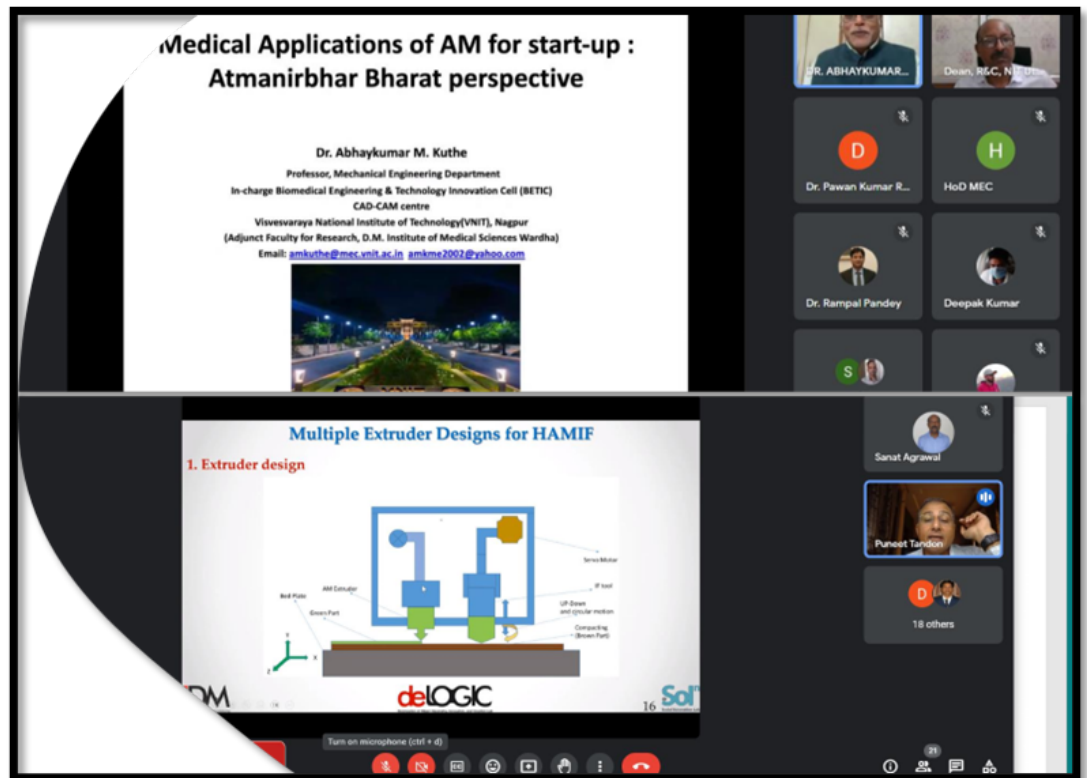
## EXPERT TALK ON “PRODUCT DESIGN ”



Two expert lectures were delivered on “Product Design” by Dr Prashant Kumar at the Srinagar campus for the benefit of the UG, PG and PhD students of the institute during Oct 26-27, 2023. A former Professor of Mechanical Engineering Department, IIT Kanpur. Dr Prashant Kumar is currently serving as Professor Emeritus at College of Engineering, Pune. He has several patents and three books to his credit including a book on ‘Product Design’. The lectures were well received and the students were benefitted.

## A 5-DAY WORKSHOP ON “3D PRINTING APPLICATIONS AND ITS POTENTIAL FOR ENTREPRENEURSHIP”

An online workshop on “3D Printing Applications and its potential for entrepreneurship” was organized during Sep 28, 2023 to Oct 02, 2023 for the benefit of the students, research scholars and faculty members from NIT Uttarakhand and outside the institute. There were experts from premier institutions such as IITs, NITs, JUET Guna, Dicul AM Pvt. Ltd (a start-up), Entrepreneurship Development Center (a funding organization), IITDM and SLIET Longowal. Dr Sanat Agrawal from NIT Uttarakhand also gave a lecture.



In total there were 13 experts – 12 external and one (1) internal. The speakers in the workshop had a long and rich experience in 3D Printing (3DP) also known as Additive Manufacturing (AM) or Rapid Prototyping (RP) and were experts in their area. The workshop started with inauguration on Thursday, Sep 28, 2023. Prof Lalit Kumar Awasthi, Hon Director was the Chief Guest of the function and Prof Abhaykumar Kuthe, VNIT Nagpur was the Guest of Honor. It was followed by the lecture of Prof Kuthe on medical application of AM for start-up. The workshop was held in online mode – both the participants and the speakers joined in online mode.



## EVENTS:

## CODING COMPETITION:

The "Coding Competition," organized by the Technical Club at NIT Uttarakhand on October 7, 2023, aimed at enhancing students' coding prowess. Conducted on the online platform "Hackerrank," the competition witnessed participation from a total of 31 students. Winners emerged from this challenging event, showcasing exceptional coding skills. Winners of the competition are as follows:

S.No.	Name of the Student	Roll Number	Position
1.	Aman Bhatt	BT21CSE015	I
2.	Divyansh Asthana	BT21CSE023	II
3.	Pradyum Pal	BT21ECE010	III
4.	Ankit Bisht	BT21ECE032	IV

## VIGILANCE AWARENESS WEEK 2023:



## EVENTS:

## VISIT OF AMIE STUDENTS:



The Department of Civil Engineering conducted laboratory experiments for AMIE Section B students (Institution of Engineers (India), Kolkata) for the winter 2022 session during December 04-08, 2023. Hon'ble Director Prof. Lalit Kumar Awasthi interacted with the group of AMIE students and the faculty members of Department of Civil Engineering

**Fit India Week campaign:**

The Fit India Week campaign, spearheaded by the Student Activities and Sports Section, orchestrated a range of sporting events and health-oriented activities from November 20th to December 10th, 2023. These events encompassed diverse activities such as Badminton, Chess, Table Tennis Tournaments, Tug of War competitions, and Fitness Pledges, involving both students and staff members.

The primary goal was to instill a regular practice of sports among students, fostering teamwork, and emphasizing the significance of fitness not only within the student body but also extending the awareness to families, educators, and the entire school staff. As part of this initiative, an Inter-Institute Faculty and Staff Cricket Tournament was also organized to promote a holistic culture of health and fitness. The Fit India Pledge conducted on November 20th witnessed enthusiastic participation from over 200 students, faculty, and staff, promoting the value of fitness and well-being. Additionally, exhibition tug of war competitions were held between male and female faculty versus students, aiming to inspire and motivate all participants towards a healthier lifestyle.



