



DEPARTMENT OF CIVIL ENGINEERING

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

ROORKEE - 247 667 (UTTARAKHAND) INDIA

E-Newsletter

Jan-Jun 2026



FROM THE HoD's DESK



Dear All,

I extend my heartfelt greetings and best wishes to all our readers. It gives me immense pleasure to present Volume 10, Issue 1 (January–June 2026) of our departmental newsletter. This edition highlights the significant academic initiatives, research contributions, and accomplishments of our department over the past six months. It showcases the commitment, enthusiasm, and collaborative efforts of our faculty members, students, and staff. I hope this newsletter serves as a valuable reflection of our journey, celebrating our achievements while motivating us to continue pursuing excellence in teaching, research, and service in the coming year.

Thanks

Narendra Kumar Samadhiya
Professor & Head

ACHIEVEMENTS IN BRIEF

- A total of 25 students were awarded their Ph.D. degrees.
- 07 research projects were sanctioned at a total cost of ₹298.16 Lakhs.
- 43 Consultancy projects from various government agencies and private organizations were carried out at a total cost of ₹1898.13 Lakhs.

AWARDS AND RECOGNITIONS (FACULTY)



Prof. C. S. P. Ojha

- Appointed as INAE Chair Professor (2026-27) by the Indian National Academy of Engineering.
- Delivered a lecture on "The science of surface ground water interaction" at NMCG Delhi on February 7, 2026.
- Delivered a lecture on "Flow Regulation, River Training, Energy Dissipation and Sediment Management" at BITS Ranchi on March 26, 2026.
- Delivered a lecture on "Advances in Hydraulics and Solutions and Research Opportunities" at IIT Mumbai on May 30, 2026.
- Delivered four invited lectures on Fluid Mechanics in INAE CEE Civil & Environmental Engineering 2026 at IIT Delhi on June 26, 2026.

Prof. Satish Chandra

- Invited to chair a technical session during the seminar on Nanotechnology Applications in Pavement Engineering (NANO PAVE 2026) at CSIR-CRRI on March 10, 2026.
- Chaired a technical session on "Speed and Traffic Management using AI Technology" during Seminar on Road Safety organized by IRC and Haryana PWD during March 27-28, 2026, at Chandigarh.
- Delivered a keynote lecture on Economics of Speeding of Vehicles during 6th Conference on Recent Innovations in Engineering Technology and Science at JBIT, Dehradun on April 03, 2026
- Invited by Crashfree India as a jury member for their project Rakshak - A National Road Safety Implementation Forum at IIT Delhi on April 12, 2026.



Prof. Praveen Kumar

- Appointed as Deputy Director of IIT Roorkee wef June 12, 2026.

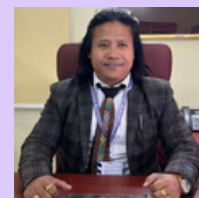
Prof. Manoranjan Parida

- Won the Ambassador of Road Safety Award from the International Road Federation-India Chapter at the IRF-IC's Foundation Day held on 19 January 2026 at the India International Centre.
- Honored with an Appreciation Certificate from Ammann India Pvt. Ltd. for his valuable contribution as a speaker/panelist at the Asphalt Recycling Seminar 2026 held in Hyderabad. His expert insights on asphalt recycling and sustainable road construction were highly appreciated by the participants and industry stakeholders.



Prof. G. D. Ransinchung, R. N.

- Visited the 2nd International Summit on Materials Science and Engineering on March 19th & 20 March 2026, Bangkok (Thailand).
- Visited the 9th International Conference on Road and Rail Infrastructure (CETRA 2026) from 27 to 30 May 2026 at Island Brac (Croatia).

**Prof. Indrajit Ghosh**

- Delivered a technical talk at International Road Federation (IRF Global) – Global Road Infratech Summit & Expo (GRIS 2026), held on 5-6 February 2026 at Hotel The Ashok, New Delhi, organized by the IRF India Chapter.
- Delivered a technical talk at SPARC National Conclave during 8-9 March 2026 at IIT Kharagpur Research Park, Kolkata.
- Examined PhD Viva-voce of Mr. Russel Aziz at IIT Kharagpur on 1 April 2026.
- Attended a one-day Symposium on “Sustainable Transportation for Equitable, Efficient and Resilient (STEER) Infrastructure in India” and “TRG Foundation Day (28 May), jointly organized by the Department of Civil Engineering, BITS-Pilani, Hyderabad Campus, and the Transportation Research Group of India (TRG) on May 28, 2026 at BITS Pilani, Hyderabad Campus.
- Examined PhD Viva-voce of Ms. Rachakonda Yashasvi at IIT Hyderabad on 29 May 2026.

