



# IGS NEWS

A Bulletin of the Indian Geotechnical Society

FOR PRIVATE CIRCULATION ONLY

Volume 57

No.

03

July-September 2025

## EDITOR



Dr. A.P. Singh

## EDITORIAL BOARD MEMBERS:



Dr. Anitha G. Pillai



Dr. Rupali Satavalekar

## Contents

Message from the President

Summary of Ph.D Theses

“Growth Impact Award – 2025 to Indian Geotechnical Journal”

Conference Reports and Chapter News

Welcome to New Members

## Message from the President



Dear Distinguished Members,

I hope you and your families are doing well. As we move forward through the year, it is heartening to look back at the progress we have made as a community. The field of Geotechnical Engineering continues to demonstrate its critical importance in shaping the nation's infrastructure, and we are proud to acknowledge the remarkable contributions of our members. The advancement of Geotechnical Engineering is not only the result of technical expertise but also the legacy of dedication carried forward by generations of our past geotechnical engineers. The young professionals and students in our community have inspiring examples to look up to geotechnical pioneers and experts whose work has strengthened the very foundation of our society's growth. It is our collective responsibility to nurture this spirit, encourage innovation, and guide the upcoming generation to continue this journey with curiosity, integrity, and purpose. We extend sincere appreciation to our Executive Committee and Sub-Committees for their relentless effort in sustaining the momentum of the Society's activities and initiatives. Their commitment ensures that our chapters remain active, our knowledge-sharing vibrant and our network strong. Together, we continue to uphold the values of collaboration, excellence, and service that define the Indian Geotechnical Society.

Prof. Murali Krishna and the SC1 Committee continue to ensure that the IGS website functions smoothly, remains current, and effectively serves the needs of our members. The team is consistently updating event information in a timely manner. Their dedicated efforts in collecting and systematically organizing technical resources for the IGS Virtual Library are sincerely appreciated, as these contributions significantly strengthen our shared

knowledge base. The SC2 Committee, led by Prof. T. Thyagaraj, has been actively working to increase ISSMGE membership, while the SC3 Committee, chaired by Prof. Chandresh Solanki, is developing initiatives to expand IGS membership. These efforts have resulted in the addition of 53 new members during the past three months. Their commitment to highlighting the professional advantages of being part of IGS and ISSMGE is sincerely acknowledged. The SC4 Committee on the IGS Foundation and Professional Forum, led by Dr. C. R. Parthasarathy, has been collaborating with other professional organizations to conceptualize and organize joint programs that benefit both communities. In the IGS foundation, efforts are being made to raise funds to promote training of engineering skills. Their regular coordination and thoughtful planning are noteworthy and highly valued. The SC5 Financial Committee, headed by Er. Ravi Kiran Vaidya, continues to manage the Society's financial activities responsibly within the approved budget provisions and has extended grants to local chapters to support their events as per prevailing norms of IGS. Their contribution to maintaining financial discipline and enabling chapter-level activities is gratefully recognized.

As part of the Society's continued international engagement, had opportunity to attend few international events under various geotechnical societies. Had the honor of representing IGS as the Guest of Honor at the 75th Anniversary Celebrations of Brazilian Geotechnical Society (ABMS) in São Paulo, Brazil, from 20–21 July 2025, upon the invitation of Prof. Roberto Coutinho, President of ABMS. The event brought together leading geotechnical professionals from across the world. Also delivered a keynote lecture and participated in a round-table discussion on “Geotechnical Challenges for the Future,” alongside representatives of International organizations including the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), International Tunnelling and Underground Space Association (ITA), International Society for Rock Mechanics and Rock Engineering (ISRM) and other international bodies. This gathering enabled valuable exchange on emerging challenges and collaborative directions in our field. During the event, also presented the upcoming 1st Geotech Asia Conference and the associated Portugal–Brazil–India pre-conference workshop, extending an invitation to the global fraternity to join us in Goa. Further strengthening our international partnerships, on 28 August 2025, during the 6th International Conference on GIS and Geoinformation

*Contd..... pg 3*

# Industrial Flooring Solutions for Operational Success



Long Life



No Downtime



Sustainable Builds

Springboard industrial operational excellence from the bottom upwards. Fortify your business with flooring solutions that are designed to work in synergy with the heavy-lifting your business does daily. With a mix of Strata products to custom-design your projects solution you reap benefits that a one-size-fits-all product cannot bring.

## Advantages of Using Geosynthetics for Industrial Flooring:

- > Custom solution builds
- > Reduced costs over traditional materials
- > Quicker construction
- > Industry-leading strength for load-bearing
- > Reduced downtime from breakdowns
- > Improved safety on site
- > Sustainable



StrataWeb®



StrataGrid™



StrataTex HSR™



StrataDrain™



@ [www.strataglobal.com](http://www.strataglobal.com) | [www.geogrid.com](http://www.geogrid.com) | [technical@strataindia.com](mailto:technical@strataindia.com)

+91 22 4063 5100

India, Spain, USA





Zoning for Disaster Mitigation (GIZ2025) in Almaty, Kazakhstan, we signed a Memorandum of Understanding (MoU) between IGS and the Kazakhstan Geotechnical Society. This agreement marks an important step toward deeper cooperation in research, knowledge-sharing and capacity-building. The presence of Prof. Keh Jian Shou, ISSMGE Vice President (Asia) and Prof. A. Boominathan highlighted the significance of this collaboration. Preparations are progressing well for the Portugal–Brazil–India and Indo–US pre-conference workshops to be held during Geotech Asia 2025. These initiatives are designed to strengthen IGS's international presence and foster meaningful professional linkages. The International Cooperation Committees: SC6 (TC Activities) led by Dr. S. K. Prasad and SC7 (Networking) led by Prof. D. Neelima Satyam are diligently coordinating the activities. Their commitment and sustained contributions to advancing global technical partnerships are sincerely appreciated.

The 56th local chapter of IGS, IGS Lucknow, was inaugurated on 19th August 2025, at Integral University, Lucknow, Uttar Pradesh. Plans are also progressing for the establishment of additional local chapters in Dehradun, Rewa, Anantapur, Madurai, Gorakhpur and Aligarh, reflecting the growing interest and active participation of professionals and institutions across the country. These efforts are being coordinated by the SC8 Committee under the leadership of Prof. Dasaka S. Murty, whose guidance has been instrumental in facilitating discussions, outreach and organizational groundwork. The rejuvenation of local chapter activities across the country is advancing steadily under the leadership of Ms. Aarti Bhargava and the SC9 Committee. The proactive outreach initiatives introduced by SC9 team have played a key role in reactivating member participation, encouraging chapter-level engagements and fostering renewed enthusiasm among regional coordinators. A number of notable activities were conducted during the recent months. A One-Day National Workshop on Geotechnical and Structural Engineering in Practice was organized by the IGS Baroda Chapter in collaboration with the Structural Engineers Association on 5th July 2025 at Grand Mercure, Surya Palace Vadodara. Following the workshop, the Executive Committee members of IGS visited the Statue of Unity on 6th July 2025. To mark the Foundation Day of the IGS Bhubaneswar Chapter, an online lecture on "Climate Resilient Analysis & Design of Embankments" was delivered by Prof. G. L. Sivakumar Babu, IISc Bengaluru on 9th July 2025. The IGS Delhi Chapter, in association with IIT Delhi, organized a one-day seminar on "Engineering Marvels: Chenab and Anji Bridge" on 15th July 2025 at RNI Park, IIT Delhi. The International Conference on Ground Improvement, Landfills, and Sustainability (GLS-2025), hosted by the IGS Bengaluru Chapter jointly with the Department of Civil Engineering, IISc Bengaluru, was held at IISc from 18–19th July 2025. The 14th Annual Conference on Deep Foundation Technologies for Infrastructure Development in India was conducted on 8th September 2025 at Avadh Utopia, Surat, organized by the Deep Foundations Institute of India (DFI) in association with the IGS Surat Chapter. For the review of planning of IGC 2025, a visit to NIT Jalandhar was made on 26th September 2025. Had the opportunity to interact with the office bearers of the IGS Jalandhar Chapter. A detailed meeting was also held with the organizing committee of IGC 2025, and it is encouraging to note that preparations are advancing with clear planning, good team work and well-structured execution strategies. I extend my sincere appreciation to the office bearers of all chapters for their continued commitment, coordination and active support in strengthening the IGS fraternity nationwide.

During this period, several new student chapters were formed and a number of student-focused activities were conducted across the country. I sincerely acknowledge the committed efforts of Prof. N. Unnikrishnan and the SC10 Committee for effectively coordinating and guiding these initiatives. A new student chapter was inaugurated at Carmel College of Engineering and Technology, Alappuzha, on 6th August 2025. I extend my best wishes to the enthusiastic student members of this chapter as they begin their journey toward academic and professional excellence in geotechnical engineering. It is requested to office bearers of the local chapters to register their student chapters with the headquarters and send reports to the headquarters on an annual basis following the standard operating procedure (SOP) of IGS Student chapters. We are happy to inform that the discussions are in progress to establish an award for the best student chapter of IGS. Meanwhile, the SC11 Committee, under the leadership of Prof. G. Madhavi Latha, is actively designing programs and activities aimed at fostering engagement and growth within the young geotechnical engineering community. The SC12

Committee, led by Prof. R. Ayothiraman, is putting lot of efforts to prepare the revised IGS Awards guidelines, and I congratulate the team for the dedicated efforts. The SC13 Committee, headed by Prof. Anitha G. Pillai, continues to ensure the timely release of the IGS Newsletter with well-curated content and thorough editorial oversight. Their commitment to maintaining quality and consistency is greatly appreciated. Appreciation is also extended to Dr. Jaykumar Shukla and the SC14 Committee for their valuable involvement in BIS-related activities and their significant contributions towards updating and advancing national geotechnical standards. The SC15 Committee, led by Dr. G. Sridevi, is actively developing new initiatives under the Women's Forum. A special Women in Geotechnics program featuring a panel discussion and technical lectures is being planned as part of IGC 2025, with preparations currently underway. Meanwhile, the SC16 Infrastructure Development Committee, under the leadership of Dr. A. P. Singh, is in the process of identifying suitable locations for the proposed IGS Headquarters in New Delhi, with several potential office spaces already under review. The SC17 Laboratory Testing Forum, convened by Dr. C. N. V. Satyanarayana Reddy, and the SC18 Skill Development Forum, led by Prof. H. N. Ramesh, continue to drive their respective initiatives with focus and consistency, aiming to strengthen technical competency and professional development across the community. Under the leadership of Prof. B. K. Maheshwari, the SC19 Committee is working toward expanding software access and data resources, including facilitating PLAXIS software support for student projects and initiating efforts to build a reliable soil profile data repository.

The 243rd Executive Committee Meeting of the Indian Geotechnical Society was convened on 5th July 2025 and was graciously hosted by the IGS Baroda Chapter at Grand Mercure Surya Palace Vadodara. I extend my sincere appreciation to the Baroda Chapter team under the leadership of Er. Ravi Kiran Vaidya, along with Dr. Jaykumar Shukla, Dr. Lalit Thakur, Dr. Ruchi P. Srivastava, and all office bearers. Their meticulous planning, smooth coordination, warm hospitality, and attentive support throughout the program ensured the successful and memorable conduct of the events.

As the year continues to unfold, our focus now turns to a major milestone, the first Geotech Asia 2025, a signature event that reflects the growing stature of the Indian Geotechnical Society on the international stage. The conference is poised to convene distinguished professionals, researchers, and industry leaders from across Asia and other regions, fostering meaningful knowledge exchange, collaboration and advancement in geotechnical engineering. Also we are happy to inform that the board meetings of FedIGS and ISSMGE will be held during 1st Geotech Asia in Goa in conjunction with the conference. Preparatory activities are progressing with strong coordination, and I am confident that the collective involvement of our members will make Geotech Asia 2025 an impactful and memorable gathering. I acknowledge the thoughtful and meticulous efforts of the SC20 Committee, led by Prof. Ashish Juneja and Prof. Dasaka S. Murty, for steering the planning and organization of this historical event. In parallel, the arrangements for the 12th International Symposium on Field Measurement in Geomechanics (ISFMG), scheduled to be held in IIT Indore, are also advancing under the leadership of Prof. D. Neelima Satyam. Abstract submission dates are extended until 31st December 2025, and I encourage members to contribute their research and project experiences to enrich the technical discourse. Furthermore, our annual premier gathering, the Indian Geotechnical Conference (IGC 2025), will be conducted from 18–20th December 2025 at NIT Jalandhar, preceded by a Pre-Conference Workshop on Earthquake Geotechnical Engineering on 17th December 2025 at the same venue. I request all members to participate actively in these events. Your involvement is vital to advancing knowledge-sharing, strengthening professional networks and further elevating the visibility and excellence of the Indian Geotechnical Society.

I would like to conclude by recalling the timeless words of Mahatma Gandhi: "You must be the change you wish to see in the world." Let this serve as our guiding principle as we continue to build and strengthen our professional community. I encourage each one of you to remain actively engaged in the activities of the Indian Geotechnical Society, contribute your expertise, and participate in the initiatives that lie ahead. Let us move forward with confidence: Together We Can, and Together We Will.

Wishing good health, well-being, and continued success to all.

**Dr. Anil Joseph**

# SUMMARY OF Ph.D THESES

## Title of Thesis:

**Remediation of Heavy Metal Contaminated Soil and Sediment and its Effective Reuse in Construction**

**Name of the Student:** Dr. Kulkarni Kalyani Anilchandra

**Supervisor:** Prof. G.L. Sivakumar Babu

**Department & Institute:** Indian Institute of Science, Bangalore & Centre for Sustainable Technologies



**SUMMARY:** This study investigates practical ways to mitigate the hazards of heavy metal contamination in soil and dredged sediment. Three approaches viz., chemical treatment using nano zero-valent iron (nZVI), bacterial remediation with *Bacillus subtilis*, and stabilization with lime and ground granulated blast-furnace slag (GGBS) were explored. The factors soil type, dosage of remediation agent, and bacteria were investigated to assess their influences on immobilization efficiency of heavy metals cadmium, nickel, and zinc. Treated soils were tested for reuse in construction, showing strong, safe, and eco-friendly potential. The work promotes cleaner environments with upto 100 % immobilization of heavy metals and waste reuse.

## Title of Thesis:

**Behavior of Geopolymer Stabilized Deep Mix Column Foundation in Soft Soil Under Static and Cyclic Loading**

**Name of Student:** Dr. Sanjoli Gupta

**Supervisor:** Dr. Suresh Kumar

**Department & Institute:** Department of Civil Engineering, Indian Institute of Technology BHU, Varanasi



**SUMMARY:** This study focuses on developing a combination of geopolymer materials that can fully replace the utilization of traditional binders to stabilize soft soil foundations. GGBS and dolomite are used as novel precursors that can produce high calcium geopolymer. Laboratory model tests were performed on a single-column foundation and embankment over a group-column foundation under static and cyclic loading similar to transportation routes to study the load settlement behavior, bearing capacity, and failure pattern of the geopolymer stabilized soil column (GPSC) improved ground. A 3D finite element analysis using PLAXIS 3D have been conducted to validate the laboratory embankment model tests results. In addition, a life cycle assessment of geopolymer in comparison to OPC was done to show that geopolymer is a sustainable and eco-friendly construction material.