## EVENTS:



**INTRA NIT BASKETBALL TOURNAMENT- 2023:** The Sports club has successfully organized the Intra NIT Intra NIT Basketball Tournament for the students on the 8th to 9th of November, 2023. The motive of conducting these tournaments was to encourage more and more students to participate and play sports. Total 05 teams participated with great enthusiasm. The tournament was conducted in a league format. There were a total of 10 matches played. Mr. Uday was awarded with the player of the tournament trophy. Khilaada Baller team of (2nd Year) won the Basketball Title 2023.

The Sports club has successfully organized the Intra NIT 5-A side football Tournament for student's from 16th to 19th October, 2023. The motive of conducting these tournaments was to encourage more and more students to participate and play sports. Total 15 Men teams and 04 women teams of 8 players (5 playing+ 3 substitutes) from students, participated with great enthusiasm. Total 152 Boys & Girls students participated in this football tournament. Reigning Champions (Team from fourth year won the the Men,s and Adishakti Team from second year won the Women's Football Title 2023.

**INTRA NIT FOOTBALL TOURNAMENT 2023:**



## EVENTS:



**Tug of War:** The Tug of War Competition held by the SAS Section during the Fit India Week 2023 saw an enthusiastic participation in the chess tournament from November 23rd to 25th, 2023. A total of five teams each from the Men's and Women's categories, consisting of students and staff, actively engaged in the event. The tournament was conducted on a league cum knockout basis, and the outcomes were as follows: In the Men's category, the 4th Year team secured the 1st position, followed by the 2nd Year team at 2nd position, and the 1st Year team at 3rd position. Meanwhile, in the Women's category, the Ph.D. team emerged victorious in 1st position, with the 4th Year team securing 2nd place, and the 3rd Year team securing 3rd place in the competition.

## CHESS TOURNAMENT:



The chess competition organized by the SAS Section during the Fit India Week 2023, held from November 21st to 23rd, was an engaging tournament categorized by year in both Men's and Women's sections. In the Men's Team Event, ten teams participated, resulting in a series of 21 matches conducted through the Single Elimination System. The outcomes were: Team Checkmate (1st Year) secured the 1st position, followed by Team Knightmares (4th Year) in 2nd position, and Team Stockfish (2nd Year) in 3rd position. In the Women's Singles, which featured nine participants, the results were: Asmita Raj (2nd Year) claimed the 1st position, Rajnandani Mehta (2nd Year) secured 2nd position, and Aditi Joshi (2nd Year) clinched the 3rd position.



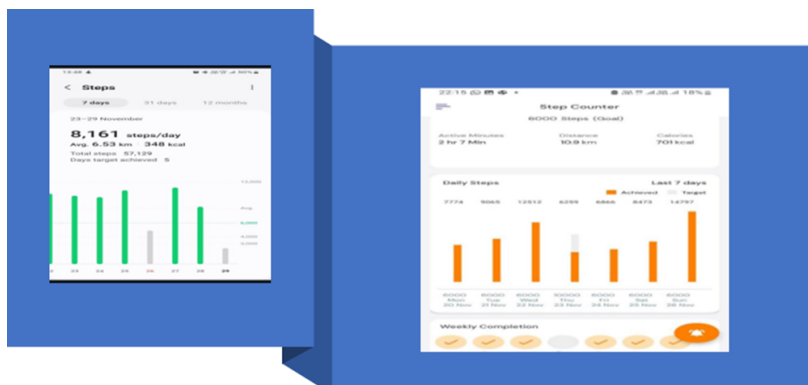
## EVENTS:

## BADMINTON TOURNAMENT:



The Badminton Tournament conducted as part of the Fit India Week 2023 by the SAS Section at NIT Uttarakhand showcased exceptional talent and sportsmanship across various categories. With spirited participation and intense matches, the event was a thrilling success. In the Men's Singles category, Brijesh claimed the top spot followed by Vaibhav and Tejas securing the second and third positions, respectively. The Women's Singles category saw Kashish emerge victoriously, with Ankita and Soniya securing the second and third positions. In the Men's Doubles, the team of Brijesh and Ashutosh clinched the first position, while Madhav and Himanshu secured the second, and Kuldeep Sir and Hitesh Sir from the faculty secured the third position. The Mixed Doubles category witnessed remarkable performances, with Himanshu and Kashish securing the top position, followed by Madhav and Ankita in second, and Nihar and Neha in the third position. The tournament was a testament to the dedication and skill of the participants, fostering a healthy competitive spirit among the NIT Uttarakhand community.

### FITNESS ASSESSMENT THROUGH FITNESS APP:



The Step Tracker Challenge, an initiative by the Students' Activity and Sports Section during the FIT India Week, witnessed enthusiastic participation from both students and staff members at the institute. The challenge aimed to promote physical activity and wellness among the participants. Among the 22 participants, Ayush Dharmshaktu (BT21CIVO18) secured the top position, followed by Aditya Bhardwaj (BT22MEC028) and Vanshika Yadav (BT22MEC029) in second and third positions, respectively. Their dedication and commitment to fitness set an inspiring example for the institute community, encouraging a culture of healthy living and wellness.



## EVENTS:

INTER INSTITUTIONAL STAFF CRICKET  
TOURNAMENT -2023

Students activity and Sports Section organized the Inter Institutional Staff Cricket Tournament -2023 from 01st Dec. to 10 Dec.2023. Total 08 teams from different institutes and organizations participated in this tournament. Irrigation department defeated NIT Uttarakhand in the Final and won the Title.

## HEALTH CHECK UP CAMP



SAS Section organized a dental checkup camp on 27th Nov. 2023 under the Fit India Week with the collaboration of Rotary club Alaknanda valley Srinagar Garhwal Uttarakhand. More than 120 students, staff and faculty members participated in the same.



## Ranking :

We are delighted to share some remarkable achievements and milestones attained by the National Institute of Technology, Uttarakhand, which reflect our unwavering commitment to excellence and progress.

### **NIRF Ranking 2023:**

We take immense pride in announcing that the National Institute of Technology, Uttarakhand has secured a place in Rank Band 101-150 in the Engineering category, out of more than 1500 participating engineering institutions, as per the National Institute Ranking Framework (NIRF), which was released on June 5<sup>th</sup>, 2023. Notably, our institute's overall score has demonstrated improvement, rising from 37.76 to 40.18. We extend heartfelt congratulations to each and every faculty member and student for their significant contributions to this remarkable achievement.