Prof. Amit Agarwal

- Made an institutional visit to the UNSW Research Centre for Integrated Transport Innovation, UNSW Civil and Environmental Engineering, in a Seminar titled Devices, Data, Designs and Decisions: A Step Towards Informed Public Transportation at June 24, 2026

**Prof. Akanksha Tyagi**

- Delivered a lecture titled “Geophysical and Geotechnical data based Numerical Modelling of Rainfall Induced Instabilities in Himalayan Debris Slope” at the One-day Workshop on “Landslide Mitigation Measures for Resilient Hill Roads” at Bharat Mandapam, New Delhi (April 30, 2026), organized by MoRTH and NHIDCL.
- Delivered a lecture titled “Alternative Materials, Advanced Testing and Modelling of Seepage Barriers/Cut-off Walls for Dam Construction and Rehabilitation” at the 2nd International Training Program on Dam Safety Management (May 13-20, 2026), at IIT Roorkee.
- Co-Chaired a Session “Sustainability and Transportation” and delivered a presentation on the topic “Physics-Based Time-of-Failure Prediction of Slopes for Climate Adaptation and Sustainability” at the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE), Austria (June 14-19, 2026).

Prof. Anjaneya Dixit

- Appointed as the Associate Dean Infrastructure (Civil) on June 22, 2026
- Nominated as the Lead Author (India) by the Ministry of Environmental, Forest and Climate Change (GoI) for the 2027 IPCC Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture, Utilization, and Storage for National Greenhouse Gas Inventories (Additional guidance).



- Delivered an invited lecture (Online mode), "Using Concrete as Carbon Sink: The to-do and not to-do", Expert Webinar Series, (IAStructE, ASCE and BITS Pilani Hyderabad Campus), February 07, 2026
- Participated as an invitee at the Lead Author Meeting, 2027 IPCC Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture, Utilization, and Storage for National Greenhouse Gas Inventories (Additional guidance), April 14-16, 2026 in Rome, Italy
- Delivered an invited Lecture: "CO₂ curing/sequestration in cementitious systems: How does it influence durability?", Collaborative Workshop and Capacity Building on Durability and Sustainability of Concrete, NIT Surathkal, June 11-12, 2026

Prof. Siddhartha Khare

- Received International Exchanges 2025 Global Round 3 Award by The Royal Society UK on 31 March 2026 for UK-India research collaboration and overseas travel. The project, led by the PI at Northumbria University, UK, includes Prof. Siddhartha Khare as Co-PI from India. The funding will be administered through the UK partner institution with total Award Value is £11,500.
- Visited the IHE Delft Institute and Wageningen University, Netherlands during April 27- May 01, 2026 under ongoing International Indo-Dutch Project funded by DST.
- Presented poster along with his student Mr. Akash Kumar at European General Assembly 2026 International Conference at Vienna, Austria during May 03-08, 2026.
- Invited as a visiting Professor at the Department of Geography, McGill University, Canada during June 01 - July 14, 2026.
- Delivered an invited lecture at Prof. Derek T. Robinson lab at the Geography and Environmental Management of University of Waterloo, Canada on June 15, 2026.

Recognitions and Awards to Bhoomicam Pvt. Ltd. startup

- Bhoomicam has been selected among the top 3 organizations, alongside Infosys Limited, under the IN-SPACE Department of Space Seed Fund Scheme. The startup will receive ₹40 lakh to demonstrate a space technology use case.
- Bhoomicam was selected among the Top 6 startups nationwide in Stage 1 of the NCIIPC-DPIIT Startup India AI Grand Challenge (January 2026) under mission-critical theme "Responsible AI for National Security," receiving a ₹3 lakh prize, a ₹5 lakh development grant, and mentorship, cloud/HPC, and deployment support.



- Bhoomicam won 1st Prize in the Elevator Pitch category at VentureStage during the IIT Roorkee Alumni Global Meet 2026, selected among the Top 10 startups from 55 applicants, earning a ₹30,000 cash prize for its scalable geospatial solutions for precision agriculture.

- Bhoomicam was featured on DD News (March 2026) for its AI and geospatial technologies, recognizing its contribution to advancing indigenous innovation in precision agriculture. <https://www.youtube.com/watch?v=Jw4xi5h3dhA>
- Bhoomicam was among the Top 5 startups selected by the Government of Uttarakhand to represent the state at the India AI Impact Summit 2026, held at Bharat Mandapam, New Delhi.

Prof. Rakesh Ranjan

- Delivered an invited lecture titled "Seven Years Beyond Waterloo: Reflections and Research Highlights" as part of the University's WSP Seminar Series at the University of Waterloo, Ontario, Canada on June 8, 2026

- Delivered a technical talk titled "Parametric Study of Cable-Supported Bridge Decks Under Wind Load" at the 8th International Symposium on Computational Wind Engineering (CWE-2026), Western University, Canada. on June 10, 2026.
- Delivered an invited talk at the 9th International Workshop on Advanced Wind Engineering Testing & Technology (AWETT-2026), Western University, Canada, showcasing IIT Roorkee's wind engineering research and facilities.