## Title of Thesis:

**Numerical Stability Assessment of Rock Tunnels: Impact of Overlying Foundations, Excavation Damage, Support Systems, and Ground Inclination**

**Name of Student:** Dr. Aayush Kumar

**Supervisor:** Dr. Vinay Bhushan Chauhan

**Department & Institute:** Department of Civil Engineering, Madan Mohan Malaviya University of Technology, Gorakhpur (U.P.) India



**SUMMARY:** This research investigates the stability of tunnels and shallow foundations in rock masses, focusing on footing-tunnel interaction and safe underground design. It examines the influence of different tunnel geometries, configurations and support systems under varied loading scenarios. The study evaluates the effects of excavation damage zones (EDZs) and steel linings on footing-tunnel stability performance. Numerical simulations assess stability factors under varied depths, offsets, and rock properties, revealing critical failure mechanisms including shear, punching, and wedge formation. Findings highlight that slope inclination, tunnel cover depth, and offset distances, EDZs and tunnel linings, strongly govern stability, and guidelines are proposed to optimize design for safe underground construction.

**Title of Thesis:****Sustainable Solutions for Municipal Solid Waste and Leachate Treatment:  
A Circular Economy Approach****Name of Student:** Dr. Anusree Nalladiyil**Supervisor:** Prof. G.L. Sivakumar Babu**Department & Institute:** Indian Institute of Science (IISc), Bangalore, Centre for Sustainable Technologies (CST)

**SUMMARY:** India's growing reliance on land filling demands innovative approaches to manage municipal solid waste and leachate. This thesis applies a circular economy perspective, treating waste as a resource. Field studies in Bengaluru revealed significant recovery potential from legacy waste and highlighted challenges of leachate treatment. A novel Anaerobic Biomass Biofilm Reactor using natural carriers achieved higher efficiency and lower sludge compared to conventional reactors. Additives like biochar and garbage enzyme improved biogas yields. Life cycle assessment confirmed that decentralised, segregation-focused systems offer the most sustainable pathway, reducing emissions and fostering resource recovery for urban waste management.

**Title of Thesis:****Performance Evaluation of Flexible Facings for Soil Nailed Slopes****Name of Student:** Dr. Amanpreet Tangri**Supervisor:** Dr. Saurabh Rawat**Department & Institute:** Civil Engineering Department, Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh

**SUMMARY:** The research focuses on the performance evaluation of flexible facings in soil-nailed slopes through physical modelling and FEM analysis using Plaxis 3D. Four facing materials namely as HDPE facing net, polyester geogrid, hex plastic net, and jute geo-mesh were examined for their behaviour under different surcharge loads considering parameters such as lateral deformation, vertical displacement, nail forces, bending moment and facing punching mobilized stress. Among all, HDPE facing demonstrated superior performance, sustaining up to 46% higher surcharge loads and developing higher nail forces with moderate deformations. The study highlights HDPE facing as a technically efficient and cost-effective (3-5 times cheaper) alternative to rigid facings for temporary and moderately steep slopes (60-70°).

**Title of Thesis:****Physical Modelling of Encased Stone Columns with Tire-Derived Aggregates:  
Model and Field Experiments****Name of Student:** Dr. Modalavalasa Upendra**Supervisor:** Prof. Ramanathan Ayothiraman**Department & Institute:** Department of Civil and Environmental Engineering, Indian Institute of Technology, Delhi.

**SUMMARY:** This study investigates the potential of Tire-Derived Aggregate (TDA) as a sustainable alternative to conventional stone aggregates (SA) in stone column applications for improving soft ground. A comprehensive experimental program, including large-scale triaxial, model, and field tests, was conducted on various SA+TDA mix proportions with and without geogrid encasement. While the inclusion of TDA slightly reduced the shear strength of the mixture, geogrid encasement effectively compensated for this loss, allowing up to 70% replacement of SA by volume without compromising performance. The findings highlight TDA's potential to reduce natural resource consumption and offer an eco-friendly solution for sustainable geotechnical engineering.

**Title of Thesis:****Acoustic Signature and Microstructure based Study of Himalayan Sandstones****Name of Student:** Dr. Shubham Chajed**Supervisor:** Dr. Aditya Singh**Department & Institute:** Department of Civil Engineering, Indian Institute of Technology Roorkee

**SUMMARY:** This thesis develops an integrated framework to predict the mechanical and damage behaviour of Himalayan sandstones from the intact state to failure. Sandstones from the Lesser Siwalik, and Purvanchal ranges were systematically analysed

through petrographic, index, and mechanical testing, advanced acoustic emission (AE) monitoring, and constitutive modelling. A novel direct surface-bonded PZT sensor-based AE setup was designed for triaxial tests, and a new Relative Cumulative AE Energy (ReC-UAE) method was proposed to identify crack initiation and damage stress thresholds. AE signals were utilised to quantify rock damage and refine a micromechanical damage–plasticity model, providing a robust predictive tool for safe and reliable rock engineering design in the Indian Himalayas.

#### Title of Thesis:

**Testing and Evaluation of Natural and Synthetic Reinforcement in Subbase/ Base Layers using Mine Overburden Materials: A Sustainable Approach**

**Name of Student:**

Dr. Jagdish Gouda

**Supervisor:**

Dr. D. Sitarami Reddy and Dr. Srinivasan V.

**Department & Institute:** Department of Civil Engineering, Visvesvaraya National Institute of Technology, Nagpur



**SUMMARY:** The research develops a sustainable framework for road construction using mine overburden materials (MOMs) reinforced with synthetic geocells and natural coir geotextiles. Extensive laboratory and large-scale tests revealed that basalt- and sandstone-based MOMs significantly enhance pavement strength and durability. Geocell reinforcement achieved up to 4.56 times modulus improvement, while bitumen-treated coir geotextiles improved soaked CBR by 70%. Mechanistic design analysis showed optimized layer thickness and reduced material use by 30–40%, achieving superior performance under heavy loads. The study demonstrates the environmental, technical, and economic feasibility of integrating mining waste into sustainable pavement geotechnics.

#### Title of Thesis:

**Employing Urease-producing Bacteria from the Hilly Regions of India for Mitigating Rainfall-Induced Soil Erosion**

**Name of Student:**

Dr. Rituraj Devrani

**Supervisor:**

Prof. Prashanth Vangla and Prof. Shilpi Sharma

**Department & Institute:** Department of Civil and Environmental Engineering, Indian Institute of Technology Delhi



**SUMMARY:** This Ph.D. thesis investigates microbial-induced calcite precipitation (MICP) as a sustainable solution to mitigate rainfall-induced erosion in hilly regions. Urease-producing bacterial strains isolated from erosion-prone Indian soils exhibited superior urease activity and calcium carbonate precipitation compared to *Sporosarcina pasteurii*. Optimized MICP treatments enhanced soil strength, cohesion, and durability. The endurance of bio-cemented soils was evaluated under multiple rainfall-drying cycles with varying raindrop energies and slope angles, demonstrating exceptional resistance to erosion and structural degradation. Large-scale slope experiments confirmed improved soil retention and reduced runoff, establishing MICP as an eco-friendly, site-specific technique for enhancing geotechnical resilience in vulnerable terrains.

#### Title of Thesis:

**Multiscale Investigation, Retro-Analysis, and Performance Evaluation of Mine Overburden Dump with Different Retention Strategies**

**Name of Student:**

Dr. Rahul Punjabrao Shende

**Supervisor:**

Dr. Srinivasan V.

**Department & Institute:** Department of Civil Engineering, Visvesvaraya National Institute of Technology, Nagpur



**SUMMARY:** This study investigates the instability of overburden dumps in opencast coal mines of Central India through geotechnical investigations, numerical modeling, and field interventions. Failure in the Dump was linked to expansive soil layers, while another nearby Dump remained stable due to prior rockfill trenching. Engineering solutions such as rockfill trenches, gabion walls, and composite walls were evaluated under static, blasting, and rainfall conditions, and using a probabilistic approach. Sustainable utilization of mine overburden was established in the field implementation of the selected engineering intervention, which demonstrated enhanced dump stability, enabling safe dumping up to 90 m and providing a framework for future mining projects.



**Title of Thesis:****Pullout behavior of Horizontal and Inclined Strip Plate Anchors Embedded in Layered/Sloping Dry Sandbed subjected to Normal and Oblique Loading****Name of Student:** Dr. Rakesh Duryodhan Shambharkar**Supervisor:** Dr. Srinivasan V.**Department & Institute:** Department of Civil Engineering, Visvesvaraya National Institute of Technology, Nagpur

**SUMMARY:** This thesis investigates the pullout behavior of horizontal and inclined strip plate anchors embedded in layered and sloping dry sandbeds under normal and oblique loading. A generalized analytical framework, based on Kötter's equation and limit equilibrium method, was developed to predict pullout capacity by considering embedment ratio, soil friction angle, anchor inclination, slope angle, and crest distance. Numerical validation using Finite Element Limit Analysis confirmed the model's reliability. Results highlight significant effects of soil layering, anchor orientation, and slope proximity on pullout capacity. The study provides a practical, accurate, and field-relevant design tool for geotechnical engineering applications.

**Title of Thesis:****Behaviour of Micropiles in Glacial Deposits under Axial and Lateral Loads: Field Testing and Numerical Simulations****Name of Student:** Dr. Manish Kapil**Supervisor:** Prof. K.S. Rao and Prof. Ramanathan Ayothiraman**Department & Institute:** Department of Civil and Environmental Engineering, IIT Delhi

**SUMMARY:** This study investigates the performance of micropiles in challenging glacial deposits of the Himalayan regions of Ladakh and Uttarakhand, where conventional deep foundations are impractical. Detailed geomorphological, geotechnical, and mineralogical analyses revealed high shear strength, angular quartz-rich soils. Full-scale field load tests demonstrated that micropile capacities exceeded analytical predictions substantially. High vertical capacities were obtained while lateral performance was sensitive to scour depth. Numerical analyses highlighted the influence of soil stiffness, grout grade, and slenderness ratio. The study establishes micropiles as a reliable and adaptable foundation solution for Himalayan glacial regions.

**Title of Thesis:****Performance Evaluation of Red Mud and GGBS in Stabilizing Expansive Soil for Subgrade Applications: A Study on Synergistic Effects with and without Alkali Activation****Name of Student:** Dr. Kandalai Srikanth**Supervisor:** Dr. Anjan Patel**Department & Institute:** Department of Civil Engineering, Visvesvaraya National Institute of Technology, Nagpur

**SUMMARY:** This study explored the utilization potential of Red Mud (RM) and GGBS blends in stabilizing expansive soil for subgrade applications. Further, the research aimed to achieve sustainable, optimal utilization, and valorization of Industrial waste using synergistic effects and alkali activation approaches. The efficacy of these blends was evaluated under varying curing periods, molarities, and dosages, using various parameters like strength, durability, microstructural, and leachate characteristics. The results revealed that GGRM blends with alkali activation met the subgrade requirements and were almost environmentally safe as per IS codal provisions.

**Title of Thesis:****Probabilistic Stability Assessment of Rock Slope****Name of Student:** Dr. Neeraj Chaudhary**Supervisor:** Dr. Subhadeep Metya and Dr. Keshav Kumar Sharma**Department & Institute:** Department of Civil Engineering, National Institute of Technology Jamshedpur

**SUMMARY:** This research focuses on assessing rock slope stability through various failure modes, including plane, toppling, and combined failures. It develops analytical formulations that consider seismic forces, surcharge, rock anchors, and groundwater pressure, emphasizing the role of vertical seismic acceleration and tension crack depth. For block toppling failure, new formulations highlight the impact of hydraulic distributions and spheroidal weathering on safety factors, particularly due to obstructed groundwater flow and rounded block edges. A probabilistic framework using Monte Carlo Simulation is introduced to evaluate safety factor variability under uncertain field conditions, improving predictive capabilities and mitigation strategies for rock slopes in complex geological and seismic situations.

**Title of Thesis:****Numerical and Experimental Investigation on Evaluation of Arching Mechanism in Soil using Trapdoor Test****Name of Student:** Dr. Harsh Rai**Supervisor:** Dr. Jitesh T. Chavda**Department & Institute:** Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology Surat

**SUMMARY:** Soil arching plays a vital role in load transfer and stability around buried structures or voids. Despite its significance, understanding of the mechanism under varying geometries, boundary conditions, and drainage states remains limited. The present study investigates soil arching behaviour through integrated numerical and experimental approaches. FEM (PLAXIS 2D) and FELA (OPTUM G2) programs are used to evaluate stability numbers for strip, circular, and annular trapdoors in drained and undrained conditions. Experimental studies using Digital Image Correlation (DIC) capture deformation and arch formation. The study establishes correlations and design charts linking geometry, soil parameters, and stability for practical applications.

**Title of Thesis:****Analysis of Time-dependent Behaviour of Tunnels in Rock Mass****Name of Student:** Dr. Geetanjali Kishan Lohar**Supervisor:** Dr. Ankesh Kumar and Dr. Nishant Roy**Department & Institute:** Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology Surat

**SUMMARY:** The primary objective of the study was to analyze radial deformations around tunnels and the load-transfer mechanism of supports accounting for time-dependent behaviour, considering a case study of Atal Tunnel, India. Field observations indicated pronounced squeezing, whereas empirical assessment classified these zones as non-squeezing, highlighting significant disparity among squeezing criteria and field observed data. To address this disparity, FE analysis was performed using the Visco-Elastic Perfectly Plastic (VEPP) model, calibrated with field data, revealing significant influence of stress anisotropy and excavation rate on creep deformation, longitudinal deformation profile, support performance, and tunnel stability.

**Title of Thesis:****Behaviour of Rock-Socketed Piles Under Axial Static and Cyclic Loading****Name of Student:** Dr. Amit Jain**Supervisor:** Prof. Ramanathan Ayothiraman and Prof. K.S. Rao**Department & Institute:** Department of Civil and Environmental Engineering Indian Institute of Technology Delhi

**SUMMARY:** This study investigates the behavior of rock-socketed piles embedded in synthetic weak rock under static and cyclic axial loading. A total of 72 model tests were conducted on aluminum piles with varying socket lengths ( $L/D = 6, 9, 12$ ), revealing that load-carrying capacity increases with strain rate, while cyclic loading induces progressive settlements up to around 100 cycles. Numerical analyses using PLAXIS 3D showed strong agreement with experimental results, confirming the reliability of the approach. The findings highlight that cyclic loading significantly affects pile performance and must be carefully considered in the design of rock-socketed piles in weak rock conditions.

**Title of Thesis:****Experimental and Numerical Modelling of Engineering Behaviour of Varved Clays and Glaciolacustrine Slopes****Name of Student:** Dr. Deepali Anand**Supervisor:** Dr. Ravi K. and Dr. Arindam Dey**Department & Institute:** Department of Civil Engineering, Indian Institute of Technology Guwahati

**SUMMARY:** The thesis focuses on the engineering freeze-thaw behaviour of reconstituted varved clays that commonly constitutes the glaciolacustrine slopes. Accordingly, unconfined compression and direct shear tests were conducted at various loading rates on samples prepared at varying moisture contents, sufficed by laboratory infiltration tests through minidisk infiltrometer tests. Further, 1D and 2D FE-based numerical modelling and conducted using Hydrus and GeoStudio Seep/W, respectively, to analyse infiltration, runoff and ground displacements caused by freeze-thaw cycles. Lastly, slope stability analyses were conducted while incorporating land-climate interaction boundary conditions, especially rainfall and snowmelt with typical hillslope profile from Tawang, Arunachal Pradesh.