### **India's Best Colleges 2023 Ranking:**

Adding to our list of accomplishments, the National Institute of Technology, Uttarakhand has achieved the 33<sup>rd</sup> position in the Engineering category in the India's Best Colleges 2023 Ranking conducted by the India Today Group-MDRA Survey. This recognition serves as a testament to our ongoing commitment to delivering quality education and fostering an environment of excellence.

These accomplishments are a testament to the relentless efforts and dedication of our faculty members and students. We are immensely proud of our contributions and the progress we have made as an institution. We remain committed to nurturing a culture of excellence, innovation, and growth. Let us continue to work together, building on these achievements, to further elevate the stature of the National Institute of Technology, Uttarakhand.

Congratulations to all on these well-deserved accolades! Together, let's continue to inspire and make a positive impact.

हमें गर्व हो रहा है कि उत्कृष्टता और नियमित प्रगति के संकेत रूप में राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड द्वारा हासिल की गई कुछ अद्वितीय उपलब्धियों के बारे में साझा करने का बहुत उत्साह है।

### **NIRF रैंकिंग 2023:**

हम गर्व के साथ घोषणा करते हैं कि राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड ने राष्ट्रीय प्रौद्योगिकी संस्थान रैंकिंग फ्रेमवर्क (NIRF) के अनुसार इंजीनियरिंग श्रेणी में 1500 से अधिक प्रतिभागी प्रौद्योगिकी संस्थानों में 101-150 रैंक बैंड में स्थान प्राप्त किया है, जो 5 जून 2023 को जारी की गई थी। यदापि, हमारे संस्थान का कुल स्कोर 37.76 से 40.18 तक सुधार करने के साथ-साथ उन्नति दिखा रहा है। हमारी ओर से इस महत्वपूर्ण उपलब्धि में हर शिक्षक सदस्य और छात्र को हार्दिक बधाई।

### **भारत के सर्वश्रेष्ठ कॉलेज 2023 रैंकिंग:**

हमारी उपलब्धियों में एक और अद्वितीय साधन, राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड ने भारत टुडे ग्रुप-एमडीआरए सर्वेक्षण द्वारा आयोजित भारत के सर्वश्रेष्ठ कॉलेज 2023 रैंकिंग में इंजीनियरिंग श्रेणी में 33<sup>वीं</sup> स्थान प्राप्त किया है। यह मान्यता हमारे गुणवत्ता युक्त शिक्षा और उत्कृष्टता को बढ़ाने के हमारे सतत प्रयासों की पुष्टि करती है।

ये उपलब्धियाँ हमारे शिक्षक सदस्यों और छात्रों के अथक प्रयासों और समर्पण की पुष्टि हैं। हम अपने योगदान और संस्थान के रूप में की गई प्रगति पर गर्व करते हैं। हम उत्कृष्टता, नवाचार और विकास की संस्कृति को पोषित करने के लिए वचनबद्ध रहते हैं। आइए, हम इन उपलब्धियों पर आधारित आगे बढ़ते हुए साथ मिलकर राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखंड के मान्यता को और ऊंचा करने का प्रयास करें।