**Prof. Prakhar Misra**

- Visiting Researcher to The University of Tokyo from 15 June to 14 July under the India-Japan LOTUS fellowship.
- Presented a talk at Nara Women's University, Nara titled 'Satellite and UAV Remote Sensing for Urban Human-Environment Interactions' on July 1, 2026
- Presented a talk at Research Institute for Humanity and Nature, Kyoto titled 'What Satellites Reveal and Hide: Emerging Dynamics of Agricultural Burning in northwestern India' on July 2, 2026
- Visited Takenaka Research and Development Institute, Chiba on industrial visit and discuss collaboration opportunities on July 7, 2026
- Delivered a talk titled 'GIS Applications of Python in Urban and Regional Planning', under the AMRUT Workshop on GIS and Big Data Integration for Spatial Solutions on January 30, 2026.

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Anurag Thombre and **Prof. Indrajit Ghosh** have been granted a patent entitled "A Road Hazard Detection Proficiency Testing System and Method Thereof" by the Intellectual Property India, Government of India.

Prof. Amit Agarwal, Karthik Krishnan O, Dhinesh Kumar R, Dhish Kumar Saxena have been granted a patent entitled "Wireless Edge Computing-Based Adaptive Traffic Control System with Real-Time Vehicle Tracking and Cloud Integration" by the Intellectual Property India, Government of India.



AWARDS AND RECOGNITIONS (STUDENTS)



Mr. Mohd Faraz Khan, Research Scholar (Hydraulic Engineering) under the supervision of Prof. C. S. P. Ojha, was selected for the "Basic Course in Isotope Hydrology" Workshop, conducted at the National Institute of Hydrology (NIH), Roorkee, during 05-09 January 2026. The programme was supported by the UK Government and delivered in collaboration with BGS (British Geological Survey).

Mr. Pratik Goel, Research Scholar (Geotechnical Engineering) under the supervision of Prof. Kaustav Chatterjee, was awarded the ISSMGE Foundation Grant to attend the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE 2026) in Vienna, Austria.

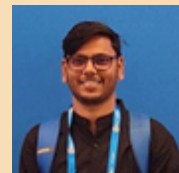


Mr. Akshay Kumar Singh, Research Scholar (Geotechnical Engineering) under the supervision of Prof. Anumita Mishra, was awarded the ISSMGE Foundation Grant to attend the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE 2026) in Vienna, Austria.



Mr. Siddharth Pandey, Research Scholar (Geotechnical Engineering) under the supervision of Prof. Akanksha Tyagi, was awarded the ISSMGE Foundation Grant to attend the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE 2026) in Vienna, Austria.

- **Mr. Sarvesh Kumar Verma**, Research Scholar (Geospatial Engineering) under the supervision of Prof. Saurabh Vijay, presented a poster titled "Automated Mapping of Glacier Frontal Retreat in the Indian Himalaya using Satellite Remote Sensing and Deep Learning Models" at the European Geosciences Union (EGU) 2026 General Assembly in Vienna, Austria (May 3–8, 2026). His participation was supported by an EGU travel fellowship (€650) and registration fee waiver.
- Presented work on "mapping the different classes of glaciers using SAR data" at the INSIGHT-2026 workshop at the European Space Agency center in Frascati, Rome, from 11th to 13th May 2026.



Mr. Prankur Sharma, Research Scholar (Geospatial Engineering) under the supervision of Prof. Saurabh Vijay, attended the 10th Snow Science Winter School in Davos, Switzerland (February 22–28, 2026). Also received 3 EPFL credits on the successful submission of his report on the project "Alpine Snow Hydrology: Spatial Variability of Snow Properties and the Representativeness of SWE Sampling".

Ms. Gopika Das K, Research Scholar (Geospatial Engineering) under the supervision of Prof. Saurabh Vijay, participated in the Greenland Ice Sheet–Ocean (GRISO) Summer School 2026 in Nuuk, Greenland (May 18–29, 2026). Selected as a fully funded participant, she presented her research on the seasonal evolution of supraglacial lakes and ice velocity changes on Greenland glaciers and gained interdisciplinary training on Greenland's ice sheet, ocean, climate, and ecosystems.



Mr. Abhinjan Maji, Research Scholar (Transportation Engineering) under the supervision of Prof. Indrajit Ghosh, was selected for the World Conference on Transport Research (WCTR) 2026 Bursary Award by the selection committee (World Conference on Transport Research Society (WCTRS) and Toulouse School of Economics). This award supported his participation in the WCTR conference held from July 6–10, 2026, in Toulouse, France.