**Title of Thesis:****Seismic Microzonation of Itanagar through PSHA, MASW-Based Site Characterization, and Ground Response Analysis****Name of Student:** Dr. Aditya Kumar Anshu**Supervisor:** Dr. Jumrik Taipodia and Dr. Arindam Dey**Department & Institute:** Department of Civil Engineering, National Institute of Technology, Arunachal Pradesh

**SUMMARY:** This thesis presents the first comprehensive seismic microzonation of Itanagar, Arunachal Pradesh. A detailed seismic hazard framework is developed through PSHA for return periods of 475 and 2475 years, using an updated and declustered earthquake catalog. Site characterization at 22 locations using MASW provided shear wave velocity ( $V_s$ ) profiles and  $V_{s30}$ -based site classifications. The results reveal significant subsurface heterogeneity across the region. Ground response analysis (GRA) shows strong amplification in soft-soil zones, where spectral accelerations exceeded codal values, highlighting the need for region-specific seismic design and mitigation strategies.

**Title of Thesis:****Development of Empirical Correlations between Geotechnical Properties and Improvement of Black Cotton Soils in Kolhapur City****Name of Student:** Dr. Guruprasad Ajay Chavan**Supervisor:** Prof. Purnanand P. Savoikar**Department & Institute:** Goa University/Department of Civil Engineering, Goa Engineering College, Farmagudi, Goa

**SUMMARY:** Research work presents characterization and mapping of black cotton soils collected from 28 different locations and up to 4.5m depth from Kolhapur city, using geotechnical properties, advanced FESEM and XRD testing and ground improvement studies using bio-enzymes such as Terrazyme and Xanthan gum. Extensive mapping, development of correlations between index and strength properties and conclusions drawn from advanced FESEM and XRD studies as regards strength behaviour and requirements of appropriate ground improvement techniques supplemented by cost analysis, presents a very useful information and database on black cotton soils in Kolhapur which will serve as a handy guide for designers in calculation of safe bearing capacity, settlements, design of foundations and recommending suitable ground improvement techniques.

**Title of Thesis:****Static and Seismic Analysis of Retaining Wall with Shelves****Name of Student:** Dr. Smita Sadanand Aldonkar**Supervisor:** Prof. Purnanand P. Savoikar**Department & Institute:** Goa University/Department of Civil Engineering, Goa Engineering College, Farmagudi, Goa

**SUMMARY:** Thesis presents an analytical work on static, pseudo-static using Finite Element Analysis of cantilever retaining walls with pressure relieving shelves. Shelf widths have been optimized for reduced bending moments in the stem-shelf junction and design charts are presented for shelf widths under varying conditions of unit weight, friction angle, height of soil retained and number of shelves. Configuration based analysis are presented for various configurations such as equal shelf widths, shelf widths increasing from top to bottom and bottom to top. Also, the analytical results are obtained by Rankine's and Klien approach and the design charts are developed for shelf widths, factors of safety against sliding and overturning for static and pseudo-static earth pressure coefficients and point of application of seismic earth pressure.

**Title of Thesis:****Numerical Evaluation of Annular Raft Supported on Stiffened and Un-Stiffened Granular Piles****Name of Student:** Dr. Ajay Pratap Singh Rathor**Supervisor:** Prof. Jitendra Kumar Sharma**Department & Institute:** Department of Civil Engineering, University Department, Rajasthan Technical University, Kota

**SUMMARY:** This research presents a comprehensive numerical study on the settlement and stress behavior of annular raft foundations resting on soft ground, supported by stiffened and un-stiffened granular piles (GPs) using the elastic continuum approach. Mathematical formulations were developed to derive the settlement influence factor (SIF), and results were expressed through non-dimensional parameters and design charts to facilitate practical applications in foundation engineering. The study establishes that annular rafts provide a more economical and efficient alternative to solid rafts by minimizing settlement and achieving better stress distribution.

## “Growth Impact Award – 2025 to Indian Geotechnical Journal” given by Springer Nature on 30th October 2025 at New Delhi, India



Springer Nature, Journal division has given the “Growth Impact Award – 2025” to the **Indian Geotechnical Journal (IGTJ)**, which was presented at Springer Nature Annual Journal Development Symposium 2025, held at Le Meridien, New Delhi, India on 30th October 2025. This award is given to IGTJ for extensive growth with an impact in recent years. The award has been received by the Editor-in-Chief (EiC) of Indian Geotechnical Journal Prof. Deepankar Choudhury and the Honorary Secretary of Indian Geotechnical Society (IGS) Dr. A. P. Singh. The award was presented by Ms. Fiona McKenzie, Vice President of Maths, Physical & Applied Sciences Journals at Springer Nature, Greater London, United Kingdom, in presence of the Publishing Editor of IGTJ Ms. Sonal Choudhary and other Springer Nature team of all journals. Also, EiC Prof. Deepankar Choudhury was invited to share the pathways of success story for IGTJ in recent years leading to this award where he acknowledged the team efforts of all stake-holders like editorial board/reviewers/authors/readers of IGTJ and support from Springer Nature and IGS.

### I G C - 2027

IGC-2027  
would be hosted by

#### IGS-Patna Chapter

The venue, theme, scheduled dates etc.  
are being worked out and shall be announced soon.

### Now Online Membership Available

The homepage of the Society has been updated and a new online membership platform has been created to facilitate joining of new members.

*Just log on to:*  
[www.igs.org.in](http://www.igs.org.in)

### 47<sup>th</sup> IGS ANNUAL LECTURE 2025



#### The prestigious 47<sup>th</sup> IGS Annual Lecture 2025

will be delivered by Prof.  
Deepankar Choudhury, Professor,  
Department of Civil Engineering,  
Indian Institute of Technology  
Bombay, Powai, Mumbai.

The topic of his lecture is  
“Advances in Geotechnical Earthquake  
Engineering for Geo-Structures:  
Transformative Research into Practice”

### ISSMGE BULLETIN

Vol. 19, Issue 3, September 2025

#### Table of Contents

Message from the Editor .....	02
From the President's Desk.....	03
From the Board.....	07
ISSMGE Highlights.....	08
Global News from Member Societies.....	12
Young Member's Arena .....	33
Corporate Associates Corner .....	39
Education and Innovation .....	55
Technical Committee Activities.....	58
Upcoming Events .....	64

### IGS Ahmedabad Chapter

The Indian Geotechnical Society (IGS), Ahmedabad Chapter, and the Faculty of Technology, CEPT University, successfully hosted a comprehensive One-Day National Seminar on "Advancement in Geotechnical Engineering for Deep Excavations and Tall Structures" on 30th August, 2025. The event, held at the Balwant Rai N. Brahmhatt Lecture Hall, CEPT University Campus, Ahmedabad, provided a vital platform for knowledge exchange among academicians, industry professionals, and researchers.

The program began with a Welcome & Greetings to all attendees, including distinguished academicians, industry experts, and professionals. This was followed by an Invocation, where attendees were asked to rise for the Saraswati Vandana / Prayer to invoke the blessings of the goddess of wisdom. The formal proceedings continued with the symbolic Watering of Plants, a ceremony designed to reflect respect for nature and a commitment to sustainable growth. The official addresses commenced with the Welcome Address delivered by Mr. Parag Dave, Chairman of the IGS Ahmedabad Chapter. Subsequently, Mr. Himanshu Kotak, Hon. Secretary, provided a briefing on the activities of the IGS Ahmedabad Chapter. The program then featured speeches from the Guests of Honour: Prof. Aanal Shah, Dean CEPT University, Mrs. Aarti Bhargav, AIMIL Ltd., and Prof. C.H. Solanki, SVINIT Surat. The cornerstone of the addresses was the keynote speech delivered by the Chief Guest, Prof. S.R. Gandhi, IIT Gandhinagar. The entire inaugural function was formally brought to a close with the Vote of Thanks, delivered by Dr. Tejaskumar Thaker, Hon. Secretary of the IGS Ahmedabad Chapter, and the playing of the National Anthem.

The technical program was structured around six specialized lectures, addressing critical areas of modern geotechnical practice:



Prof. S.R. Gandhi (IIT Gandhinagar) delivered the first lecture on "Deep Excavation for Tall Buildings and Infrastructure Projects". The presentation was insightful, specifically covering deep excavation challenges and offering innovative solutions relevant to the engineering community. Mr. Mihir Vora (KBM Engineering Research Laboratory) discussed "Geotechnical Investigation and Analysis for Tall Buildings". The focus was on the importance of thorough geotechnical investigation and settlement analysis. The lecture provided a clear comparison of methods and case studies, reinforcing how accurate ground data ensures safe and reliable foundation design. Dr. Kandarp Thaker (M/s KCT Consultancy Services LLP) explored "Soil-Structure Interaction for Foundations and Earth Retaining Structures". This lecture highlighted the importance of soil-structure interaction in tall building foundations, the limitations of empirical methods, and the necessity for advanced numerical modelling. Case studies on raft foundations and deep excavation retention systems were used to demonstrate the value of realistic analysis. Mr. Nishit Gandhi

(DISHMAAN TECH-SOLUTIONS PVT LTD) covered "Earth Retention during Deep Excavation by Soil Nailing & Micro Piles". The lecture addressed specific techniques for earth retention, focusing on the application of Soil Nailing and Micro Piles during deep excavation projects. Mr. Pranil Chakraborty (Heritage Infraspace India Limited) provided insights into "Construction Methodology for Diaphragm Wall". The lecture addressed specific techniques for earth retention, focusing on the application of soil nailing and micro piles during deep excavation projects. Dr. Tejaskumar Thaker (Pandit Deendayal Energy University) concluded the lecture series with "Advances in Site-Specific Seismic Hazard Analysis for Geotechnical Infrastructure Projects". This topic focuses on the modern, highly specialized approach to assessing earthquake risk for critical and major projects (like long-span bridges, nuclear power plants, tall buildings, and large dams), moving beyond the generic seismic codes prescribed for typical structures. Interspersed between the lectures were corporate presentations from C-Phi Consult Pvt. Ltd., Simcon Technology Pvt. Ltd. and M.K. Soil Testing Laboratory, providing valuable industry perspective.

The seminar's successful execution was managed by a dedicated Organizing Committee, led by Mr. Parag Dave (Chairman, IGS Ahmedabad Chapter). Key roles were filled by Mr. Himanshu Kotak and Dr. Tejaskumar Thaker (both Hon. Secretaries), Mr. Aditya Gandhi (Treasurer), and Mrs. Komal Parikh (Convener, representing the Faculty of Technology, CEPT University).





## IGS Baroda Chapter

The One-day workshop on “Geotechnical and Structural Engineering in Practice” (GSEP-2025) was successfully held on 5th July 2025, jointly organized by the Indian Geotechnical Society – Baroda Chapter and the Structural Engineers Association, Vadodara.

The event began with a graceful invocation and lamp lighting ceremony, followed by inspiring addresses from Dr. Anil Joseph (President, IGS) and Dr. A.P. Singh (Secretary, IGS).

Eminent and very senior professors of MS University of Baroda who inspired generations of civil engineers as Dr. Damle, Dr. A.V. Shroff, Dr. H.J. Shah, Dr. D.L. Shah were felicitated as a small recognition for nurturing generations of students and creating benchmark contributions throughout their illustrious career. IGS and SEA both acknowledged their invaluable contributions to the geotechnical and structural engineering fraternity in Vadodara and pan India. Eminent and senior most structural engineer Shri Gautam Talati was also felicitated on the occasion.

The technical sessions on the geotechnical side featured experts including Dr. Lakshmanarao Mantri (Afcons) on tunnelling complexities, Er. Govind Raj (Keller) on diaphragm wall construction, Prof. (Dr.) Deepankar Choudhary (IIT Bombay) on foundations for high-rise buildings, and Mr. K.V. Babu (L&T) on driven piles in liquefaction-prone sites. The structural sessions were delivered by well-known experts Dr. Abhay Gupta on the design considerations for tallest Shiva Statue in India, Shri Shantilal Jain on Challenges in Design and Construction of High rise buildings, Shri Sumer Chopra on seismic hazard assessment of Gujarat and Shri Bhavin Shah on limitations of draft version of IS:456.

Each session enriched participants with practical insights, case studies, and the latest advancements in geotechnical and structural practices. The workshop concluded with an engaging discussion and vote of thanks, marking a day of learning, collaboration, and innovation in engineering.



The 243rd National Executive Committee (NEC) meeting of IGS Main body was organized by the IGS Baroda Chapter on 6th July 2025. Shri Ravikiran Vaidya, Chairman, IGS Baroda Chapter expressed gratitude and thanks to the EC and President for allocating the EC meeting to Baroda Chapter after several years.

A record 28 members of the NEC attended the meeting and deliberated on various issues requiring attention of the main body. The session included discussions on upcoming activities, technical workshops, and strategies to promote geotechnical research, professional collaboration, sub-committee presentations, Geotech Asia update and updates by each chapter and sub-committee on the work done in respective domain or region. The meeting concluded with a vote of thanks and acknowledgment of the Baroda Chapter's efforts in hosting the event.

The Executive Committee members of IGS Baroda Chapter along with the National Executive Committee members of IGS visited the Statue of Unity on 6th July 2025.



The visit provided an opportunity to explore the architectural marvel and understand its engineering and structural features. Members appreciated the scale, design, and construction techniques employed in this iconic structure.

The outing fostered camaraderie and informal interactions among participants, strengthening professional connections. The day concluded with a group photo and shared reflections on the engineering excellence behind the monument.



The IGS Baroda Student Chapter of Parul University organized a seminar on "Piled Raft Foundation: Concepts, Design and Application" on 10th September 2025, where Dr. Arpita V. Patel explained the fundamentals, design principles, advantages, case studies, and practical challenges of piled raft foundations for B. Tech Civil students.



The Indian Geotechnical Society, UltraTech Cement Ltd, and Structural Association jointly celebrated Engineer's Day in memory of Bharat Ratna Sir M. Visvesvaraya on 13th September 2025 at Hotel Tarasuns, Gotri, Baroda. The theme of the event was "Engineering Innovation for a More Resilient World." Eminent speakers included Er. Saurabh Vyas, Business Head, Techfab India Ltd.,



and Er. Gopal Krishnan, VAC Products, UltraTech Cement Ltd. The session



concluded with an engaging interaction followed by dinner.

## IGS Bangalore Chapter

IGS Bangalore Chapter in association with the Department of Civil Engineering, IISc organized an international conference on "Ground Improvement, Landslides and Sustainability, GLS-2025" during 17-19th July 2025. A preconference workshop on 3D printing was organized in the Golden Jubilee Seminar Hall, Department of Civil Engineering, IISc Bangalore on 17th July. This workshop provided a comprehensive understanding of additive manufacturing (AM) applied to geotechnical engineering through expert lectures, discussions, and demonstrations. Around 60 participants from industry and academia attended this workshop. The talks included rapid prototyping in geotechnical innovation by Prof. David J. Frost from Georgia Tech USA, 3D printing of geosynthetics by Prof. G. Madhavi Latha from IISc, upscaling of post-consumer plastics in 3D printing for circular economy by Prof. Suryasarathi Bose from IISc, bio-inspired 3D printing by Prof. Prashanth Vangla from IIT Delhi, use of carbon-sequestering materials for printed construction by Dr. Souradeep Gupta from IISc and innovative textured geogrids by Dr. Hasthi Venkateswarlu from MANIT Bhopal. The workshop concluded with lab visits and demonstration of 3D printing of geosynthetics, sand particles and earth-based concrete elements.