## PATENTS/PROJECTS/MoUs:

Status Of Patent (Filed, Published / Granted)	Inventor(s) And Co-inventors Name	Title Of The Patent
Published	Dr. Rakesh Kumar, Mr. Palash Suresh Behra, Dr. Dharmendra Tripathi, And Dr. Rakesh K. Mishra	Portable Stair Climbing Mechanism For The Conventional Trolley
Granted	Amalendu Patnaik, Tushar Goel	Highly-directional Compact Semicircular Angular-phased Antenna Array In 9.35-42.89 Ghz
Published	AK Tiwari, Shivam Saini, Anil Sharma, Manish Rawat, Dharmendra Tripathi	An Economical, Automated, Non-invasive Device For Spinal Curvature Measurement
Granted	Prof. SUDIPTA SARKAR, Dr. Laiju A. R.	A Hybrid Iron Sulfide Impregnated Anion Exchanger (HISIX) For Selective Removal Of Hexavalent Chromium From Contaminated Water
Granted	Rampal Pandey, Neha Thakur, Mrituanjay D. Pandey	Co(no3)2 Autocatalyzed Decarboxylation Of Itaconic Acid Leads To The Formation Of Methacrylic Acid And Co(ii)-mofs: Fluorescent Co(ii)-mofs Detect Hg2+, Fe3+ And Cu2+ Ions
Published	Pankaj Kumar Gupta, Kishore Debnath, Krishnakant Dhakar	A System And A Micromachining Process Using Cow Urine (Gau-mutra)
Granted	Dr. Mrituanjay D. Pandey, Rampal Pandey, Neha Thakur, Manzoor Ahmad Wani	Fluorescence Readout For Identification Of Hg2+by Anthraimidazole-dione Based Probe In Real Water Samples
Granted (US)	Mahesh Chowdhary, Arun Kumar, Ghanapriya Singh, Rajendar Bahl	Open Vs. Enclosed Spatial Environment Classification For A Mobile Or Wearable Device Using Microphone And Deep Learning Method
Granted (US)	Mahesh Chowdhary, Arun Kumar, Ghanapriya Singh, Kashif R. J. Meer, Indra Narayan Kar, Rajendar Bahl	Method And Apparatus For Determining Probabilistic Context Awareness Of A Mobile Device Using A Single Sensor And/Or Multi-sensor Data Fusion
Granted (US)	Mahesh Chowdhary, Arun Kumar, Ghanapriya Singh, Rajendar Bahl	Context Awareness Of A Smart Device Through Sensing Transient And Continuous Signals
Granted (US)	Mahesh Chowdhary, Arun Kumar, Ghanapriya Singh, Rajendar Bahl	Method For Generating A Personalized Classifier For Human Motion Activities Of A Mobile Or Wearable Device User With Unsupervised Learning
Granted (US)	Mahesh Chowdhary, Arun Kumar, Ghanapriya Singh, Kashif R. J. Meer, Indra Narayan Kar, Rajendar Bahl	Method And Apparatus For Energy Efficient Probabilistic Context Awareness Of A Mobile Or Wearable Device User By Switching Between A Single Sensor And Multiple Sensors
Published	Dr. Vinod Singh Yadav, Manoj Kumar Singh, Vineet Singh, Anurag Maheshwari	Hybrid Solar Air Heater For Space Heating And Crop Drying
Published	Dr. Vinod Singh Yadav, Vineet Singh, Manoj Kumar Singh, Anurag Maheshwari	Solar Pump Irrigation Based On Photovoltaic (PV) Cell Technology
Published (German)	Sarika Pal, Maneesh Kumar Singh, Vipin Kumar Verma, Yogendra Kumar Prajapati	A System For Improved Long-range Surface Plasmon Resonance Sensor With Ultrahigh Imaging Sensitivity And Figure Of Merit
Published	Tushar Goel, Rajesh Saha, Amalendu Patnaik, Vinod Singh Yadav, Nishant Kumar	"Personal Portable Air-circulating System For PPE Suits Or Similar Uniforms/Dresses" 202011021129
Granted	Prakash Dwivedi, Sourav Bose, Rakesh Thapliyal, Satyaveer Negi	Power Driven Stair Climbing Tri-wheeled Spider-wheel System
Published	Varshney A, Mishra NK, Singh V, Manoj Kumar, Niraj KUMAR	Solar Power Integrated Bidirectional Non-isolated DC-DC Converter For E-rickshaw
Published (FER)	S Agrawal And NK Mishra	System For Disposing Agriculture Waste
Published (German)	Dr. Manoj Gupta, Dr. Nitesh Singh, Dr. Pawan Kumar Rakesh	A Desk Mounted Air Purification Device
Published	N Kumar, Rajbahadur, M.S. Rawat, V Trivedi, N Trivedi, S Kaloni, BS Khatri	A Composition For Fabricating Of Pine Needle Ash Particulates Reinforced Surface Composite.
Filed	Dr. Man Vir Singh, Aman Bansal, Ham Lata, R K Tripathi, Ajay Singh Verma, Dr. Yogesh Kumar, Dr. Kamal Kant Tiwari	An Analyzing Method For Use Of Recycled Aggregates In Concrete
Filed	A. Ajayaghosh, A. Mal, Rakesh K. Mishra, D. B. S. Kumar, J. Jacob, S. Shankar	Real Time Peripheral Bed System For Relaxing Spine Of Patient Using Stretches Intensity And Position
Granted (German)	Dr. Indrajit M. Nagpure	A Process For Carbon Dioxide Adsorption Induced Switchable Antibacterial Activity Of A Smart Covalent Organic Framework
FER Submitted	Tushar Goel, Satendra Pathak, Pankaj Kumar Pal,	System For Synthesizing Kmgso4cl Nano-crystallite
FER Submitted	Tushar Goel, Avinash Bhatt, Pankaj Kumar Pal	SELF-REPETITIVE BROADBAND SLOT ANTENNA/14-03 Indian Design IPR, Jan. 2023
FER Submitted	Tushar Goel, Mahesh Kumar Aghwariya, Pankaj Kumar Pal,	, "Industrial Design Of WIDEBAND UNIDIRECTIONAL ANTIPODAL Radiating Structure /14-03, Indian Design IPR, Jan. 2023
FER Submitted	Tushar Goel, Arvind Bisht, Pankaj Kumar Pal,	"Industrial Design Of WIND-MILL LIKE SHAPED ANTIPODAL BROADBAND/14-03, Indian Design IPR, Jan. 2023
FER Submitted	Vinod Singh Yadav, Nishant Kumar, Aditya Pratap Singh	Log-periodic Antipodal Antenna/14-03
FER Submitted		Vehicle Wheels Speed Synchronizing Assembly

S. No.	NATIONAL / राष्ट्रीय	DD/MM/YYYY
1.	Eotvos Lorand University, Hungary Eotvos लोरंड विश्वविद्यालय, हंगरी	26-06-2019
2.	National Formosa University, Taiwan नेशनल फॉर्मोसा यूनिवर्सिटी, ताइवान	20-08-2019
3.	Indian Institute of Technology Roorkee, India भारतीय प्रौद्योगिकी संस्थान रुड़की, भारत	24-09-2020
4.	Indian Institute of Technology Kanpur, India भारतीय प्रौद्योगिकी संस्थान कानपुर, भारत	07-12-2020
5.	National Highways Authority of India (NHAI) भारतीय राष्ट्रीय राजमार्ग प्राधिकरण (NHAI)	13-08-2020
6.	Mitsubishi Electric India Private Limited मिजुबिशी इलेक्ट्रिक इंडिया प्राइवेट लिमिटेड	02-07-2018
7.	Powerforge, (PWSIM Engg. Solutions Pvt.Ltd.), Bengaluru पावरफोर्ज, (पीडब्ल्यूएसआईएम इंजीनियरिंग सॉल्यूशंस प्राइवेट लिमिटेड), बेंगलूरु	10-02-2020
8.	EMTP (Alliance Software & Services) ईएमटीपी (एल्लायंस सॉफ्टवेयर एंड सर्विसेज)	19-07-2021
9.	All India Institute of Medical Sciences (AIIMS) Rishikesh अखिल भारतीय आयुर्विज्ञान संस्थान (एएस) ऋषिकेश	21-07-2020
10.	Semi-Conductor Laboratory (SCL) – ISRO, Mohali, India सेमी-कंडक्टर प्रयोगशाला (एससीएल) - इसरो, मोहाली, भारत	23-09-2020
11.	Bharat Heavy Electricals Limited (BHEL), Haridwar, India भारत हेवी इलेक्ट्रिकल्स लिमिटेड (बीएचईएल), हरिद्वार, भारत	02-09-2020
12.	Central Manufacturing Technology Institute (CMTI), Bengaluru सेंट्रल मैन्युफैक्चरिंग टेक्नोलॉजी इंस्टीट्यूट (CMTI), बेंगलूरु	21-05-2021
13.	Institute of Informatics & Communication, University of Delhi, New Delhi for Implementation of Non-SaaS SAMARTH ERP(SHSM) system गे.एस.समर्थ ईआरपी (एसएचएसएम) प्रणाली के कार्यान्वयन के लिए सूचना विज्ञान और संचार संस्थान, दिल्ली विश्वविद्यालय, नई दिल्ली	26-11-2020
14.	Indian Institute of Technology Delhi, India भारतीय प्रौद्योगिकी संस्थान दिल्ली, भारत	13-07-2020
15.	CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, India सीएसआईआर-भारतीय पेट्रोलियम संस्थान (सीएसआईआर-आईआईपी), देहरादून, भारत	03-08-2020