Mr. Sushant Rahul, Research Scholar (Geotechnical Engineering) under the supervision of Dr Akanksha Tyagi, won the 1st Prize in the "BIS-Excellence Student Award Ceremony" under the Best Research Paper category for the paper "Physics-based Time-of-Failure Determination of Rainfall-Induced Instability in Lateritic Soil Slopes" published in Engineering Geology (Q1, IF 8.4).



Dr. Soumyadeep Deb (recently completed PhD under Prof. Praveen Kumar and Prof. Nikhil Saboo on the topic Development of Specification for use of Waste Plastic in Bituminous Roads) got 1st prize worth Rs 10,000/- under category of Best PhD Thesis during BIS function. This work is under process for consideration of BIS specifications.

Mr. Aman Garg, Research Scholar (Geotechnical Engineering) under the supervision of Dr V. A. Sawant, secured 3rd position in the BIS Excellence Students Awards Ceremony held at the WRDM, IIT Roorkee, on May 13 2026 under the Research Publication Category for his research paper titled "Effect of Different Configurations of Combined Pile-Raft Foundation on Vertical Load-Carrying Capacity and Load Sharing"



• **Mr. Swapnil Balasaheb Ghodke**, Research Scholar (Structural Engineering) under the supervision of Prof. Bhupinder Singh and Prof. Shubhankar Roy Chowdhury, has been awarded the CSIR Foreign Travel Grant to attend and present his research at the 17th International Conference on Durability of Building Materials and Components (DBMC 2026) scheduled from 20th July to 24th July 2026 at Montreal, Canada.

• Awarded the DAAD Fellowship to carry out part of his Ph.D. research work at the TU Berlin, Germany.

Mr. Akash Kumar, Research Scholar (Geospatial Engineering) under the supervision of Prof. Siddhartha Khare was awarded financial support of ₹1,50,000 under the Departmental Development Fund (DDF) Scheme, to present his research at the European Geosciences Union (EGU) General Assembly 2026 in Vienna, Austria. The conference was held from May 3-8, 2026, where he presented his paper titled "Establishing PhenoCam-based monitoring of wheat and rice phenology in India with satellite and meteorological data."



Mr. Kartik Saini, Research Scholar (Structural Engineering) under the supervision of Prof. Anjaneya Dixit, has been selected for the prestigious JST LOTUS Scholarship funded by the Japan Science and Technology Agency (JST), Japan. Under this scholarship, he will undertake collaborative research at the BME Laboratory, Graduate School of Engineering, The University of Tokyo, under the supervision of Prof. Ippei Maruyama.

Ms. Soumita Mondal, Research Scholar (Geotechnical Engineering) under the supervision of Prof. Akanksha Tyagi, has won the "TunnelFem 2026 Award" under the category "Student Excellence Awards - PhD (Tunnelling)" to recognize excellence in tunnelling and geotechnical engineering and celebrate the contributions of women in the profession.



Batch-13 of B.Tech. Civil Engineering secured the 3rd position in the "UG Best B.Tech. Project" category organized by the Bureau of Indian Standards, along with a cash prize of ₹3,000.



Mr. Laksh Alawadhi, a B. Tech. 2nd-year student, and Prof. Prakhar Misra received the first prize in the International Conference on Vision 2047: Prosperous and Great Bharat 2.0 (theme: Indomitable Security System) held at IIT Roorkee (April 24-26, 2026).

NEW FACULTY JOINED



Dr. Vindhya wasini Prasad joined the Department of Civil Engineering as an Assistant Professor in Geotechnical Engineering on March 11, 2026. He earned a B. Tech. degree in Civil Engineering in 2017 from Indian Institute of Technology (IIT) Roorkee. He completed his Master of Science in Civil Engineering from Clemson University, USA, in 2019, and Ph.D. in Civil Engineering from University of Illinois at Urbana-Champaign (UIUC) in December 2024.

RESEARCH PROJECTS AWARDED

Name of the Principal Investigator/ Co- PI	Research Project	Sponsoring Agency	Amount (₹ Lacs)
 Prof. Amit Agarwal (PI)	Building Competencies for Edge-AI Device Development	VT Netzwelt	5.00
	SUGAM: An Intelligent Control Lights for Safer Mobility in Hilly Terrain	TIH IIT Mandi	23.87
 Prof. Anjaneya Dixit (PI)	Development of Compressed Stabilized Earth Blocks with Flue Gas Desulphurization (FGD) Gypsum	CPRI	30.72
 Prof. Bhupinder Singh (Co-PI)			
 Prof. Akanksha Tyagi (Co-PI)			