The GLS-2025 conference was held in the Faculty Hall of IISc, Bangalore during 18-19 July. About 280 delegates participated in the conference. Prof. G. Madhavi Latha started the conference with her welcome address. Dr. P. Raghuveer Rao, Vice-Chair of IGS Bengaluru Chapter has given an overview

of the Chapter and the conference. Dr. Anil Joseph, President of IGS and Dr. A.P. Singh, Honorary Secretary of IGS delivered the inaugural speeches. Prof. Munwar Basha from IIT Hyderabad, Chair of the technical committee, has given the brief on the papers received. GLS-2025 comprised of eight technical sessions with 12 keynote sessions and 36 technical paper presentations and 5 poster sessions. The keynote lectures were delivered by Prof. David Frost from Georgia Tech, USA, Prof. Pradeep Kurup, from U. Mass Lowell, USA, Prof. SPG Madabhushi from University of Cambridge UK, Prof. Sai Vanapalli from University of Ottawa, Canada, Prof. B.V.S. Viswanadham from IIT Bombay, Prof. Anand J. Puppala from Texas A&M University, USA, Prof. D.N. Singh from IIT Bombay, Prof. Vikas Thakur from Norwegian University of Science and Technology, Norway, Prof. M.R. Madhav, Emeritus Professor, JNTU Hyderabad, Ms. Dola Roychowdhury, Founder Director, GCUBE Consulting Engineers, Dr. Bindumadhava Aery, Aurecon, Australia and Prof. J.S. Vinod, University of Wollongong, Australia. In the conference, Prof. G.L. Sivakumar Babu, who was superannuating from the Department of Civil Engineering

IISc has delivered a talk on "Journey in Geotechnical Engineering: Research, Practice and Impact". Prof. Deepankar Choudhury and Dr. Parthasarathy chaired this session. This talk was followed by felicitation to Prof. Babu by IGS Bengaluru Chapter along with the former and present students of geotechnical group of IISc, colleagues, friends and well-wishers. Many delegates have shared their fond memories and close interactions with Prof. Babu. The felicitation function was an emotional tribute to Prof. Babu's professional and personal accomplishments. The felicitation session was moderated by Prof. Dasaka Murty from IIT Bombay. During the closing session, Springer best paper and best poster awards were given to 10 student delegates. All sessions of the conference were highly interactive and well-attended. The conference has promoted sustainability practices



Felicitation of Prof. G L Sivakumar Babu



Participants of GLS-2025



by providing seed paper badges, glass bottles, jute conference bags and book mementoes.

IGS Bengaluru Chapter jointly with Department of Civil Engineering, IISc, Bengaluru, organized a half day workshop on “Innovations and Case studies in Geotechnical Engineering” on 27th September 2025. Prof. Ananth Ramaswamy, Chair, Department of Civil Engineering, IISc was the Chief Guest of the event. The workshop included three technical talks. Prof. Anjaneyappa, Head, Department of Civil Engineering,



Felicitation of Prof. H B Nagaraj and Prof. L Govindaraju by IGS Bengaluru Chapter

RVCE, briefed about the importance of compaction control of subgrade and its importance on pavement performance. Prof. H.B. Nagaraj delivered a talk on

sustainable mud blocks for building construction. The third technical by Prof. L. Govindaraju presented the geotechnical aspects of an underground metro station at Vellara junction and dam safety. During the workshop, IGS Bengaluru Chapter has felicitated Prof. H.B. Nagaraj and Prof. L. Govindaraju, who had superannuated recently from BMS Engineering College and R.V. College of Engineering, respectively. The workshop was attended by 50 delegates including students, faculty members and practitioners.

## IGS Bhubaneswar Chapter

The Indian Geotechnical Society (IGS) Bhubaneswar Chapter celebrated its Installation Day on July 9th, 2025 at the Indian Institute of Technology, Bhubaneswar (IIT BBSR) with great enthusiasm and scholarly spirit. The event brought together eminent professionals, academicians, and research scholars from across the state and beyond. A distinguished lecture was delivered in hybrid mode by Prof. G.L. Sivakumar Babu, Professor at the Indian Institute of Science (IISc), Bengaluru, on the topic “*Landslides and Ground Improvement Techniques.*” The insightful talk highlighted the challenges of slope instability in hilly terrains and discussed modern solutions for sustainable ground improvement practices.

The technical session was chaired by Dr. Laxmikanta Tripathy, Chairman of the IGS Bhubaneswar Chapter. The event was graced by Prof. Sridevi, Prof. Benugopal Mahapatra, and Dr.



Installation Day of IGS Bhubaneswar Chapter

Somani, along with Er. Asutosh Dash, EIC-cum-Special Secretary, Water Resources Department, Government of Odisha, as special guests. Dr. Shantanu Kumar Patra, Secretary of the Chapter, presented an overview of the chapter’s objectives and forthcoming activities, while Prof. Sumanta Halder, Vice President, elaborated on the ongoing initiatives and collaborations. Dr. K.C. Goude, Treasurer, and Er. K.C. Palo also shared their remarks on the financial and operational aspects of the chapter.

The event witnessed active participation from Ph.D. scholars and M.Tech students, who interacted enthusiastically during the Q&A session, making it a vibrant academic exchange. Dr. Hanumanta Rao and several senior members of IGS were also present and contributed to the discussions. The program concluded with a vote of thanks and an expression of gratitude to all dignitaries, members, and participants for their continued support in advancing geotechnical engineering research and practice in the region.

## IGS Calicut Chapter

As part of the IGS Student Chapter activities, a session was conducted on 16th September 2025 by Dr. Prateek Negi on the theme “*A Strategic Talk on Geotechnical Engineering Placements.*” The objective of the session was to provide students with a comprehensive understanding of career preparedness in the field of geotechnical engineering. The session emphasized the significance of developing a professional mindset

to effectively navigate the challenges of the industry. Detailed insights were provided on the current geotechnical job market, with emphasis on emerging opportunities, required skills, and industry expectations. In addition, the session addressed structured approaches to the job search process, including resume building, aligning competencies with organizational requirements, and preparing for placement processes. The session was highly informative and interactive, enabling students to gain

practical insights into both personal development and professional readiness. It served as a valuable initiative under the IGS Student Chapter to bridge the gap between academic learning and industry expectations.

The session focused on multiple aspects essential for career readiness in geotechnical engineering, beginning with working on mindset to develop confidence, clarity, and adaptability in approaching placements. Insights



were provided on what recruiters really look for, with emphasis on the balance between technical expertise and professional skills. Core 2 competencies were highlighted, including technical proficiency, where a deep understanding of soil mechanics and foundation engineering was described as non-negotiable, alongside strong software skills covering geotechnical analysis, design and modelling, and data analysis. The importance of field experience was also underscored, as it strengthens practical understanding and bridges the gap between theory and practice. In addition, the session emphasized the role of critical thinking, problem-solving, communication, resilience, and adaptability, which are increasingly valued by employers in a dynamic job market.

The discussion highlighted the M. Tech project as an important way to develop technical skills and gain a deeper understanding of the subject. Thesis work was described as an opportunity to work on real geotechnical problems, improve research ability, and build expertise in specific areas, which helps in both academics and careers. Equal importance was given to internships, which help connect classroom learning with field practice. Internships provide exposure to industry work, practical problem-solving, and professional culture, while also allowing students to build networks and show their abilities to recruiters.



The second part of the session focused on the geotechnical job market, providing students with an overview of the career opportunities available in this field. It was highlighted that geotechnical engineers are required in a wide range of organizations, including construction companies, EPC firms, consultancy organizations, and PSU's. A key point of discussion was that geotechnical engineering jobs are highly site-specific, often demanding practical problem-solving skills to address varying ground conditions and project requirements. Furthermore, it was emphasized that each company expects a specific skill set, depending on the nature of work.

The final part of the session was dedicated to the important steps for an effective job search, which were recommended as daily practices for students preparing for placements. It was suggested that dedicating just 30 to 45 minutes a day can make a significant difference if used consistently. Key steps

included researching one new company each day to understand its work profile and requirements, focusing on skill development and network building, keeping track of relevant job openings, and actively using platforms like LinkedIn for exposure and opportunities. The importance of adopting a proactive messaging strategy to connect with professionals and recruiters was also emphasized as a way to stand out in the competitive market. An example of a good resume was presented, highlighting how a well-structured resume can effectively showcase academic achievements, technical skills, and professional experience.

The session was highly enriching and provided students with valuable insights into both academic and professional aspects of geotechnical engineering. Sincere thanks to Dr. Prateek Negi for the session, and to Dr. Anil Kumar and Dr. Anjana Bhasi for being a part of this program and supporting its success.

## IGS Chennai Chapter

The IGS Chennai Chapter organized two engaging in-person technical talks during this quarter. The first talk, held on 11th September 2025, was delivered by Dr. Luke Deamer, Group Sustainability Manager at Keller, UK, on the topic *"Building the Foundations for a Sustainable Future: Lessons from Around the World."* Dr. Deamer offered valuable perspectives on sustainability practices in the construction industry, with particular emphasis on geotechnical engineering. He elaborated on various sustainability concepts, matrix-based assessments, and the challenges and constraints involved in realizing a

sustainable future. The second talk, on the intriguing topic *"Lumpy Fills,"* was presented by Prof. R. G. Robinson, Professor in the Department of Civil Engineering, IIT Madras, on 26th September 2025 at Paari Arangam, Department of Civil Engineering, CEG, Anna University. Prof. Robinson

shared insights from his research on clay lumps carried out in Singapore nearly two decades ago, highlighting the advantages, complexities, and challenges associated with characterizing clay as lumps. Both sessions witnessed active participation from academia and industry, fostering lively discussions and



knowledge exchange. The talk followed by the Annual General Body Meeting (AGM) of the IGS Chennai Chapter, where the decision to extend the Executive Committee's term by another term of two years was approved as a special case, in view of the upcoming major event, IGC-2026.

## IGS Dhanbad Chapter

The Indian Geotechnical Society (IGS) Dhanbad Chapter and the Department of Civil Engineering, IIT (ISM) Dhanbad, cordially hosted an expert talk on "Coastal Erosion Mitigation Using Nature-Based Solution" on Friday, 12th September 2025. The engaging session was delivered by Prof. Neelima Satyam, Professor from IIT Indore. Prof. Satyam



shed light on innovative and sustainable nature-based approaches to combat the critical issue of coastal erosion. The talk provided valuable insights for students and faculty, fostering a deeper understanding of environmentally conscious solutions in civil engineering and geotechnical practices. Attendees appreciated the relevance and depth of the discussion.

## IGS Guntur Chapter

The Indian Geotechnical Society (IGS) Guntur Chapter organized 8th Prof. A. Srirama Rao Lecture on 29th September, 2025 at Hotel Venkatesh Grand, Guntur. The lecture was delivered by Prof. Gali Madhavi Latha, Professor of Civil Engineering and Chair of the Centre for sustainable technologies, IISc Bangalore on the topic "Building a Railway Bridge above Clouds. The Indian Engineering

at the Best". The event commenced with a formal inaugural ceremony attended by IGS Guntur Chairman Er. G. Brahmaiah and Secretary, Dr. K. Naga Sreenivasa Rao. Around 65 participants including field engineers, faculty and students attended the program. During the lecture Prof. Gali Madhavi Latha delivered insightful lecture covering various Constructional Aspects of world's higher Railway Bridge constructed across river Chenab in Jammu.



## IGS Hyderabad Chapter

On July 21, 2025, the BITS Pilani, Hyderabad Campus, in a collaborative effort with the Indian Geotechnical Society (Hyderabad Chapter) and the BITS IGS Student Chapter, hosted a distinguished technical talk by Prof. Sai Vanapalli from the University of Ottawa, Canada. The event, expertly coordinated by Prof. Anasua Guha Ray and Prof. Raghuram Ammavajjala, attracted an engaged audience comprising faculty, research scholars, and students. Prof. Vanapalli delivered an insightful lecture titled "Towards Implementation of the Mechanics of Unsaturated Soils into Geotechnical Engineering Practical Applications."

The lecture served as a crucial platform to illuminate a growing and vital sub-discipline within geotechnical engineering. Prof. Vanapalli detailed the necessity of moving beyond traditional saturated soil mechanics, emphasising that a proper understanding of unsaturated soils is imperative for modern engineering practice. He highlighted how neglecting the role of soil suction and partial saturation often leads to a significant and costly overestimation in foundation design. By

advocating for the integration of these advanced concepts, the talk underscored the potential for developing safer, more economical, and resilient geotechnical structures, marking a significant step toward bridging the gap between theoretical research and its practical application in the field.



The Civil Engineering Association of BITS Pilani, Hyderabad, in collaboration with the Indian Geotechnical Society

(Hyderabad) – BITS Student Chapter, hosted a distinguished lecture by Prof. Toshiro Hata from the Graduate School of Advanced Science and Engineering, Hiroshima University, Japan, on September 15, 2025. Coordinated by Prof. Anasua Guha Ray and Prof. Raghuram Ammavajjala, the event offered an excellent platform for insightful academic exchange. Prof. Hata delivered an insightful lecture titled "Future Perspectives on Environmental and Microbial Geotechnical Engineering." He was accompanied by Ms. Momoko Okayama, a Master's student from his research team.

Prof. Hata shed light on the pioneering field of Microbial Induced Calcite Precipitation (MICP), skillfully explaining its intricate biochemical





processes with exceptional clarity. He highlighted the transformative applications of this bio-geotechnical technique, with a special emphasis on its use in restoring Japan's heritage sites. The lecture provided the audience with a deep understanding of how MICP offers a sustainable, eco-friendly alternative to conventional conservation methods.

Anurag University, Ghatkesar, Hyderabad, inaugurated the IGS–Anurag University Student Chapter on 15th September 2025, coinciding with the celebration of Engineers' Day. The newly formed chapter, affiliated with the IGS Hyderabad Chapter, will be mentored by Dr. Pallavi Badry, Professor and Head, Department of Civil Engineering, School of Engineering, Anurag University.

To mark the occasion, the Department of Civil Engineering organized a technical talk on *“Global Trends and Challenges in Building Sustainable Bridges.”* The session was delivered by Er. Ankala Sai Baba, ME, MBA, IRSE, Ph.D. (HAG), Ex-Chief Engineer, Indian Railways (Govt. of India) and currently Chief

Executive Officer, Abhilan Bridgetech Consultants, as well as Advisor (Tunnel Projects) to NHIDCL, NHAI, and BRO. The talk provided valuable insights to budding civil engineers on the vital role of Geotechnical Engineering in modern construction practices.



## IGS Indore Chapter

The Indian Geotechnical Society (IGS) Indore Chapter, in collaboration with the Department of Civil Engineering, Indian Institute of Technology (IIT) Indore, successfully organized a One-Day Seminar on *“Advancement of Numerical Modelling in Geotechnical Engineering: Tunnelling and Slope Stability”* on 5th August 2025.