S. No.	NATIONAL / राष्ट्रीय	DD/MM/YYYY
16.	Manipal University, Jaipur मणिपाल विश्वविद्यालय, जयपुर	18-09-2019
17.	Malaviya National Institute of Technology Jaipur, Rajasthan, India मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर, राजस्थान, भारत	30-06-2020
18.	Hemvati Nandan Bahuguna Garhwal University (A Central University) Srinagar Garhwal Uttarakhand हेमवती नंदन बहुगुणा गढ़वाल विश्वविद्यालय (केंद्रीय विश्वविद्यालय) श्रीनगर गढ़वाल उत्तराखंड	16-03-2021
19.	Indian Institute of Technology, Ropar भारतीय प्रौद्योगिकी संस्थान, रोपड़	02-09-2021
20.	Pawan Hans Limited, Noida पवन हंस लिमिटेड, नोएडा	08-10-2021
21.	The Institution of Engineering (India), Kolkata इंजीनियरिंग संस्थान (भारत), कोलकाता	24-03-2022
22.	Jawaharlal Nehru Government Engineering College (JNGEC), Sundernagar, HP जवाहरलाल नेहरू गवर्नमेंट इंजीनियरिंग कॉलेज (JNGEC), सुंदरनगर, हिमाचल प्रदेश	12-04-2022
23.	Indian Institute of Technology Roorkee, India @175 Partnership भारतीय प्रौद्योगिकी संस्थान रुड़की, भारत @175 भागीदारी	27.05.2022
24.	Indian Institute of Technology, Ropar भारतीय प्रौद्योगिकी संस्थान, रोपड़	21-06-2022
25.	Maharaja Ranjit Singh Punjab Technical University, Bathinda, Punjab महाराजा रणजीत सिंह पंजाब तकनीकी विश्वविद्यालय, बठिंडा, पंजाब	29-08-2022
26.	Asia University, Taiwan एशिया विश्वविद्यालय, ताइवान	19-10-2022
27.	Himachal Pradesh Technical University, Hamirpur हिमाचल प्रदेश तकनीकी विश्वविद्यालय, हमीरपुर	27-10-2022
28.	National Highways & Infrastructure Development Corporation Ltd राष्ट्रीय राजमार्ग और अवसंरचना विकास निगम लिमिटेड	31-10-2022
29.	National Institute of Technical Teachers Training and Research Chandigarh राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण एवं अनुसंधान संस्थान चंडीगढ़	13-07-2020
30.	THDC Institute of Hydropower Engineering & Technology टीएचडीसी इंस्टीट्यूट ऑफ हाइड्रोपावर इंजीनियरिंग एंड टेक्नोलॉजी	27-01-2023

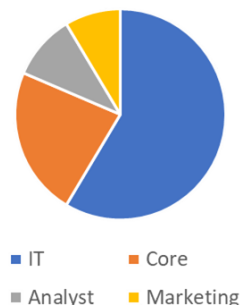


## Research Grants:

Research Projects	PI/ Co-PI	Funding Agency	Total Sanctioned amount (Rs)
Study of FeRh epitaxial films and heterostructures for spintronics applications	Dr. Hardeep Kumar	UGC-DAE CSR Indore	11.98 Lakhs
Design Innovation Center	Dr. Pawan Kumar Rakesh	MoE, New Delhi, IIT Roorkee	100 Lakhs
Fabrication and Testing of Lower Limb Prosthesis for Transtibial Amputee using Biocomposites with Energy Restoring Capability	Dr. Pawan Kumar Rakesh, Dr. Sanat Agarwal	ICMR, New Delhi	28 Lakhs
Fabrication and characterization of Co- based CoPt/Pt multilayered films by Electrodeposition	Dr. Manvendra Singh Khatri	UGC-DAE CSR, Mumbai	1.35 Lakhs
Development of domestic cooking stove based on biomass gasification with porous radiant burner	Dr. Niraj Kumar Mishra	DST-SERB	22.13 Lakhs
Development of empirical model for fundamental natural period of buildings constructed in hilly terrains	Dr. Smita Kaloni, Dr. Shashank Bhatra	SERB DST	40.8 Lakhs
DECONET- "DECONET- DEVELOPMENT OF INDIGENOUS SYSTEM FOR DECIPHERING ENVISIONED SPEECH FROM EEG SIGNALS USING OPTIMIZED DEEP CONVOLUTIONAL NEURAL NETWORK MODELS	Dr. Hariharan Muthusamy, Dr. Niraj Kumar Singh, AIIMS, Rishikesh	CRG, DST-SERB	40.70 Lakhs
A novel power on pilot IC for ultra-low power wireless IoT devices	Dr. Nitanshu Chauhan, Dr. Sarita Yadav, Mr. Vivek Kumar, Dr. Hariharan Muthusamy	Meity	15 Lakhs
VLSI Design and Implementation of imagined speech based neuroprosthesis: an application in the health care system under chips to start up programs of Meity	Dr. Hariharan Muthuswamy, Dr. Nitanshu Chauhan, Mr. Vivek Kumar and Mr. Himanshu Kumar	Meity	84.70 Lakhs.
Structural, Electronic and Momentum Density Investigations of Novel Materials Applicable in Energy Conversion and Storage	Dr. Jagrati Sahariya	CSIR	22 lakhs

## Career Counselling and Placement (C2P) Section

Company Domains



Company Visited

**8+**

Companies like Samsung Research, L&T, etc

Last Year

**80%**

Placed students from B.Tech, programs

Max Package offered

**15+**

Including IT & Core Companies

In Process Drives

**15+**

Companies like NVEDIA, Schneider Electric, Maruti, Renishaw

Average Package

**7LPA**

Mean Package offered so far

Activities

**12+**

Counselling Programs workshops/ seminars/STC organized

### LIST OF PLACED STUDENTS (2020-24):

S. No	Name	Roll No	Branch	Off and On Campus Companies
1	Om Prakash	BT20CSE019	CSE	Genpact
2	Anchal	BT20EEE014	EEE	Pie Infocomm
3	Vinayak Kala	BT20MEC002	MEC	Pie Infocomm
4	Shrey Pradhan	BT20CIV006	CIVIL	L&T
5	Deepika Sharma	BT20CIV019	Civil	L&T
6	Abhishek Gairola	BT20EEE002	EEE	L&T
7	Lalit Mehra	BT20MEC004	MEC	L&T
8	Satyam Singh Gurjar	BT20MEC008	MEC	L&T
9	Elugu Nikshitha	BT20MEC010	MEC	L&T
10	Ayush Dhiman	BT20CSE004	CSE	Samsung Research
11	Minal Kapse	BT20ECE021	ECE	C-DAC
12	Md Shadab	BT20CSE011	CSE	C-DAC
13	Aman Singh Bhandari	BT20CSE009	CSE	C-DAC
14	Medhavi Sharma	BT20CSE005	CSE	C-DAC
15	Mohd Faisal	BT20EEE012	EEE	Unacademy