Name of the Principal Investigator/ Co- PI	Research Project	Sponsoring Agency	Amount (₹ Lakhs)
 Prof. Prakhar Misra (PI)	Automated Construction Progress Monitoring	Takenaka India Pvt Ltd	25.00
 Prof. Siddhartha Khare (PI)  Prof. Alok Bhardwaj (Co-PI)	Development of Digital Twin of Haridwar City for Effective Urban Management using Geospatial Tools	DST, New Delhi	88.45
 Prof. Sanhita Das (PI)	An Integrated Framework for Conflict Risk and Workload Assessment of Commercial Bus Drivers Using Physiological and Naturalistic Driving Data	ANRF- ARG	36.67
 Prof. Sonalisa Ray (Co-PI)	Development of a Reconfigurable Cable-Driven Parallel Robot for House Construction	ANRF	88.45

EVENTS:

WORKSHOPS/CONFERENCES/SHORT TERM COURSES

Workshop on “Theory and Applications of Unified Mechanics Theory (UMT)” : January 12, 2026

The Department of Civil Engineering, IIT Roorkee, successfully organized a Workshop on “Theory and Applications of Unified Mechanics Theory (UMT)” on 12 January 2026 in the Conference Room of the Civil Engineering Department.



The workshop featured distinguished experts Prof. Cemal Basaran (State University of New York, Buffalo, USA) and Prof. C. Lakshman Rao (IIT Madras), who delivered insightful lectures on advanced applications of Unified Mechanics Theory, including hydrogen embrittlement-fatigue and degradation modeling in lithium-ion batteries. The event provided M.Tech. and Ph.D. students with a valuable platform to engage in cutting-edge research, interact with eminent academicians, and discuss their own research work. The workshop was coordinated by Prof. Rakesh Ranjan, Department of Civil Engineering, IIT Roorkee, whose efforts facilitated meaningful academic discussions and knowledge exchange among participants.

SPARC Workshop on Data-Driven Climate Change and Resilient Infrastructure, A SPARC (MoE) Collaborative Workshop: February 02-03, 2026

The workshop titled “Data-Driven Climate Change and Resilient Infrastructure” was organized as a SPARC (MoE) Collaborative Workshop organized by the Department of Civil Engineering,



IIT Roorkee, in collaboration with Prof. Satish V. Ukkusuri, Purdue University, USA, during 2–3 February 2026 at IIT Roorkee. The workshop focused on addressing climate risks and infrastructure vulnerabilities through advanced data-driven approaches. It brought together faculty, researchers, students, government agencies, urban planners, infrastructure professionals, policymakers, and disaster-risk management practitioners. Distinguished speakers and panelists included experts from IIT Madras, TISS Mumbai, IISc Bangalore, IIT Bombay, IIT Roorkee, World Bank, Purdue University, University of Central Florida, and New York University. The workshop aimed to promote international collaboration and equip participants with tools and knowledge for climate-resilient infrastructure planning and evidence-based decision-making. The event was coordinated by Prof. Indrajit Ghosh.

SPARC-GIANT Two-Week Course on Managed Aquifer Recharge and Modelling Water-Food Nexus : February 17-27, 2026



The Civil Engineering Department organised a SPARC-GIANT two-week course on "Managed Aquifer Recharge and Modelling Water-Food Nexus" during 17-27 February, 2026. The course was organised as an activity of the ongoing SPARC project between IITR Civil Department and HTW Dresden, Germany.

The course received 225+ registrations from across India. The course attracted master's and doctoral students particularly from Civil, Hydrology, WRDM, and CoEDMM departments and also from NIH Roorkee and IISc Bengaluru. The course included talks by renowned international experts - Prof. Dr.-Ing. Thomas Grischek and Dr.-Ing. Cornelius Sandhu (HTW Dresden, Germany), Dr. rer. nat. Hilmar Börnick (TU Dresden, Germany), and Dr. rer. nat. Prabhas Kumar Yadav (University of Tübingen). Dr. Prabhas also conducted a one-day hands-on workshop on using computer modelling for simulating groundwater flow.

The course included talks by Dr. Brijesh Kumar Yadav (Hydrology, IITR), Dr. Roopam Shukla (CoEDMM, IITR), Dr. Gopal Krishan (NIH, Roorkee), Er. D.K. Singh (Uttarakhand Jal Sansthan), and Dr. Hemant Kumar (CED, IITR; course organiser). The course equipped the 26 participants with latest advancements in managed aquifer recharge and water-food nexus modelling along. The participants also gained practical skills - Colilert technique (Environmental lab, CED), Double ring infiltrometer (Hydraulics lab, CED), and site visit to function and under-construction River Bank Filtration well at Pantdweep, UJS, Haridwar. The event was coordinated by Prof. Hemant Kumar

3rd Indian Cryosphere Meet: February 18-19, 2026

Dr. Saurabh Vijay successfully organized the 3rd Indian Cryosphere Meet (ICM-2026) at IIT Roorkee, following IIT Ropar in 2024 and IIT Bombay in 2025. The initiative began at IIT Roorkee with a few phone calls in February 2021, grew through monthly online meetings, and evolved into an annual in-person platform for India's cryosphere community.