The opening technical lecture was delivered by Er. Chiranjib Sarkar, Principal Engineer, GEOCONSULT India, who presented a comprehensive overview of tunnel and underground construction in India. Prof. Dr. Ankit Garg from Xi'an Jiaotong-Liverpool University, China, delivered an insightful session on *“Defining a new framework for determining the wilting point of vegetation: Implications for seepage modelling in vegetated slopes.”* The seminar also featured multiple sessions on Midas GTS-NX, focusing on design and analysis of foundations, slope stability, TBM tunnel design, and NATM tunnel modelling. Dr. Ganesh W. Rathod presented a detailed lecture on *“Numerical aspects of modelling dynamic loading in Chenab Bridge,”* followed by Prof. Neelima Satyam, who discussed *“Numerical Approaches in Health Monitoring of Tunnels and Rock Slope Stability.”* The concluding



expert lecture by Er. Chiranjib Sarkar highlighted *“Case Studies on Numerical Modelling of Underground Excavations, Tunnels and Slope Protection Works.”* The event witnessed enthusiastic participation from faculty members research scholars.

The Civil Engineering Department, IPS Academy, Institute of Engineering and Science, under the IGS IPSAIES student chapter organized an Expert Talk on *“Critical Thinking Meets Technical Writing: Advanced Research Paper Methods for Engineers”* on 13th September 2025 at the Placement Auditorium. The talk was delivered by Prof. Arif Ali Baig Moghal (Professor, NIT Warangal), who shared in-depth insights on research methodology, structuring papers, originality, plagiarism ethics, manuscript preparation, journal

selection, and addressing reviewer feedback. He emphasized how critical thinking, combined with technical writing skills, can significantly enhance the quality of research papers and their acceptance in reputed journals.



On occasion of Engineers' Day, the Department of Civil Engineering and Civil Engineering with Computer Applications, under the IGS PIEMR Student Chapter, organized a Reel Making Competition on 16th September 2025. With the theme *“Best PIEMR*



Civil Lab Reel,” the event encouraged students to showcase the laboratories through creative and engaging short videos. The competition witnessed enthusiastic participation, with students highlighting the facilities, learning environment, and innovative aspects of the Civil Engineering labs at PIEMR. Entries were evaluated based on creativity, clarity, adherence to the theme, and presentation quality. The results were declared on 17th September

2025, and winners were awarded for their outstanding efforts. The initiative added a unique flavor to Engineers’ Day celebrations by blending technical knowledge with digital storytelling, inspiring students to communicate engineering concepts in innovative ways. The event not only motivated participants but also showcased the academic and infrastructural strengths of the Civil Engineering Department.



PIEMR Engineers' Day Celebration

## IGS Jabalpur Chapter

The 58th Engineers’ Day was organized by the IGS – TIET Students’ Chapter, Department of Civil Engineering on the 165th birth anniversary of Bharat Ratna Dr. Sir Moksha Gundam Visvesvaraya on 15th September 2025. Dr. Rajeev Chandak, Vice Chairman IGS Jabalpur Chapter was the Chief Guest and Er Gopal Gupta (Retired Superintendent Engineer PWD Jabalpur) Project Engineer of Veerangana Rani Durgavati Flyover Jabalpur was the Special Guests of the function. Dr. Chandak said that students of Civil Engineering are future nation builders and they will have an important contribution in the creation of nation structures. Shri Gopal Gupta presented the technical information about the construction of Jabalpur flyover. Students’ Aniket, Deepak Choudhary, Nikhil, Shubham, Deepak Chakrawarti and Rishabh Raj set up exhibitions of various civil engineering models i.e. Flyover, Dam, Road, Bridge, and Building and Ayush, Dharmendra, Divyani, Lalkrishna, Rohit, Piyush organized quiz and technical presentations. Mr. R.N. Paharia Chairman Takshshila Group of Institution appreciated the exhibition and other technical work organized by the students. Er Sharad Gupta Institution Secretary, Dr. I.K. Khanna Group Director, Dr. B.K. Sahu Principal and Department’s Heads were present during the event. Prof. Deepesh Lodhi, Satyam Tiwari, Abhishek Patel, Akash Jain Faculties of Civil Department and Dharmendra Ahirwar and Murlidhar Kori technical assistant guided students for model making and other activities. Certificates were presented by the guests to the students for various activities.



Engineers' Day Celebration

58th Engineer's Day on birth anniversary of Bharat Ratna Sir Mokshagundam Visvesvaraya was organized under the joint aegis of IGS Jabalpur Chapter, Indian Concrete Institute Jabalpur Centre and Practicing Engineers Association Jabalpur. Er. R.P. Dubey, who designed the newly constructed longest elevated road of Madhya Pradesh Veerangana Rani Durgavati flyover and Shri Gopal Gupta SE, associated with the flyover construction was honored by Shawl, Coconut (*shriphal*) and Abhiyanta Gaurav Samman. Important information related to the planning and construction of the flyover was presented by the

engineer duo. Er Sanjeev Verma “Salil” Chairman, Dr Rajiv Chandak and Er. R.K. Shrivastav Vice-. Chairmans, Er Sanjay Verma Hon. Secretary, Prof Vedant Shrivastava Treasurer IGS Jabalpur Chapter, Er. Rakesh Rathore, Dr. Manish Dubey Life Member of IGS and many PEA and ICI technocrats were honored in the function. About 140 engineers associated with the construction of Jabalpur city were honored with Abhiyanta Gaurav Samman. Engineer Pradeep Barangay and Sunil Tiwari Technical official of ACC Cement Ltd. had a special contribution in making the program successful.



165th Birth Anniversary of Dr M V Visvesvaraya

## IGS Jodhpur Chapter

The Indian Geotechnical Society (IGS), Jodhpur Chapter, in association with MBM University Jodhpur, organized an interactive session with Prof. P. Pravin Kumar Venkat Rao on 29 July 2025 at 4:30 PM. Prof. Rao, Professor at the Earthquake Engineering Research Centre, IIIT Hyderabad, and a member of the BIS code revision committee, engaged participants with insights from earthquake engineering research and code development, underscoring the importance of rigorous design practices for safer, resilient structures. The program was presided over by Prof. Ajay Kumar Sharma, Vice Chancellor, MBM University, Jodhpur, whose remarks highlighted the value of expert interactions in strengthening academic rigor and professional readiness. The event was chaired by Er. Ashok Mathur, Chairman, IGS Jodhpur Chapter and convened by Dr. Ajay Sharma, Professor, Department of Structural Engineering and Dr. Abhishek Arya, Honorary Secretary, IGS Jodhpur Chapter, with institutional support from Prof. A.N. Modi (Head, Department of Civil Engineering) and Prof. Suresh Sankhla (Head, Department of Structural Engineering). The session was attended by IGS Jodhpur Chapter representatives, faculties of Civil Department and Structural Department of MBM University, practitioner architects, Geotechnical consultants, representatives from Public Health Engineering Department, Military Engineering Services, Public Works Department, Rajasthan State Road Development Corporation, Jodhpur Development Authorities and Railways. A healthy discussion took place related to Masonry Buildings and people from academic and field gave many suggestions to Dr. Rao to be incorporated in the upcoming revision of Indian Standards. The session fostered



meaningful dialogue among faculty, researchers, and students, and reinforced the commitment of IGS Jodhpur Chapter and MBM University to knowledge-sharing and professional development in geotechnical and structural engineering. During the interaction, founder of IGS Jodhpur Chapter, Dr. D.G.M. Purohit was felicitated for his outstanding achievements in the field of Geotechnical Engineering.

The Indian Geotechnical Society (IGS), Jodhpur Chapter, in collaboration with JIET Universe, organized an interactive session on the theme “Masonry Meets Modern Materials: Composite Strategies for Earthquake Resilience” on 30th July 2025 at 11:30 AM at the JIET Universe campus, Jodhpur. The expert speaker for the event was Dr. P. Pravin Kumar Venkat Rao, Professor at the Earthquake Engineering Research Centre, IIIT Hyderabad, and a member of the BIS code revision committee, who shared valuable perspectives on integrating traditional masonry with advanced composite materials to enhance earthquake resilience in construction practices. The session was graced by the presence of Prof. Akhil Ranjan Garg, Vice-Chancellor, Bikaner Technical University, Bikaner, as the Chief Guest, and Shri Sumant Vyas, Director, CAZRI, as the Guest of Honour, both

of whom emphasized the importance of research-driven innovation and interdisciplinary collaboration in building safer, sustainable infrastructure. The program was led under the guidance of Er. Ashok Mathur, Chairman of IGS Jodhpur Chapter, and was convened by Dr. Abhishek Arya, Honorary Secretary of IGS Jodhpur Chapter, who ensured smooth coordination of the event. Overall, the session proved to be an enriching knowledge-sharing platform for faculty, professionals, and students, inspiring them to adopt modern engineering approaches while retaining the wisdom of traditional construction techniques for a resilient future. The session was attended by professionals of Geotechnical Engineering, faculties and students from department of Civil Engineering.

The Indian Geotechnical Society (IGS) Jodhpur Chapter, had the distinct honor of hosting Dr. K.S. Rao, one of India’s most celebrated geotechnical experts and the lead investigator of the world-famous Chenab Bridge, the highest railway bridge on the globe. On the very first day of his visit on August 29, 2025, an exclusive technical interaction was arranged with senior officials from Indian Railways, including the Divisional Railway Manager (DRM) Shri Anurag Tripathi; Deputy Chief Engineers; other engineers & technical staff members from Railways; and Project Directors, along with Design Directors from Vishal Infrastructure Ltd, the company currently executing the renovation of Jodhpur Railway Station. Dr. Rao delivered a deeply engaging discourse on the geotechnical and structural challenges of mega bridge projects, bringing together







the sharp edge of scientific research and the practical wisdom of decades-long engineering practice. His rich experiences in foundation design, slope stability, and soil-structure interaction not only provided valuable technical knowledge but also encouraged railway engineers to rethink approaches to design and execution. The discussion sparked lively interactions among participants, where challenges from ongoing railway and urban infrastructure projects were deliberated in the light of Dr. Rao's expertise. It also highlighted the importance of collaborative engagements where academia and industry work hand-in-hand to generate solutions that are innovative, sustainable, and resilient. The session, appreciated by all attendees, truly embodied the spirit of knowledge exchange and served as an inspirational platform for budding engineers, researchers, and industry professionals to carry forward the legacy of engineering excellence.

On 30th August 2025 at 9:00 AM, Prof. K. S. Rao visited the CAZRI (Central Arid Zone Research Institute) campus for a focused technical engagement on soil science and its intersections with geotechnical engineering. During the visit, he toured CAZRI's soil laboratories, keenly observing ongoing research activities that address challenges in agriculture, arid-land management, and soil health. Prof. Rao underlined the central role of soil engineering in improving field performance, irrigation efficiency, and sustainable cropping systems, noting how geotechnical characterization directly informs agronomic decisions. He interacted with soil engineering scientists at CAZRI, exchanging perspectives on laboratory testing protocols, in-situ investigations, and data-driven methods for predicting

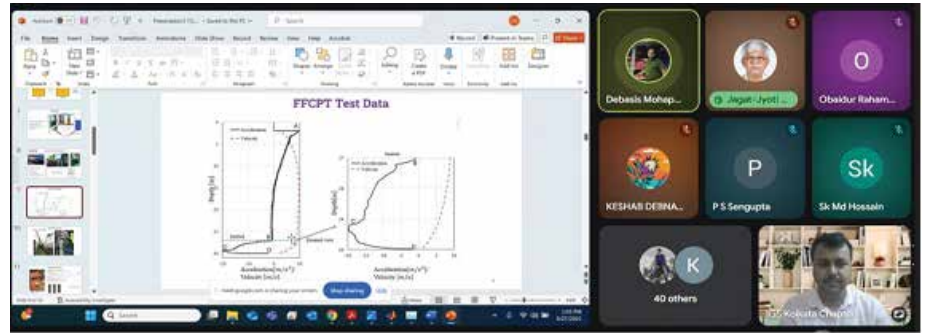
soil behavior under varying moisture and loading conditions. The discussions also touched on soil-structure interaction in farm infrastructure, embankments, and water-harvesting systems crucial for arid regions. Prof. Rao was accompanied by CAZRI Director Shri Sumant Vyas, whose support enabled productive dialogues with institute researchers. The delegation included Er. Ashok Mathur (Chairman, IGS Jodhpur Chapter), Er. Girish Mathur (Co-Chairman, IGS Jodhpur Chapter), and Shri Abhimanyu Mam (Executive Member, IGS Jodhpur Chapter), whose presence strengthened academia-industry-research linkages. The visit reaffirmed a shared commitment to translational research that bridges geotechnical insight with agricultural resilience. Overall, the engagement showcased pathways for joint projects, student exposure, and knowledge transfer, paving the way for impactful, region-specific solutions in the arid landscape.



MBM University, Jodhpur in collaboration with the Indian Geotechnical Society (IGS) Jodhpur Chapter organized a historic technical expert lecture under the PM-USHA scheme on the topic "Making of the Chenab & Anjikhad Railway Bridges – Technical & Social Challenges" on August 30, 2025. The event was graced by the presence of Shri Gajendra Singh Shekhawat, Hon'ble Union Cabinet Minister of Culture & Tourism, Government of India, as the Chief Guest, and Dr. Richhpal Singh, Principal, Government College Jodhpur, as the Guest of Honour. With an overwhelming audience of over 550 participants, the auditorium resonated with enthusiasm as dignitaries such as Air Marshal Jagdish Chandra (ADC to the President of India), Shri Sumant Vyas (Director, CAZRI), and Shri Rajesh Kumar Sharma (Director, Directorate of Technical Education, Jodhpur) joined the gathering. The lecture also drew participation from senior professionals of Railways, PWD, JDA, Nagar Nigam, alongside practicing civil engineers, architects, academicians, and bright students from MBM University, IIT Jodhpur, JIET College, and Government Polytechnic College. Prof. Rao's captivating narration of the journey behind the world's highest railway bridge seamlessly blended technical depth with stories of resilience, teamwork, and vision, leaving the audience inspired. More than a lecture, the session became a moment of pride for MBM University and IGS Jodhpur Chapter, symbolizing the fusion of academic excellence and national engineering achievement, and reaffirming the region's role as a hub for knowledge exchange and innovation in civil infrastructure.

## IGS Kolkata Chapter

A two-hour technical Session in online mode was organised on 27.09.2025. The programme was attended by 65 participants from different academic and industrial organisations. After the welcome address by the Chairman, Er. Alok Roy, the session was coordinated by Jt. Secretary Er. Chiranjib Sarkar. The topic of the technical lecture was on “Advanced Offshore site characterization through Free-Fall Cone Penetrometer testing and MPM Simulations” was delivered by Dr. Debasis Mohapatra, researcher at Delft University of Technology, Netherlands. He discussed the introduction of an advanced framework to improve the interpretation of undrained shear strength from Free-Fall Cone Penetrometer Test (FFCPT)



data. This technical talk has given insights the importance of development of an improved analytical model that incorporates strain-rate effects and soil sensitivity. He has presented the MATLAB-based tool which was implemented to translate FFCPT data into undrained shear strength profiles efficiently. The proposed approach

demonstrates superior accuracy compared to existing Gravimetric methods, offering a powerful step forward for offshore geotechnical site characterization.