## C2P/Alumni Section:

### LIST STUDENTS GOT INTERNSHIP:

Sr. No.	Name	Roll No.	Branch	Company	Stipend
1	Gaurav Singh Bisht	BT20EEE006	EEE	221 B Baker Street	Average stipend is 35K
2	Mohd Faisal	BT20EEE012	EEE	Unacademy	
3	Minal Kapse	BT20ECE021	ECE	09 solutions	
4	Ayush Dhiman	BT20CSE004	CSE	Samsung Research	

The following alumni of NIT Uttarakhand attained a remarkable achievement in the Engineering Services Examination (ESE) 2023.

SrNo	Alumni/Alumna	Department	Batch	ESE 2022 AIR and Specialization	
1	Mr. Sudhanshu Bhandari	Civil Engineering	2015-2019	27 <sup>th</sup> (Civil Engineering)	
2	Mr. Shivashish Gautam	Civil Engineering	2013-2017	66 <sup>th</sup> (Civil Engineering)	

# Faculty/Students Achievements:

- Dr. Sarika Pal, Asst. Prof. in has been awarded a prestigious project grant of ₹24.94 lakhs for the project titled "Prototype development of a non-invasive plasmonic fiber sensor using nanomaterials for detection of cortisol salivary biomarker" from SERB-DST under the CRG (Core Research Grant) scheme.
- Dr. Minakshi Rana, Assistant Professor, Department of Humanities and Social Sciences has been associated as Co- Principal Investigator for undertaking NCW sponsored research project, Titled " Mapping Glass Ceiling in Corporate Houses with special reference to women employees in Jammu and Kashmir" .
- Dr. Sarika Pal, Department of Electronics Engineering, National Institute of Technology, Uttarakhand organized an Expert Lecture on "Photonic Spin Hall Effect and its potential applications in the field of Communication and Sensing" dated 24 November, 2023.
- Delivered an invited lecture on "Overview on Intellectual Property Rights (IPR)" in Workshop on "SECURING RESEARCH FUNDING" organized by RDC and HC-HNBG University, Srinagar, December 11-12, 2023
- Guest editor, Special issue on Recent Advances in Fluid Mechanics and Nanoelectronics: Memorializing ICRAFNM-2023 in Physics of Fluids and Journal of Applied Physics.
- ITSr FOUNDATION AWARD 2023 (Best Researcher Award) awarded by The Institute of technical and scientific research in association with the Institution of Engineers (India), Rajasthan State Centre, Jaipur, and Ambuja Cement Foundation for accountable contribution in academics.
- Dr. Rampal Pandey, Section Editor (Inorganic Chemistry)-Current Indian Science (Bentham Science Publications) is serving as an Editor for Special Issue on "Synthesis, Structure, Properties, Application and Technological Aspects of Metal-Organic Frameworks".
- An International book titled "Ethanol and Glycerol Chemistry Edited by Dr. Rampal Pandey, has been published.
- Honorary Chair/Chairperson, 3rd International Conference On Intelligent Computing Techniques For Smart Energy Systems" organized by SEEC, Manipal University Jaipur, in association with the NIT Uttarakhand, MNIT Jaipur, and IIIT, Ranchi, India during December 14-15, 2023.
- Dr. Abhinav delivered an expert talk on "Interpersonal Skills" in Capacity Building of Subordinate Officers during the Soft Skill Workshop at Centralized Training Center, Sashastra Seema Bal (SSB), Srinagar, Garhwal on December, 13, 2023.
- Dr. Shashank Bhatra visited CTC, SSB, Srinagar(Garhwal) for delivering a lecture on "Conflict Resolution and Negotiation Skills" in the Soft Skills workshop on Capacity Building of Subordinate Officers on 12.12.2023 .
- Research Scholar, Chetana (BT21CEJ005) successfully presented her work titled "Green Foundations: A Sustainable Approach to Uplift Resistance with Granular Anchor Piles in Comparison to Concrete Piles." in the International Conference on Environmental Sustainability and Climate Change (ICESCC 2023) held between 21st-22nd December, 2023, NIT Meghalaya, Shillong, India.
- Research Scholar, Shailja Joshi (BT21CEJ003) successfully presented her work titled "Nonlinear analysis of double beam model for railroads resting over reinforced ground." 13th Structural Engineering Convention (SEC2023) held between 7th - 9th December, 2023 at VNIT Nagpur.
- Dr. Dharmendra Trpathi has been honored with the prestigious MATRICS-2023 research grant for his project titled "Computational Modeling and Validation for Directly Transmitted Viral Infection Spread: Pathogenesis Blood Flow Dynamics."
- Dr. Dharmendra Trpathi has recently been granted a patent for an innovative and cost-effective automated non-invasive device designed for measuring spinal curvature. This groundbreaking invention promises significant advancements in spinal health assessment technology.
- **Dr. Pawan Kumar Rakesh and Dr. Pankaj Kumar Pal have been honored with the Best Faculty Award of 2023, acknowledging their exceptional contributions and dedication in their respective fields. This prestigious recognition highlights their commitment to academic excellence and signifies their remarkable impact within the academic community.**