More than conferences or training programmes, ICM is about building lasting legacies through community building. Its philosophy promotes connected scholars rather than isolated PhDs, students at the forefront of leadership, open data, open science and reproducibility, international quality with national responsibility, and a long-term vision beyond individual careers. The community now looks forward to the 4th ICM in February 2027 at IISER Bhopal.

SPARC-GIANT Special Session on "Water-Food Nexus and Managed Aquifer Recharge": February 22, 2026



The Civil Engineering Department co-organised a SPARC-GIANT Special Session on "Water-Food Nexus and Managed Aquifer Recharge" at the 4th Roorkee Water Conclave (RWC) as Zero-Day activity on 22nd Feb 2026.

The prevailing groundwater crises in northwestern India presents an imminent need to strengthen management of aquifer recharge (MAR) techniques including riverbank filtration (RBF) by integrating them into the water-food (WF) nexus. The special session provided a platform for scientific exchange on MAR in context to WF nexus. The session included talks by leading experts - Prof. Thomas Grischek (HTWD, Germany - Managing clogging of infiltration facilities), Dr. Hilmar Börnick (TU Dresden, Germany - Elimination of organic trace pollutants), Dr. Gopal Krishan (NIH Roorkee - Application of environmental tracers), Dr. Cornelius Sandhu (HTWD, Germany - MAR and water-nexus in water-stressed regions), and Dr. Hemant Kumar (IITR - Hydroeconomic modelling). The special session was attended by 60+ participants of RWC and IITR community - including Prof. Arun Kumar (HRED, IITR), Prof. Basant Yadav (WRDM, IITR) and Prof. Karrie Weber (UNL, USA).

MoRTH Projects Review Meeting : February 24, 2026



On February 24, 2026, MoRTH Projects Review Meeting has been organized in the Department of Civil Engineering, IIT Roorkee with the MoRTH officials Shri V. K. Rajawat, Director General, Shri Pankaj Aggarwal Chief Engineer S&R, Shri Bidur Kant Jha, Director, New Technologies. The meeting was coordinated by Prof. Praveen Kumar, Chair Professor, MoRTH.

Two-Day Agri-Drone Workshop at IIT Roorkee Campus: March 26-27, 2026

Prof. Siddhartha Khare Conducted 2-Day Agri-Drone Workshop at IIT Roorkee Campus (26-27 March 2026) Sponsored from NMICPS TiHAN-IIT Hyderabad through Bhoomicam Pvt. Ltd. Startupin collaboration with Krishi Vigyan Kendra Roorkee. The workshop aims to introduce farmers, students and industry professionals to the growing field of Agri-Drone technology and precision agriculture through expert sessions and live demonstrations. Under this workshop, students and professionals were trained from diverse backgrounds on Drone-based mapping, data processing, and AgriDrone spraying techniques through hands-on sessions and live demonstrations.



Two-Day workshop on “Bridging Innovation in Steel with Modern Infrastructure Needs”: April 9-10, 2026



The Department of Civil Engineering at IIT Roorkee, in collaboration with the Steel Authority of India Limited (SAIL) and CBMM, successfully organized a two-day workshop on “Bridging Innovation in Steel with Modern Infrastructure Needs” from 9-10 April 2026, coordinated by Prof. Rakesh Ranjan.

The event brought together distinguished experts from academia, industry, and consulting organizations to deliberate on advancements in steel manufacturing, seismic design, evolving Indian Standards, and applications in high-rise buildings, bridges, and mass housing. With keynote addresses, technical sessions, panel discussions, and laboratory tours, the workshop fostered meaningful industry-academia collaboration, highlighted SAIL’s pivotal role in driving innovation, and set the stage for future partnerships in research, technology development, and standards formulation. Building on the momentum of this workshop, an MoU between IIT Roorkee and SAIL was formally signed on 19 June 2026, marking a significant step towards long-term collaboration in steel research, innovation, and infrastructure development in India.

Two-day workshop on drone technologies, assembly, and their multidisciplinary applications: May 25-26, 2026

The Geospatial Engineering Group, Department of Civil Engineering at IIT Roorkee successfully organized a comprehensive two-day workshop focusing on drone technologies, assembly, and their multidisciplinary applications.



The workshop aimed to bridge the gap between theoretical knowledge and practical expertise in Unmanned Aerial Vehicle (UAV) technology. The event saw highly competitive participation and brought together a diverse, international group of students spanning undergraduate, masters, and doctoral levels. The workshop was sponsored by industry partners Takenaka India, MapMyIndia and American Express. The workshop received an overwhelming response from the student community, underscoring the growing interest in autonomous technologies. More than 100 applications were received, out of which 25 participants were rigorously selected to ensure a high-quality, interactive learning environment. A total of eight expert faculty talks and two hands-on session were delivered, focusing on the cutting-edge integration of drones across various industries.