The session was very successful with a quality interaction session. It was concluded with a warm vote of thanks by the Prof. Subhra Podder.

## IGS Mumbai Chapter

In run up to preparation and meeting for GoetechAsia event, the IGS Mumbai Chapter conducted an insightful webinar on 4th July, featuring Mr. Jon Sinnreich from GRL Engineers, USA, who delivered a detailed presentation on the Bi-Directional Static Load Test (BDSLT) method. The session

covered the fundamental principles, instrumentation setup, interpretation of results, and advantages of BDSLT over conventional static load testing in deep foundations. Mr. Sinnreich shared global case studies demonstrating the method's efficiency, accuracy, and cost-effectiveness in evaluating pile performance. The interactive discussion

provided participants with valuable practical insights, strengthening their understanding of modern pile testing practices. The session concluded with appreciation to Mr. Sinnreich for his informative and engaging presentation. It was attended by more than 50+ team members from Mumbai and other geographies.

## IGS Mysuru Chapter

A Field Visit to NIE North Campus - The National Institute of Engineering, Mysuru was organized on 10th July 2025 by Dr. H.S. Prasanna, Professor at NIE Mysuru, in association with the IGS Student Chapter of NIE, Mysuru. The visit was coordinated by Mrs. Shruthi A. N. and Dr. Unnam Anil, and attended by more than 30 UG Final Year and M. Tech First year Civil Engineering students. During the visit, students explored the ongoing large-scale construction projects at the NIE North Campus, including the Girls' Hostel Block with a built-up area of 1,55,000 sq. ft. comprising Lower Ground, Ground, and 12 Floors. The visit provided students with comprehensive exposure to construction methodologies, structural systems, project lifecycle management, and on-site safety practices, thereby bridging the gap between theoretical knowledge

and field applications. This hands-on experience significantly enhanced their understanding of real-time project execution, stakeholder coordination, and professional construction management practices.



The Department of Civil Engineering, Vidyavardhaka College of Engineering (VVCE), Mysuru, organized a Five-Day Faculty Development Program (FDP) on “AI & ML for Civil Engineering Applications” from 28th July 2025 to 1st August 2025, under the banner of the IGS Mysuru Chapter. The sessions were delivered by Dr. Gopal Krishna Sharma, Professor, PESIT, Bengaluru, who provided an in-depth understanding of Artificial Intelligence and Machine Learning fundamentals, probability concepts, and their applications in various domains of civil engineering. The FDP covered topics such as data-driven decision-making, predictive modelling for material behaviour, structural health monitoring, and geotechnical data interpretation. The program enhanced participants' knowledge of integrating AI and ML techniques with traditional engineering approaches, equipping them with essential tools to address complex



civil engineering problems using intelligent computational methods. The participants included faculty members and technical staff of Vidyavardhaka College of Engineering and a few working professionals. FDP was covered in blended mode.



A Technical Talk on “Industry Readiness and Career Opportunities in Civil Engineering” was organized on 13th October 2025 by the Department of Civil Engineering, ATME College of Engineering, Mysuru, in association with the IGS students Chapter of ATME, Mysuru. The session was delivered by Dr. H. S. Prasanna, who emphasized the significance of developing industry-relevant skills, professional ethics, and technical competence essential for a successful career in civil engineering. The talk highlighted various emerging domains, career pathways, and industry expectations, providing students with valuable insights into bridging the gap between academic learning and professional practice. The session



motivated students to align their academic pursuits with real-world industry demands and prepare themselves for diverse career opportunities in the civil engineering sector.

An Educational Visit to the Construction Site at NIE North Campus was organized on 17th October 2025 by the Department of Civil Engineering, Vidyavardhaka College of Engineering, Mysuru, under the banners of the IGS Students Chapter of VVCE, Mysuru and NIRMAAN Club. The visit was coordinated by Prof. Raghavendra S. Sanganaikar and Prof. Shashank, and attended by 63 students of the 5th Semester B.E. Civil Engineering program. The students explored the ongoing construction

works of the Academic Block, Girls’ Hostel, and Roofing Systems, where engineers and project managers from GINA Engineering welcomed them and conducted a detailed safety briefing, highlighting the significance of Personal Protective Equipment (PPE) such as helmets, reflective jackets, gloves, and protective footwear, as displayed on site safety boards. The visit provided students with valuable exposure to construction sequencing, material handling, project coordination, and modern building technologies, effectively bridging theoretical learning with field practices and enhancing their understanding of safety norms and professional engineering applications.



## IGS Patna Chapter

On 30th August 2025, the Department of Civil and Environmental Engineering (DCEE), IIT Patna, in collaboration with the IGS IIT Patna Students' Chapter, successfully organized a one-day workshop titled “From Tracks to Spans: Performance-Based Engineering with Finite-Element Methods” (FTS-2025). The event brought together enthusiastic participants from premier institutions, including IITs, NITs, state government

colleges, and private universities, fostering a vibrant exchange of ideas and technical knowledge. Dr. Arpit Jain (Faculty Advisor, IGS IIT Patna Students' Chapter) was the convenor of the workshop, and Dr. Vaibhav Singhal (Associate Professor, CEE IIT Patna) was the co-convenor of the workshop.

A key highlight of the workshop was the hands-on training session conducted by experts from MIDAS Research and Development Centre India Pvt. Ltd.

Participants engaged with advanced finite-element modeling tools, gaining practical insights into structural analysis and optimization. The complex numerical modelling for railway applications, mines and bridge failures was the key attraction. Additionally, hands-on experience provided significant insights to the participants.

The workshop was graced by distinguished guests, including Dr. Ramakrishna Bag, Secretary of IGS

Patna Chapter, and Dr. Nitin Kumar, whose presence added immense value to the event.

FTS-2025 also acknowledges the generous support of Prof. T.N. Singh, Honourable Director of IIT Patna; the Head of the Civil and Environmental Engineering Department; IGS Patna Chapter; ACE; and MIDASIN for their invaluable contributions.



## IGS Pune Chapter

Dr. D.Y. Patil Institute of Technology Department of Civil Engineering organized Skill Development Program for final year students on 1st July to 4th July 2025 at their campus. The skill development program included total nine sessions on various topics such as Outcome Based Education Philosophy, Academic Roadmap, Career Guidance, Competitive Exam, Training and Placement Guidance, Strategic Preparation, industry exposure etc. Following resource persons delivered the sessions

Dr. Sunil Deshpande, Dr. Shobharani, Dr. Preetu Ramkar, Mrs. Veena Bellary, Mrs. Sweety Chauhan, Er. Omkar Shendure, Mr. Rohan Ambekar, Mr. Nikhil Shete, Er. Rushikesh Dramane and Er. Harshal Misal.

The students benefitted from these sessions. The sessions successfully provided the strategies for GATE examinations, MPSC and UPSC examinations etc.



On the request of Dr. Hemant Dhumal, Chief Engineer, W.R.D., Pune the Veer Dam Site was visited to assess the

damages and to find out the root cause for longitudinal cracks on the top surface of Dam going upto about 140 meters in length.

The site was visited on 8th July, 2025 by The Executive Committee members, Er. Ramesh Kulkarni, Er. Suman Jain, Dr. Sachin Jain and Er. Deepali Kulkarni along with Jr. Engineer Ms. Mali and other Staff Members working on the Dam.

A trial pit of about 1.2-meter  $\times$  1.2-meter by 0.90-meter depth, which has been excavated about two months back was inspected and reviewed. The report based on the observations is prepared and submitted to Dr. Dhumal Sir for further process.



Indian Geotechnical Society Pune Chapter in association with Maharashtra State Infrastructure Development Corporation (MSIDC) and Institution of Engineers Pune Centre (IEI) jointly organized expert talk on 28th July 2025 at Firodiya Hall IEI, Shivajinagar Pune between 4:00 PM to 7:00 PM.

The Indian Geotechnical Society (IGS) Pune Chapter extends its heartfelt gratitude to the distinguished experts, Er. Ravindra Oak, Retired Chief Research Officer, Central Water and Power Research Station (CWPRS), Pune, and Er. Sai Prakash Nair, Project Head at J. Kumar Infraprojects Ltd., Pune, for delivering exceptionally insightful and thought-provoking technical

sessions during the event. Their presentations offered a deep dive into the evolving landscape of geotechnical engineering, combining decades of research experience and practical field applications. The sessions provided participants with a unique opportunity to gain valuable knowledge about modern construction methodologies, innovative ground improvement techniques, and sustainable solutions for geotechnical challenges. The engaging delivery and real-world examples shared by both experts not only enhanced the learning experience but also encouraged meaningful discussions and knowledge exchange among students, researchers, and professionals.

The event was further elevated by the felicitation of Dr. Aruna Thube Madam, in recognition of her outstanding contributions to geotechnical engineering, research, and academia. Her commitment to advancing engineering education and mentoring young minds has been truly exemplary. The felicitation ceremony, conducted in the esteemed presence of Er. Vikas Ramgude, Joint Director, MSIDC, and Dr. Thube Sir, added a sense of pride and warmth to the occasion, celebrating the spirit of excellence and dedication that defines the field.

The IGS Pune chapter sincerely acknowledges the presence, encouragement, and support of all dignitaries, faculty members, and participants who made the event a grand success. Their enthusiastic participation and active engagement throughout the sessions reflected a collective commitment to advancing knowledge and collaboration in geotechnical engineering. The event



not only fostered professional learning but also strengthened the bond between academia and industry—aligning with IGS Pune Chapter’s vision to build a dynamic platform for future geotechnical innovations and leadership.



The Student Chapter of D.Y. Patil College of Engineering, Akurdi, Pune, organized a special program on 13th August 2025 at 10:30 AM to mark the installation of the new committee of the IGS Student Chapter for the Academic Year 2025–2026, followed by an expert lecture at the college campus.

The event was graced by distinguished guests from the IGS Pune Chapter — Er. Ramesh Kulkarni, Er. Suman Jain, and Er. Annapoorni Iyer — whose presence added significance to the occasion. Representing the host institution, Dr. Ashok More and Prof. Mukund Chougule also attended the program, extending their encouragement and guidance to the newly appointed committee members.

The highlight of the event was an engaging expert lecture delivered by Er. Prakash Bansod, Geotechnical Advisor at Afcons Infrastructure Ltd., Mumbai, on the topic “*Bearing Capacity of Shallow Foundations*.” In his session, Er. Bansod provided an in-depth explanation of the fundamental concepts governing the bearing capacity of soils and its critical role in safe and economical foundation design. He enriched the lecture with practical examples from real-world projects, helping students connect theoretical knowledge with field applications.

He further elaborated on the methods of computation of bearing capacity, discussing various influencing factors such as soil type, foundation width, depth, and loading conditions. His lucid explanation and interactive approach made complex geotechnical concepts easy to understand, sparking keen interest among students and faculty alike.

The session proved to be highly informative and beneficial, providing young engineers with valuable insights into one of the most essential topics in geotechnical engineering. The event concluded with a vote of thanks, expressing appreciation to the speaker and dignitaries for their valuable time and contributions.



The Professional Structural Engineers Association (PSEA), in association with the Indian Geotechnical Society (IGS) Pune Chapter, Architects, Engineers and Surveyors Association (AESAs), Indian Concrete Institute (ICI) Pune Centre, Ultratech Cement, and Dr. Bhanuben Nanawati College of Architecture (BNCA), jointly organized an enlightening seminar on *India’s Pride – the Chenab Bridge*. The event was held on Friday, 22nd August 2025, from 4:00 PM onwards at the BNCA Campus, Pune.

The program was graced by Er. Vikas Ramgude, Joint Director, MSIDC, along

with the office bearers of all associated professional societies. Their presence added prestige and encouragement to the event, reflecting the strong collaboration between academic, professional, and industrial bodies.

The seminar featured two insightful technical sessions delivered by eminent speakers — Dr. Sunil Basarkar and Er. Shashank Rajbhoj. Dr. Basarkar captivated the audience with his detailed presentation on the geotechnical aspects of the Chenab Bridge, one of the world’s highest railway bridges and a marvel of modern engineering. He elaborated on the extensive studies undertaken for slope stability and foundation design of the bridge piers, emphasizing the rigorous scientific and technical approach adopted to ensure stability and safety in the challenging Himalayan terrain.

Following this, Er. Shashank Rajbhoj provided an in-depth overview of the structural design, components, and execution of the bridge. His session highlighted the innovative engineering solutions, complex design calculations, and the immense challenges faced during construction. He also explained the temporary structures, including cables, supports, and cranes, that played a vital role in the bridge’s execution phase.

The seminar also featured a short presentation by Er. Vishwas Kulkarni from Ultratech Cement, who showcased the company’s advanced construction materials and their applications in large-scale infrastructure projects. The program concluded with a vote of thanks, acknowledging all contributors, and was followed by a networking dinner, marking a fitting end to an inspiring and knowledge-rich evening.



IGS Pune Chapter inaugurated its 41st Student Chapter at JSPM University School of Civil and Environmental Sciences, Wagholi Pune on 5th September 2025 at their campus at 11:00 am. The inauguration event is graced by Dr. Raviraj Sorate. He delivered technical session on “Geopathic Stress and accidents: Case Study of Mumbai – Pune Expressway”

The event began with an interaction between the IGS Pune Chapter Office Bearers and students. The committee members shared the objectives of IGS, professional opportunities for student members, and the importance of engaging in society activities for academic and career growth. This interaction inspired students and laid a roadmap for future activities of the student chapter.

The inauguration was conducted in the presence of: Dr. R. S. Deshpande; Dr. Aniket Patil; Mr. Gokul Dhumal; Dr. Sagar Turkane; Er. Ramesh Kulkarni; Er. Suman Jain and distinguished members of the IGS Pune Chapter

The inauguration ceremony included: Lighting of the lamp and Saraswati Vandana; Introduction of IGS and its objectives; Addresses by dignitaries highlighting the significance of geotechnical engineering and Felicitation of guests and coordinators

An expert session was delivered by Dr. Raviraj Sorate Sir on “Geopathic Stress and accidents: Case Study of Mumbai – Pune Expressway” The lecture proved to be highly enriching, linking theoretical knowledge with practical field applications.



Indian Geotechnical Society (IGS) Pune Chapter and Central Water and Power Research Station (CWPRS), Pune jointly organized a Two-Day National Seminar on “Managing Aging and Distressed Hydro Power Projects – Challenges and Opportunities” on 11th and 12th September 2025 at CWPRS, Pune.

The seminar was inaugurated in the august presence of Dr. Anil Jain, Chairman, NDSA as the Chief Guest, and Shri Chaskar, Chief Engineer, NWA as the *Guest of Honour*. Dr. Prabhat Chandra, Chief Patron, extended a warm welcome to all dignitaries, guests, participants, and delegates. Er. Suman Jain, Chairperson IGS Pune Chapter highlighted the activities of IGS Pune Chapter and provided an overview of the seminar, followed by a *vote of thanks* delivered by Shri Hanumanappa.

Over the two days, the seminar featured five keynote lectures delivered by eminent experts: Dr. Anil Jain, Shri Chaskar, Shri Pramod Narayana, Dr. Sanjay Belsare, Dr. Hemant Dhumal.