## Research Publications:

1. N Thakur, P Kandwal, R Pandey\*, Development of a Thiophene–Thiophene  $\pi$ -Conjugate Ultrasensitive Fluorescent Probe for Heavy-Metal Ions via Discrete Signaling: DFT Studies and Mechanistic Insights, *Industrial & Engineering Chemistry Research*, 2023, 62 (33), 12864-12879.
2. S C Kumain, Maheep Singh, Lalit K Awasthi, "A Dual-Stream Encoder-Decoder Network with Attention Mechanism for Saliency Detection in Video(s), *Signal, Image and Video Processing*", DOI :10.1007/s11760-023-02833-3. (Accepted; SCIE; IF: 2.3,).
3. S C Kumain, Maheep Singh, Lalit K Awasthi, "Investigating U-Net's Reliability in Saliency Detection with Salt and Pepper Noise" in *IEEE Third International Conference on Power, Control and Computing Technologies (ICPC<sup>2</sup>T) 2024*, NIT Raipur, Chhattisgarh, India.(Accepted)
4. Prabhjot Kaur, Nitin Kumar, Maheep Singh, "A Comparative Study of Recent Biometric Cryptosystems", in *International Conference on Artificial Intelligence, Computing, IOT and Data Analytics (AICTA-2023)*, PEC Chandigarh, 18-20 December 2023.
5. Prabhjot Kaur, Nitin Kumar, Maheep Singh, "Bolstering Biometric Cryptosystems with Tailored Scale Invariance Approach", in *International Conference on Intelligent Systems and Embedded Design (ISED-2023)*, DIT University, Dehradun, 15-17 December 2023
6. Sharma Gaurav, Maheep Singh. "Deep W-Net: DNN for Spatial Saliency Prediction in Video Frame", in *5th International Conference on Deep Learning, Artificial Intelligence and Robotics (ICDLAIR)*, Springer 2023, 07-09 December, NIT Kurukshetra.
7. KK Tiwari, R Raghav, R Pandey\*, Recent advancements in fluoride impact on human health: A critical review, *Environmental and Sustainability Indicators*, 2023, 100305.
8. K. Mishra, V. Kumar and A. Datta, "Monte Carleling of Growth Delay in Atomic Layerm eposited WS<sub>2</sub> on SiO<sub>2</sub> Substrate Based on Kinetic Extrapolation of Reaction Entropy and Enthalpy," in *IEEE Transactions on Nanotechnology*, vol. 22, pp. 785-791, 2023, doi: 10.1109/TNANO.2023.3329668.
9. Vivek Kumar, Nischal Anand, Rohit Rai, Sneha Chauhan and Jyoti Patel "Unveiling Thermal Cross Talk in 5nm Gate-All-Around Stacked Nanosheet FETs: A Machine Learning Perspective," in *IEEE 37th VLSID 2023*, Kolkata, India, 2024. (Accepted).
10. Sneha Chauhan, Loreen Mahmoud, Tanay Sheth, Sugata Gangopadhyay, and Aditi Kar Gangopadhyay. "Generating Adversarial Examples Using LAD." In *International Conference on Intelligent Data Engineering and Automated Learning (IDEAL 2023)*, pp. 154-165. Cham: Springer Nature Switzerland, 2023.
11. Rajeev Kumar, Sajal Agarwal, Sarika Pal, Alka Verma, Yogendra Kumar Prajapati, (2023) "Refractive Index Sensing Using MXene Mediated Surface Plasmon Resonance Sensor in Visible to Near Infrared Regime, *Measurement*, 113682, ISSN 0263-2241, <https://doi.org/10.1016/j.measurement.2023.113682> .
12. V. Kumar, S. Pal, (2023) "A Tantalum Disulfide (TaS<sub>2</sub>) Mediated Long-Range Surface PlasmonResonance Refractive Index Sensor with Improved Performance". *Sens Imaging*, vol. 24, 42.<https://doi.org/10.1007/s11220-023-00449-y>.
13. Rajeev Kumar, Sajal Agarwal, Sarika Pal, Yogendra Kumar Prajapati, J.P. Saini, (2023) "Enhanced refractive index sensing using a surface plasmon resonance sensor with heterostructure", *Micro and Nanostructures*, Vol. 183, 207656, ISSN 2773-0123, <https://doi.org/10.1016/j.micrna.2023.207656>. (SCI; IF: 3.1)

## Research Publications:

14. V. Kumar, R. Kumar, S. Pal, Y. K. Prajapati, "Early Detection of Dengue Virus Using GaSe and WS 2 Mediated Surface Plasmon Resonance Sensor With Ultrahigh Sensitivity" Sixth IEEE International WORKSHOP ON RECENT ADVANCES IN PHOTONICS (WRAP 2023) by IIIT Allahabad
15. Daya Ram, D. S. Bhandari, Dharmendra Tripathi, and Kushal Sharma, Motion of bacteria and CaOx particles via urine flow modulated by the electroosmosis, Physics of Fluids, InmPress, (2023) [IF: 4.6]
16. Apoorva Upadhyay, Aishwarya Upadhyay , Prakash Kumar Sarangi, Aakash Chawade, Nidhi Pareek, Dharmendra Tripathi, Vivekanand Vivekanand, Machine learning approach for microbial growth kinetics analysis of acetic acid-producing bacteria isolated from organic waste, Biochemical Engineering Journal. In Press, (2023) [IF: 3.9]
17. Rohit Kumar, "The DC Microgrid with Energy Storage System," 2023 IEEE Workshop on Power Electronics and Power Quality Applications (PEPQA), Cali, Colombia, 2023, pp. 1-6, doi: 10.1109/PEPQA59611.2023.10325769.
18. Pankaj Singh Rana, Nitin Sharma, and Anupam Priyadarshi, "Mathematical modeling and optimal control of a deterministic SHATR model of HIV/AIDS with possibility of rehabilitation: a dynamic analysis", published in the "Tamkang Journal of Mathematics", (ESCI, I.F. 0.312), DOI: 10.5556/j.tkm.55.2024.5109.
19. Rajalaxmi Rath, Kuldeep Sharma, "A review on XFEM in crack analysis of piezoelectric material" is presented in the International Conference on Technologies and Innovations for Sustainable Development, MNNIT Allahabad, Prayagraj, Uttar Pradesh held on 27th-29th, Oct. 2023.
20. Chaturvedi, Sonalika, & Dangwal, R. B. (2023). Writing the Grotesque: Poisoned Bodies and Toxic Environment in Ambikasan Mangad's Swarga. In Ecodisaster imaginaries in India Essays in Critical Perspectives (pp. 126-136). essay, Lexington Books.
21. Chaturvedi, Sonalika, & Dangwal, R. B. (2023). Dharmo Rakshati Rakshitah: Ethical Imperatives for Indian Political Society. Journal of Dharma, 48(3), 299-314.
22. Shrey Pradhan, Musharraf Ahmad, Praveen Kumar, Smita Kaloni, Shashank Bhatra, "Effect of vertical irregularities in buildings in different seismic zones". Engineering for sustainable development organized by IABSE.
23. Changchuk Palmo, Nikita Meena and Bibhash Kumar. Bearing Capacity of Strip Footing over Anisotropic and Heterogeneous Clay with Void. Indian Geotechnical Conference organized by IIT Roorkee.
24. Mubasshir Hussain and Bibhash Kumar. Stability analysis of embankment placed over anisotropic clay. Indian Geotechnical Conference organized by IIT Roorkee.
25. Shahrukh and Singh V. P. (2023). Frost susceptibility classification of soil at Jammu and Kashmir, India. In CD-ROM Proceedings of the Indian Geotechnical Conference, Roorkee, PaperId. 351, December 14-16.
26. Rahul Raj, Muskan Mayank, Laiju A.R., "Estimation and modeling of groundwater contaminants in Uttarakhand's hilly state", HYDRO-2023 INTERNATIONAL, 28th International Conferences on Hydraulics, Water Resources and Coastal Engineering, NIT Warangal, Dec. 21-23, 2023.
27. NIR emission from Nd 3+ doped Sr 3 WO 6 distorted triclinic phosphor, A Pusdekar, NS Ugemuge, R Nafdey, P Singh, IM Nagpure, SV Moharil, Radiation Effects and Defects in Solids, 1-14 (2023).
28. Host sensitization of luminescence of lanthanide activators in NaBi(WO 4 ) 2 , S Kshetrapal, NS Ugemuge, K Sharma, R Nafdey, IM Nagpure, SV Moharil, Radiation Effects and Defects in Solids 178 (9-10) (2023) 1211-1231.
29. H Saini, S Gangwar, CS Yadav, MS Khatri, Protection of Metals and Physical Chemistry of Surfaces 694 59 (4) 2023.