2nd Leh Indian Glaciology Summer School (LIGSS-2026): June 1-13, 2026



Dr. Saurabh Vijay successfully organized the 2nd Leh Indian Glaciology Summer School (LIGSS-2026) in Leh, Ladakh, from 1-13 June 2026.

Following the success of its first edition, the school received nearly 450 applications from 15 countries, from which 22 participants across undergraduate, postgraduate, doctoral, postdoctoral and early-career levels were selected.

The theme, "Remote Sensing of Himalayan Glaciers," covered satellite, radar, LiDAR, drone and AI-based approaches through lectures, tutorials, group projects and field exposure. The programme was led by five core teachers with contributions from more than 15 national and international experts. LIGSS-2026 strengthened scientific capacity, regional and gender diversity, international collaboration and practical understanding of Himalayan glacier change among young researchers.

GUEST LECTURES

Speaker	Lecture Details
 Prof. Arun Shukla University of Rhode Island, USA	Invited Lecture Title: Structural Response under Extreme Underwater Loadings Date: January 30, 2026 Organizer: Prof. M. A. Iqbal

 Prof. Kaushik Dey Indian Institute of Technology, Kharagpur	Distinguished Lecture Series in Civil Engineering Title: Blasting Technology for Civil Engineers Date: March 12, 2026 Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee
 Prof. William Coombs Durham University, United Kingdom	Geo-ORBIT Online Lecture Series Lecture1 Title: Large Deformation Soil Structure Interaction using the Material Point Method Date: May 22, 2026 Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee
 Col. Sandeep Sudhera Executive Director (Projects) National Highways and Infrastructure Development Corporation Limited, India	Invited Lecture Title: Planning and Execution of the Rescue of 41 Workers Stuck Inside the Silkyara Tunnel in the State of Uttarakhand, India Date: May 26, 2026 Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee
 Prof. David M.G. Taborda Imperial College of London, United Kingdom	Geo-ORBIT Online Lecture Series Lecture2 Title: Real-Time Back Analysis Using Surrogate Models: Principles and Application to a Deep Excavation Date: June 5, 2026 Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee
 Retd. Prof. Sarvesh Chandra Indian Institute of Technology Kanpur	Guest Lecture Title: Research an Insight Date: June 9, 2026 Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee



Prof. Hing-Ho Tsang
University of Dundee, United Kingdom

Geo-ORBIT Online Lecture Series

Lecture3

Title: Geotechnical Seismic Isolation (GSI)

Date: June 26, 2026

Organizer: Department of Civil Engg. with IGS Student Chapter Roorkee

VISITORS



- Prof. M. K. Mittal (Retd. Faculty, CED) visited the department on February 18, 2026 and interacted with HCED and Faculty colleagues.

- On February 14, 2026, Shri V. L. Kantha Rao, IAS, Secretary, Ministry of Jal Shakti (MoJS), visited the Hydraulics Laboratory of the Department of Civil Engineering at Indian Institute of Technology Roorkee. During the visit, he interacted with faculty members, and research scholars, and reviewed various experimental and research setups in the Hydraulics Lab.
- Distinguished Speakers: Dr. Shailesh Agrawal (Ex-Executive Director, BMTPC, New Delhi; Professor of Practice, Department of Earthquake Engineering, IIT Roorkee) as Chief Guest; Prof. Janki Andharia (Professor (Retd.) & Climate Policy Scholar, Tata Institute of Social Sciences (TISS), Mumbai), Prof. Satish V. Ukkusuri (Lyles School of Civil and Construction Engineering, Purdue University, USA), and Dr. Ajay Chourasia (Chief Scientist & Head, Structural Engineering and 3D Concrete Printing Division, CSIR-CBRI, Roorkee) as Keynote Speakers; and Prof. Ashish Verma (Indian Institute of Science (IISc) Bangalore) and Prof. Chandan Ghosh (Former Professor & Head, Resilient Infrastructure Division, National Institute of Disaster Management (NIDM)) as Invited Speakers for the SPARC Workshop on Data-Driven Climate Change and Resilient Infrastructure, held during 2-3 February 2026.



- Prof. Bryan Mark, The Ohio State University, visited as a visiting Professor Twice, first in February and second time in May-June, 2026

INFRASTRUCTURE (NEW FACILITIES/ INSTRUMENTS)

Temperature Controlled Triaxial Testing Equipment : ₹ 176.59 Lakhs

The Temperature-Controlled Triaxial Testing Equipment is capable of performing Triaxial tests at -20°C to $+65^{\circ}\text{C}$ for frozen sediments, soil, and admixture-stabilised soils/grouts. It is purchased for Advanced Grout and Geomaterial Testing Lab funded under Strengthening of existing labs of the Departments (Geotechnical Lab, Civil Engineering Department) by Project ICD 2043-MJS.