In addition, there were nine technical sessions presented by domain experts from CWPRS, including: Dr. Selva Balan, Shri Hanumanappa, Dr. Mandira Muzumdar, Dr. Prakash Palae, Dr. Prajakta Ghadge, Dr. Rolland, Mrs. Jai Edlabadkar, Dr. Sachin Marulkar, Shri Sachin Khupat and Dr. Sunil Pillai

A special highlight of the event was a cultural program organized by CWPRS in the evening, where engineers showcased their talents in singing and dancing. The performances were highly appreciated by all delegates and guests, creating a vibrant and engaging atmosphere.

The seminar concluded with excellent feedback from the participants, who praised the quality of technical content, hospitality, venue, and overall arrangements. The event closed with a *vote of thanks* proposed by Er. Deepali Kulkarni, Hon. Secretary, IGS Pune Chapter.



MIT – WPU Department of Civil Engineering in association with IGS Pune Chapter and in collaboration with Bentley Systems have organized one day workshop on “From Concepts to Calculation: PLAXIS Hands on Training – a leading geotechnical software for the analysis of deformation and stability in geotechnical engineering projects on 12th September 2025 Friday, at Civil Engineering Computer Laboratory.

Dr. Keerthi Raaj S, Product Success Manager and Dr. Rohan Deshmukh, Sr. Geotechnical Consultant from Bentley Systems India Pvt. Ltd. were speakers and trainer for this workshop. Total four sessions were conducted in which Introduction to Bentley's Geotechnical Portfolio, Introduction to PLAXIS 2D and 3D Software, Hands on Session on PLAXIS 2D Software for Tunnel Design and Analysis, Hands on Session on PLAXIS 2D Software for Slope Stability Analysis have been taken by the experts.

It was a proud moment for the Indian Geotechnical Society (IGS) Pune Chapter to inaugurate its 42nd Student Chapter at Zeal Polytechnic, Narhe, Pune — marking a significant milestone as the first-ever IGS Student Chapter established in a diploma college. The event commenced with the auspicious Saraswati Puja and lamp lighting ceremony, symbolizing the pursuit of knowledge and wisdom.

The inauguration ceremony was graced by eminent personalities including Er. Deepali Kulkarni, Dr. S. M. Navghare, Dr. Shrikant Shinde, Dr. Raviraj Sorate, and Er. Baba Jagtap representing the IGS Pune Chapter. From Zeal Polytechnic, Prof. P. L. Jadhav, Prof. Priyanka Late, and other faculty members were present, adding to the academic fervour of the event. All dignitaries and committee members of the IGS Pune Chapter were felicitated in recognition of their continuous contributions to the society and the field of geotechnical engineering.



During the ceremony, the newly appointed student committee members took an oath of commitment to uphold the objectives and values of IGS, officially declaring the student chapter open. Members of the IGS Executive Committee interacted with the students, elaborating on the vision, objectives, and wide range of activities undertaken by IGS to promote geotechnical education, research, and industry engagement among young engineers.

The event also featured an insightful expert lecture by Dr. S. M. Navghare on the topic *“Introduction to Geosynthetics in Geotechnical Engineering.”* Dr. Navghare explained the types, functions, and diverse applications of geosynthetic materials in modern civil engineering projects. His presentation emphasized the growing importance of geosynthetics in sustainable infrastructure development and soil improvement techniques.

The inauguration concluded on an inspiring note, with students motivated to actively participate in future IGS activities and contribute to the advancement of geotechnical engineering.



The Department of Civil Engineering, RMD Sinhgad School of Engineering Pune proudly inaugurated the Indian Geotechnical Society (IGS) Student

Chapter on Wednesday, 24 September 2025. The chapter provides a vibrant platform for civil and geotechnical engineering students to explore the latest developments in the field, gain industry exposure, and sharpen leadership skills.

The program opened with a warm welcome by Ms. Aparna H. Chavan, faculty Coordinator, IGS student chapter followed by an introduction to the chapter's vision and planned activities—seminars, workshops, technical quizzes, field visits, and collaborative events such as GeoFest.

Er. Deepali Kulkarni Ma'am, Secretary of IGS Pune Chapter has introduced the IGS and IGS Pune Chapter briefly. The talk offered valuable insights into emerging trends and research opportunities in geotechnical engineering, inspiring students to pursue careers and advanced studies in the discipline.

The Chapter inaugurated with cutting the ribbon and displaying the board of IGS Pune Chapter. A logo of IGS Pune Chapter is drawn beautifully by students and one foundation model also displayed at the entrance of the department.

A key highlight was an expert lecture delivered by Dr. Raviraj Sorate, noted geotechnical consultant, on *“Geopathic Stress and Accidents: A Case Study on the Mumbai–Pune Expressway.”* Dr. Sorate explained how naturally occurring geopathic stress zones can influence soil behaviour and roadway stability, and presented investigative findings that correlate these factors with accident-prone stretches of the expressway. His presentation gave students a rare, practical perspective on integrating geotechnical analysis with highway safety.



The Department of Civil Engineering at Jaihind College of Engineering, Kuran organized an expert session in collaboration with the Indian Geotechnical Society (IGS), Pune Chapter. The session was titled *“Applications of MS Project (MSP) for Construction Project Management”* and took place on 24th September 2025 at 11:00 AM in the Civil Department Seminar Hall.

The expert speaker for the session was Mr. Chetan Loni, Director of ConBrain, Pune, who brought industry insights into how Microsoft Project (MSP) can be effectively utilized for planning, scheduling, and managing construction projects. The session aimed to bridge the gap between academic knowledge and practical applications in construction management.

The session provided valuable exposure to students and faculty, enhancing their understanding of modern project management tools used in the construction industry.



## IGS Raipur Chapter

Indian Geotechnical Society (IGS) Raipur Chapter and Civil Engineering Department National Institute of Technology (NIT) Raipur jointly, successfully organized a one-week hands-on training program titled *“Testing of Geo-materials for Geo-technical and Transportation Engineering Applications”* from 14th July 2025 to 18th July 2025. The event was

designed to offer practical exposure and skill development to professionals, researchers, and students in the field of geotechnical and transportation engineering. The training program was physically conducted on campus. Dr. Laxmikant Yadu, Professor & Head and Hon. Secretary IGS Raipur Chapter was the convener of the training program. Dr. Sunny Deol G and Dr. Alfia Bano, Associate Professor, Civil Engineering

Department NIT Raipur were the coordinators of the training program.

The primary objective of the program was to provide participants with broad exposure to state-of-the-art testing equipment and to deliver hands-on training on both fundamental and advanced testing procedures related to various geo-materials. Participants included field engineers, consultants, technical staff, and research scholars

from across the region. Throughout the week, the training sessions covered diverse applications in geotechnical and transportation engineering, offering insight into cutting-edge practices and real-time testing methodologies.

The inaugural ceremony on 14th July 2025 at 10:30 AM was graced by Dr. A. P. Singh, Director of Explore Engineering Consultants Pvt. Ltd. and Honorary Secretary of IGS National Body, who served as the Chief Guest. Dr. S. Sanyal, Dean (Corporate Relations and Resource Mobilization), NIT Raipur, and Dr. R.K. Tripathi, Chirman IGS Raipur chapter was the Guest of Honor. Dr. G.D. Ramtekkar, Professor Civil Dept NIT Raipur, elected chairman of IGS Raipur chapter was also present as special guest in the event. In the inaugural ceremony new nominated office bearers of IGS Raipur chapter were also announced by Dr. Laxmikant Yadu, Hon. Secretary of IGS Raipur chapter.

The valedictory ceremony was held on 18th July at 4:00 PM in the presence of eminent dignitaries, including Dr. M.K. Verma, Ex-Vice Chancellor, CSVTU, and Professor, Civil Engineering Department, NIT Raipur. The notable guests included Dr. G. D. Ramtekkar, Dean (Planning & Development), Chairman IGS Raipur Chapter Dr. R.K. Tripathi, Immediate past chairman IGS Raipur chapter, Dr. R. N. Khare, Principal, VEC Lakhanpur, and vice-chairman IGS Raipur chapter and several other senior faculty members and members of IGS Raipur chapter. Organizers extended whole hearty gratitude and thank to the IGS main body and M/s Marshal Geo Test Laboratory Raipur for providing the financial support to organize the training program.

The event was hailed as a great success, fostering academic-industry collaboration and enhancing the technical capabilities of all attendees. More than 40 participants across many



states of India, expressed immense appreciation for the hands-on experience and interactive sessions that bridged the gap between theoretical learning and practical application.

The Indian Geotechnical Society (IGS) Student Chapter at Guru Ghasidas Vishwavidyalaya (GGV), Bilaspur, conducted an expert talk on "*Application of Controlled Implosion Technique in Urban Built-up Environment: A Case Study of Supertech Twin Tower, Noida*" was organized by the IGS Student Chapter, GGV, Bilaspur on 12th September 2025. The session was delivered by Dr Harsh Kumar Verma, Senior Principal Scientist, CSIR-CIMFR, Bilaspur Regional Research Centre. Dr Balbir Kumar Pandey, Faculty Advisor of the chapter, welcomed the guest, highlighting his remarkable contributions in the field of geotechnical engineering. Dr Verma discussed the landmark demolition of the Apex and Ceyane towers in Noida, ordered by the Supreme Court due to violations of building norms. He elaborated on the scientific planning, use of ~3,700 kg of explosives, vibration control, and safety measures that ensured a successful nine-second implosion without damage to nearby structures. The talk, attended by over 170 students and faculty members, concluded with a vote of thanks by the Student Chapter President.



The IGS Student Chapter, GGV Bilaspur, organised a career guidance talk on "From GGV to Officers Training Academy: My Journey and Lessons Learned" on 23rd September 2025. The session was delivered by Officer Cadet

Milind Kumar Bhodekar, an alumnus of the Civil Engineering Department and current cadet at OTA Gaya. Addressing fifth-semester students, he shared his inspiring journey from campus to military training, highlighting the importance of discipline, perseverance, time management, and leadership qualities. He also discussed strategies for competitive exams and career development. The session motivated students to pursue excellence with dedication and determination.



The Rajat Jayanti Varsh Mahotsav celebrated the Silver Jubilee of Chhattisgarh State organized under the aegis of the Indian Geotechnical Society (IGS) VEC Ambikapur Student Chapter, the program engaged students, faculty, and experts in 14 days of seminars, workshops, and community activities. The event highlighted Chhattisgarh's journey over the last 25 years and focused on fostering innovation, technical skill enhancement, and social responsibility among participants. Through symposia, technical seminars, cultural programs, sports meet, and awareness campaigns, students gained exposure to sustainable development, digital literacy, environmental protection, women empowerment, and cybersecurity. Guided by Dr. R. N. Khare (Vice President, IGS Raipur Chapter) and Dr. Ketan Chourasia (Faculty Advisor, IGS Raipur Chapter), the Mahotsav successfully integrated learning with community engagement, inspiring students to contribute to the vision of Developed Chhattisgarh @2047.





The Indian Geotechnical Society (IGS) student chapter SSIPMT Raipur conducted a webinar. The objective of the session was to introduce students and professionals to the advantages of integrating different design and analysis software tools for achieving a smooth and efficient project development process. During the session, the resource person emphasized how AutoCAD serves as a powerful drafting tool for preparing detailed 2D and 3D drawings, while STAADPro is widely applied for structural analysis and design to ensure safety and stability of structures. The discussion further highlighted the use of Revit as a Building Information Modeling (BIM) platform, enabling effective coordination, visualization, and documentation of construction projects. By combining these three tools, participants were shown how to establish a seamless work flow, reducing errors, saving time, and enhancing collaboration across different project phases. The webinar provided valuable insights into real-world applications

of integrated software usage in the construction industry. It was well-received by students, research scholars, and young engineers, as it equipped them with knowledge of industry-relevant practices that strengthen both technical proficiency and employability.



The Indian Geotechnical Society (IGS) student chapter SSIPMT Raipur conducted a seminar on Research Paper Writing. It is designed to guide students, researchers, and faculty members through the essential process of writing high-quality and impactful research papers. In today's academic and professional landscape, the ability to effectively communicate research findings is as important as the research itself.

Key topics included understanding the structure of a research paper, formulating a clear research problem, literature review techniques, methodology development, data presentation, result analysis, and drawing meaningful conclusions. The seminar covered best practices in academic writing, referencing styles (APA, IEEE, etc.), avoiding plagiarism, selecting appropriate journals, and understanding peer-review processes.

Real examples from various disciplines will be discussed to help participants relate theory to practice. By the end of the seminar, attendees will have a clearer understanding of how to structure and present their research effectively, enhancing their confidence and competence in scholarly communication.



## IGS Surat Chapter

The 14th Annual Conference of the Deep Foundations Institute of India (DFI India 2025) was held from 8th to 10th September 2025 at *Avadh Utopia, Surat*, jointly organized by DFI of India, IGS Surat Chapter, and SVNIT Surat. The conference witnessed the participation of eminent personalities from various organizations.

The Conference brought together several distinguished personalities and leaders from academia and industry. Prof. Chandresh H. Solanki, Professor (HAG) at SVNIT Surat, and Chairman, IGS Surat Chapter was the Conference Chair of DFI 2025. Dr. Anupam Shukla, Director, SVNIT Surat, graced the event as Guest of Honour, while Prof. V. L. Manekar, HoD, Department of Civil Engineering, SVNIT Surat, was an Organizing Committee member.

Dr. K.S. Rama Krishna, member of DFI of India, was honoured with the Lifetime Contribution Award at the conference. Dr. Anil Joseph, IGS President, also attended as Guest of Honour, alongside Er. Mohan Ramanathan, Chairman, DFI

India, and Dr. Sunil S. Basarkar, Vice Chairman, DFI India. Er. Nehal Desai, Secretary, IGS Surat Chapter, played a key role as an Organizing Committee member, while Mr. Anirudhan I.V. and his team represented DFI India as part of the Organizing Committee. Additionally, Dr. Jaykumar Shukla (Geo Dynamics Engineers LLP) and Dr. Jitesh T. Chavda (Assistant Professor, SVNIT Surat) served as Technical Chairs for DFI India 2025.

The event brought together leading academicians, practicing engineers, researchers, and industry professionals to exchange knowledge on deep foundations, ground improvement, and sustainable geotechnical practices.

Across three days, the conference featured keynote lectures, technical paper sessions, and corporate presentations, offering a blend of research insights and field experiences. Eminent experts such as Dr. Eric Chong (Keller Australia), Dr. Stuart Hardy (Arup London), Mr. Abhishek Basu (Adani Infra India Ltd.), Mr. Satyajit Vaidya (LANGAN), Mr. Andrzej Wolski (Geopier), Mr.

Bedros Avakian (Menard Middle East), and Dr. Makarand Khare (Terranova Consultants) delivered impactful lectures on advanced design concepts and innovative technologies. Industry leaders including Menard, Bauer Engineering, ITD Cementation, Keller Ground Engineering, Apollo Techno Industries, Suntech Infra, and CEG Test House shared practical applications and emerging trends.

The sessions covered a wide spectrum from deep foundation design and ground improvement to sustainability, monitoring, and lessons from field case studies. Punctuality, professional conduct, and technical diversity made the conference both enriching and well-structured.





The exhibition stalls were a key feature of the event, showcasing the latest innovations in equipment, testing techniques, and construction technologies. Participants had the opportunity to directly interact with professionals from leading companies, gaining valuable insights into real-world practices and emerging trends in the geotechnical industry.