## Research Publications:

30. Narayan, S., Shrimali, M. K., Bharti, S. D., & Datta, T. K. (2023, October). Effects of aftershocks on the performance of steel building frames. In Structures (Vol. 56, p. 104959). Elsevier.
31. Dar, M. A., & Narayan, S. (2023). Parametric study of wood sheathed cold formed steel shear wall panels using OPENSEES. Materials Today: Proceedings.
32. Koutilya, B., & Narayan, S. (2023). Numerical Investigation of Steel Sheathed Cold-Formed Steel Shear Wall Under Cyclic Loading Using ABAQUS. In Proceedings of 17th Symposium on Earthquake Engineering (Vol. 2) (Vol. 330, p. 55). Springer Nature.
33. Sundriyal, V., & Narayan, S. (2023). Fragility Analysis of Steel Building Frame Considering Different Nonlinear Material Modeling. In Proceedings of the Indian Structural Steel Conference 2020 (Vol. 1): ISSC 2020 (Vol. 318, p. 77). Springer Nature.
34. Shikha Sharma, Amit Soni, Jagrati Sahariya\* (2023) First-principles calculations to investigate impact of Ga and In dopants on the electronic and optical features of boron phosphide, Optical & Quantum Electronics, In press
35. Chetana and Bhatra, S. Green Foundations: A Sustainable Approach to Uplift Resistance with Granular Anchor Piles in Comparison to Concrete Piles. International Conference on Environmental Sustainability and Climate Change (ICESCC 2023), 21st-22nd December, 2023, NIT Meghalaya, Shillong, India.
36. Joshi, S., Kumar, L., and Bhatra, S. Nonlinear analysis of double beam model for railroads resting over reinforced ground. 13th Structural Engineering Convention (SEC2023), 7th - 9th December, 2023, VNIT Nagpur.
37. Harnessing of Non-covalent Interaction in Novel [Ni(en)3](2-chlorophenyl- acetate)2 Second Sphere Complex: Synthesis, Characterization, Single Crystal Structural, DFT and Hirshfeld Surface Analysis. Priti Bansal, Anju Saini, Parmjeet Kaur, Paramjeet Kaur, Santosh Kumar, Pankaj Kandwal, Valeria Ferretti. Structural Chemistry (accepted for publication).
38. Exploring Azomethine ylides reactivity with Acrolein through cycloaddition reaction and computational antiviral activity assessment against hepatitis C virus. Oumayma Abdessadak, Pankaj Kandwal, Marwa Alaqrbeh, Kamal Tabti, Mohammed Aziz Ajana, Tahar Lakhliifi, Mohammed Bouachrine. Journal of Molecular Modeling (accepted for publication).
39. Prajapat, S., Bhandari M., and Kumar, A. Impact of Geometric Characteristics on Capacity of Hill Roads. In Research Symposium on Urban Transport, 16th Urban mobility India Conference & Expo at New Delhi, October 27-29, 2023.
40. Bhandari M., Prajapat, S., and Kumar, A. Speed analysis on hill roads in mixed traffic conditions. In the 7th Conference of Transportation Research Group (CTRG) of India, Surat, India, December 17-20, 2023.
41. Ahmad, F., and Kumar, A. Capacity Estimation on Hilly Road Under Heterogeneous Traffic Condition. In the 7th Conference of Transportation Research Group (CTRG) of India, Surat, India, December 17-20, 2023.
42. Nagar, C., Gusain, J. S., Sharma, A. K., and Kumar, A. Effect of Pedestrians on Vehicular Speed and Capacity of Hilly Roads. In the 7th Conference of Transportation Research Group (CTRG) of India, Surat, India, December 17-20, 2023.
43. D. K. Sharma and V. Kumar, "Impact of heavy ions on a-Si:H/PolySi bilayer thin film transistors with Schottky barrier source and drain based on Nickel Silicide," in Elsevier Memories - Materials, Devices, Circuits and Systems, Volume 7, 2024, doi: 10.1016/j.memori.2023.100096.
44. J. Patel, N. Agarwal, V. Kumar, N. Bagga and S. Dasgupta "Small-Signal Non-Quasi-Static Model of Multi-Fin FinFET for Analog and Linearity Analysis: Role of the Gate Resistance" in *Springer-Journal of Computational Electronics (JCEL)*, 2024.
45. Himesh Kumar, Dheeraj K Khatod, Loss Allocation in Three-phase Distribution Network using tau-value, IEEE Transactions on Power Systems, 2023.







## MEDIA COVERAGE:

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# Prajñanam प्रज्ञानम



Vol. 2 No. 4

## NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND



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