Portable 3D Laser Scanner : ₹ 35.40 Lakhs



The FARO Orbis Portable 3D Laser Scanner is an advanced handheld reality capture solution that rapidly collects accurate three-dimensional data of buildings, infrastructure, industrial facilities, and other environments. Combining high-speed LiDAR technology with integrated imaging and SLAM (Simultaneous Localization and Mapping), the scanner enables users to capture detailed point clouds while walking through a site, eliminating the need for extensive tripod setups or GPS.

Prestressed Lab Setup : ₹ 33.20 Lakhs



The Prestressed Concrete Testing Laboratory is being established to facilitate experimental research on the structural behaviour of prestressed concrete members under controlled loading conditions. The facility comprises a high-capacity prestressing frame, hydraulic jacking system, anchorage and locking mechanisms, high-strength prestressing wires/strands, load transfer assemblies, and essential accessories for applying and maintaining the desired prestressing force. The setup enables investigations on flexural and shear behaviour, prestress losses, cracking, serviceability, ultimate strength, and structural performance of prestressed concrete elements. It supports advanced research on innovative prestressing techniques, structural design validation, durability assessment, and the development of resilient and sustainable prestressed concrete systems.

Static Rock Triaxial System ₹ 34.90 Lakhs



The static rock triaxial testing setup is used to determine the mechanical behavior and strength characteristics of rock specimens under controlled confining pressure and axial loading conditions. The system consists of a high-capacity servo-controlled loading frame (2000 kN), a hydraulic power unit, a triaxial pressure cell, and a computerized data acquisition and control system housed in the adjacent control cabinet.

HIFIT High Frequency Mechanical Impact (HFMI) Treatment Tool: ₹ 23.60 Lakhs

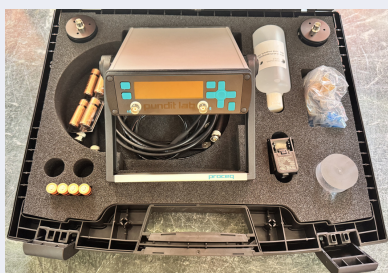


The High Frequency Mechanical Impact (HFMI) Treatment Tool is an advanced post-weld surface treatment system designed to enhance the fatigue performance of welded structures. The tool employs high-frequency oscillating pins to plastically deform the weld toe, thereby reducing stress concentrations, introducing beneficial compressive residual stresses, and inducing local work hardening at critical fatigue crack initiation

sites. These microstructural and mechanical modifications significantly improve fatigue resistance and extend the service life of welded structures. The instrument facilitates advanced research on fatigue life enhancement, residual stress engineering, weld improvement techniques, structural rehabilitation, and the experimental validation of fatigue and fracture mechanics-based design and assessment methodologies for welded steel structures.

Slab Compactor ₹ 29.93 Lakhs

The IPC Global Slab Roller Compactor is a high-performance laboratory compaction system designed to produce uniform asphalt slab specimens that closely replicate field compaction conditions. It uses a programmable rolling mechanism to compact hot-mix asphalt into rectangular slabs with consistent density, thickness, and air void distribution, ensuring reliable and repeatable test results.



Ultrasonic Pulse Velocitimeter
₹ 7.70 Lakhs



Core Cutting Machine
₹ 4.98 Lakhs



Real Time Polymerase Chain Reaction Machine
₹ 14.00 Lakhs



Truemet Vickers Hardness Testing Machine
₹ 4.72 Lakhs



UAV for Sensor Integration
₹ 13.90 Lakhs



Absolute & Kinematic Viscosity Testing Equipment
₹ 3.74 Lakhs



Loading Frame DAS Actuator Testing Apparatus
₹ 9.91Lakhs



Leica Polarising Microscope
₹ 11.46 Lakhs



Rock Cutting, Polishing and Lapping Machine
₹ 4.33 Lakhs

FAREWELL



The Department bids a heartfelt farewell to **Shri Deenanath, Senior Attendant (S.G.)**, and expresses sincere gratitude for his dedicated service and valuable contributions and wishes him good health, happiness for life ahead as he retired on January 31, 2026.

The Department bids Farewell to **Shri Mahesh Chand**, Senior Attendant in Environmental Engg. Lab and expresses sincere gratitude for his dedicated service and valuable contributions and wishes him good health, happiness for life ahead as he retired on April 30, 2026.



The Department of Civil Engineering, IIT Roorkee, organized a memorable Farewell Party for the graduating B.Tech. and M.Tech. students on April 23, 2026, celebrating the achievements and contributions of the outgoing batch.

OBITUARY



The Department expresses its heartfelt condolences on the passing of Mr. Shyam Sunder, Retired Technical Assistant, Central Facility, on April 28, 2026.



The Department expresses its heartfelt condolences on the passing of Mr. Mahesh Chand, Retired Senior Attendant, on July 13, 2026.

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