The conference began with an inaugural session, followed by keynote lectures and corporate presentations. Technical sessions focused on innovations in deep foundation design and testing

equipment. The exhibition area was opened, allowing participants to explore technologies and interact with industry experts.

The second day started with plenary talks, followed by parallel sessions on deep foundations, ground improvement, and research methodologies. The afternoon included keynote lectures on sustainable foundation practices and a Women in Deep Foundations (WiDF) session. In the evening, a cultural program was held, followed by a banquet dinner, providing a lively environment for informal networking among delegates, participants, and exhibitors.

The final day began with keynote sessions on foundation performance and geotechnical instrumentation, followed by parallel tracks on sustainable practices, failure case studies, and monitoring techniques. The valedictory session marked the formal conclusion of the conference, followed by a closing

lunch. A heritage tour to Surat fort in the afternoon offered participants valuable field exposure to Surat's culture and modern renovation works.

The hospitality and overall arrangements were exceptional and contributed significantly to the success of the conference. The conference was marked by seamless organization, professional management, and exceptional hospitality. The venue, Avadh Utopia, provided excellent facilities with well-equipped halls and smooth coordination between sessions. Time management was exemplary, ensuring that all events were conducted on schedule.

Food and refreshments were thoughtfully arranged, with diverse options catering to all participants. The banquet dinner and cultural evening on the second day added a personal touch, creating a vibrant setting for networking and informal discussions among delegates, industry experts, and students.

## IGS Tadepalligudem Chapter

On July 30, 2025, Ar. Komal Gilda, Assistant Professor, School of Planning and Architecture, Vijayawada, gave a expert talk on "Integrating Civil Engineering with Architecture for Greener Future" at the Department of Civil Engineering, Sasi Institute of Technology and Engineering, Tadepalligudem, and IGS Tadepalligudem. Seventy students and staff from the Civil Engineering department took part in the event. The speaker has explained clearly the need of Integrating Civil Engineering with Architecture for design and developing the sustainable infrastructure in the society. The speaker attentively addressed all of the pupils' enquiries.



On September 15, 2025, Er G John Moshae SE, R&B (retired) and G.

Anantharamulu, Project Manager of the Project gave a expert talk on "Salient Features of Kanaka Durga Flyover, Vijayawada, Andhra Pradesh" at the Department of Civil Engineering, Sasi Institute of Technology and Engineering, Tadepalligudem, and IGS Tadepalligudem. Seventy students and staff from the Civil Engineering department took part in the event. The speaker has explained clearly the Overview of Project, Alignment, Pre-construction Activities, Foundations, Substructure, Superstructure, Segmental Construction, Casting Yard and beds, Spine &, Wing launching and Extended Pier cap. The speaker attentively addressed all of the pupils' enquiries. Also, on the eve of Engineers Day -2025 various competitions such as Quiz, working models, Poster Presentation,



CAD Challenge and Nirmaan Logo Design were conducted for II, III and IV B.Tech I sem students. A total of 102 students registered for the events and 12 students secured first prize and 12 students secured second prize.

The Faculty Development Program (FDP) on "Geotechnical Innovations for Sustainable & Disaster-Resilient Infrastructure" (GeoInnovate 2025) was organized to explore new ideas and practical solutions in geotechnical engineering. With disasters and climate challenges increasing, the program aimed to show how modern tools and sustainable practices can make infrastructure safer and stronger. The sessions covered a wide range of topics—IoT and AI-based landslide early warning systems, green infrastructure for flood control, forensic studies of geotechnical failures, and the use of new materials like biopolymers and geosynthetics. Experts also introduced digital innovations such as Geotechnical BIM and AI/ML applications, which are changing how engineers design and manage projects.

Held from 15th to 19th September 2025, the FDP featured 10 expert





# HYDRO HELLOMAC

Unlock the Future of Hydraulic Protection

**5 seconds**

Instant signal transmission,  
to ensure timely alerts

**5 years**

Long-lasting battery,  
no external power needed

**5 km**

Wide range of seamless data  
transmission, always connected

**5 networks**

GPRS, 4G, Satellite, Lorawan, Wifi.  
High connectivity guaranteed



**Wireless**

Free of connections.  
No strings attached

**Plug&Play**

No setup hassle.  
No installation risks.

**Less than 5 minutes**

Installed in no time.  
Ready to monitor

**Unlimited coverage**

Extended monitoring network,  
no limits to connectivity.



lectures (two per day) delivered by leading academicians and professionals. The response was remarkable 131 participants, including faculty, students, young engineers, and professionals, joined the program. Interactive

discussions made the sessions lively, and participants gained both knowledge and practical insights.

At the end, an assessment test was conducted, and certificates were given to those who completed the program

successfully. Overall, GeoInnovate 2025 not only enriched the participants but also inspired them to apply modern approaches for building infrastructure that is sustainable, safe, and disaster-resilient.

## IGS Thiruvananthapuram Chapter

IGS Thiruvananthapuram Chapter, in association with TC 104 of ISSMGE, organized the 8th T.S. Ramanatha Ayyer Lecture and International Symposium on Physical Modelling of Geotechnical Structures, at Mar Baselious College of Engineering and Technology on 19th September 2025. The programme was inaugurated by Smt. Mini Antony IAS (Additional Chief Executive Officer of KIIFB)



The speakers of the programme were Dr. Srinivas Mantrala (IIT Kanpur), Prof. B.V.S. Viswanadham (IIT Bombay), Prof. Ashish Juneja (IIT Bombay), Prof. Stuart Haigh (University of Cambridge).

IGS Thiruvananthapuram Chapter organized a symposium on Forensic Assessment of Geotechnical Distress along NH-66, at LBS Institute of Technology for Women on 16th July 2025.



The programme was inaugurated by Shri Rahul Krishna Sharma, IAS, Project Director, Kerala State Transport Project (KSTP). The main speakers of the programme were Dr. K. Balan, Patron, IGS Thiruvananthapuram Chapter and Dr. N. Unnikrishnan, Chairman IGS Thiruvananthapuram Chapter

The IGS Student chapter of LBS Institute of Technology for Women organised a Geotechnical Engineering

Hackathon, TERRAHACK, on 17th September 2025. The students were exposed to complicated real case studies in Geotechnical Engineering.



The IGS Student chapter of LBS Institute of Technology for Women organised a visit to the Central Soil Analytical Laboratory, Thiruvananthapuram and had an exposure to various soil profiles in the State of Kerala.



## IGS Vellore Chapter

The Centre for Disaster Mitigation and Management, VIT Vellore, organized a one-day workshop on “Challenges in Strengthening of Reinforced Concrete Structures” on 12th September 2025. The event aimed to provide insights into the assessment, rehabilitation, and strengthening techniques of RC structures. A total of 24 participants, including 5 UG/PG students and 19 research scholars, attended the workshop.

In the forenoon session, Mr. Ravi Shhankkar Subramaniam, Chief Executive – Technical and Operations, Padmavathy Buildmat, Chennai, delivered an expert lecture on Condition Assessment of RC Structures Using Various Techniques and Case Studies on Strengthening Techniques for super

and sub-structures. He emphasized the importance of systematic evaluation in ensuring structural safety and durability. The session covered non-destructive and semi-destructive testing methods such as rebound hammer, ultrasonic pulse velocity, core testing, and corrosion mapping, supported by real-world case studies that illustrated practical strengthening strategies. Challenges in condition assessment of underground and sub-structures were also discussed.

The afternoon session featured Dr. Jayaprakash J, Professor (HAG), School of Civil Engineering, VIT, who presented on “Restoring Structural Integrity of Reinforced Concrete Elements Using Fibre Reinforced Polymer Composites” He explained the advantages of FRP composites—lightweight, corrosion-resistant, and high strength-to-weight

ratio—highlighting their applications in beams, slabs, and columns. His lecture showcased successful implementations of FRP systems in structural rehabilitation, emphasizing their effectiveness in extending the lifespan of deteriorated structures including bridges.

The workshop concluded with visits to the Concrete 3D Printing Lab and the Disaster Research Lab, where participants received live demonstrations and hands-on exposure to innovative construction and research techniques.





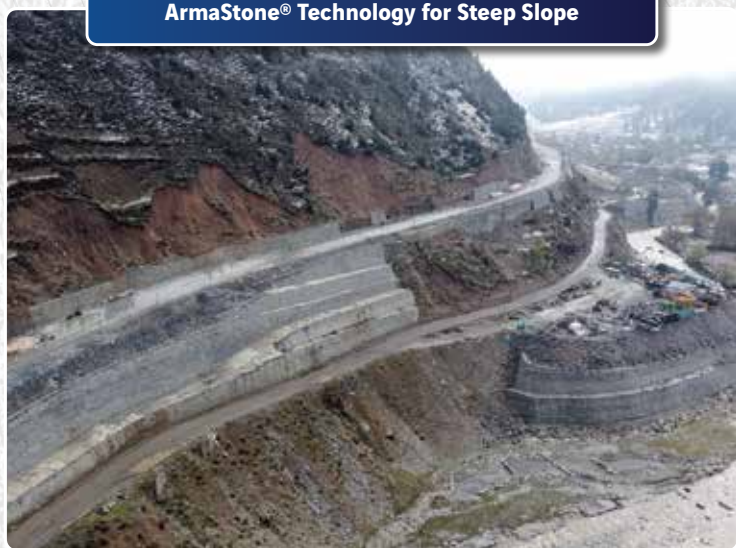


**GEOQUEST**

## **Sustainable infrastructure with Geoquest's integrated innovative engineering solutions.**

We provide challenging and complex engineering solutions in the fields of hydraulic protection, geohazard risk mitigation, ground stabilization, precast crossing structures, soil reinforcement and retaining structures.

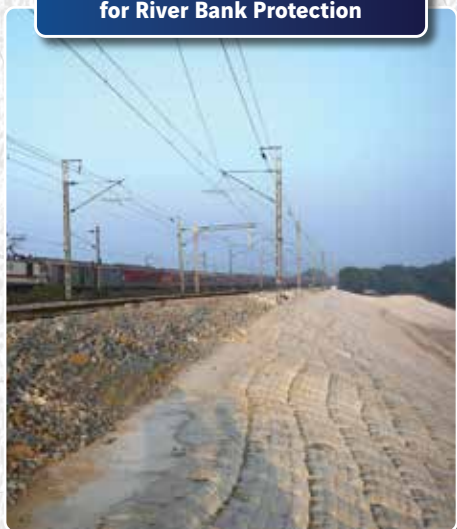
**ArmaStone® Technology for Steep Slope**



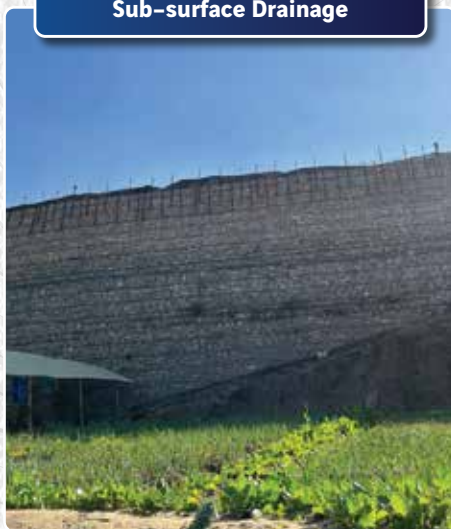
**ArmaGreen® Technology for Steep Slope**



**TechRevetment® Technology  
for River Bank Protection**



**Draintube™ for  
Sub-surface Drainage**



**ArmaLynk® for Basal  
Reinforcement**



**TERRE ARmee**

*is now*



**GEOQUEST**

*New name, Proven expertise, Diverse solutions.*



# PLAXIS 2D Ultimate | PLAXIS 3D Ultimate

## Flexible Geotechnical Analysis Software

Perform advanced finite element or limit equilibrium analysis of soil and rock deformation and stability, as well as soil structure interaction, groundwater, and heat flow.

### Requisition of PLAXIS licenses available for IGS members.

#### PLAXIS 3D

- Perform everyday deformation and safety analysis for soil and rock
- Creep or flow-deformation coupling
- Consolidation Analysis
- Steady-state groundwater
- Analyse the effects of vibrations
- Stimulate hydrological, time-dependent variations of water levels or, flow functions

#### PLAXIS 2D

- Perform everyday deformation and safety analysis for soil and rock
- Analyse the effects of vibrations
- Stimulate hydrological, time-dependent variations of water levels, or flow functions
- Assess the effects of transient heat flow

**Application form link:** <https://forms.gle/5EjKb8PwEYFBVPhK7>



**Usage Charge:** ₹1500/- per application (2D or 3D) for a duration of up to 6 months, plus an additional 18% GST. Initial access is granted for 3 months, with an additional 3-month extension provided based on availability at no extra charge.

Licenses will be allocated to students and research scholars after receipt of the relevant application form and documents, and upon approval of the operational committee.

**Note:** The licenses are exclusively for Academic Research, and cannot be used for any Consultancy/Commercial Projects as well as Sponsored Research

It is must for users to acknowledge this support of IGS in their research reports.

**For queries, Email: [igsheadquarter@gmail.com](mailto:igsheadquarter@gmail.com)  
Phone Number: +91 9873070020**







Formally Innovative Solutions™

## GEOTECHNICAL STRENGTH. INFRASTRUCTURE EXCELLENCE.

Active member of Nation Building

Pan-India Execution | Engineering Excellence |  
Turnkey Geotechnical Solutions

### Complete Geotechnical Expertise

- ✓ **Design & Consultancy:**  
Geotechnical Investigation, DPR Preparation, PMC, PMU
- ✓ **Ground Improvement:**  
PVD, Micro Piling, TAM Grouting, Stone/Sand Columns, Geocells, Geogrid, High pressure grouting
- ✓ **Slope & Tunnel Protection:**  
Rockfall Barriers, HEA Panels, SDA, SN Bolts, CTA Anchors, FRP Anchors Shotcreting (Manual & Robotic), Drainage Systems  
Portal & Shaft Stabilization (NATM & TBM)
- ✓ **Anchoring Systems:**  
DCP Cable/Bar Anchors, Marine Tie Rods, Geo Technical Bars, Anchor Accessories
- ✓ **Soil & Erosion Control:**  
Hydroseeding, Jute/Coir Mats, Geocells, 3D Geo Mesh, Geotextiles
- ✓ **Geosynthetics & River Training Works:**  
Gabions, Geotubes, Geobags, Mattress Systems, GCCM, Pond Lining, OB Dump Yard Stabilization
- ✓ **Specialty Solutions – DE NEEF® (NATM/TBM):**  
Soil Injection, Leak Sealing
- ✓ **RE Wall/RS Wall Systems (Concrete/Flexible)**

### Applications:

Highway, Metro, Railway, Hydro & Mining  
Infrastructure Complex Hill & River Zone  
Engineering Projects



Head Office  
Kolkata



ngispl.com

.....

Member of the Indian  
Geotechnical Society (IGS),  
Indian Road Congress (IRC) &  
Deep Foundation Institute (DFI)



+91 9953606123  
+91 3348225744



info@ngispl.com  
sales@ngispl.com



x.com/NextgenInnov  
linkedin.com/company/96421022  
instagram.com/nextgeninnovativesolutions/  
youtube.com/@NextgenInnovativeSolutions

## CONTENTS

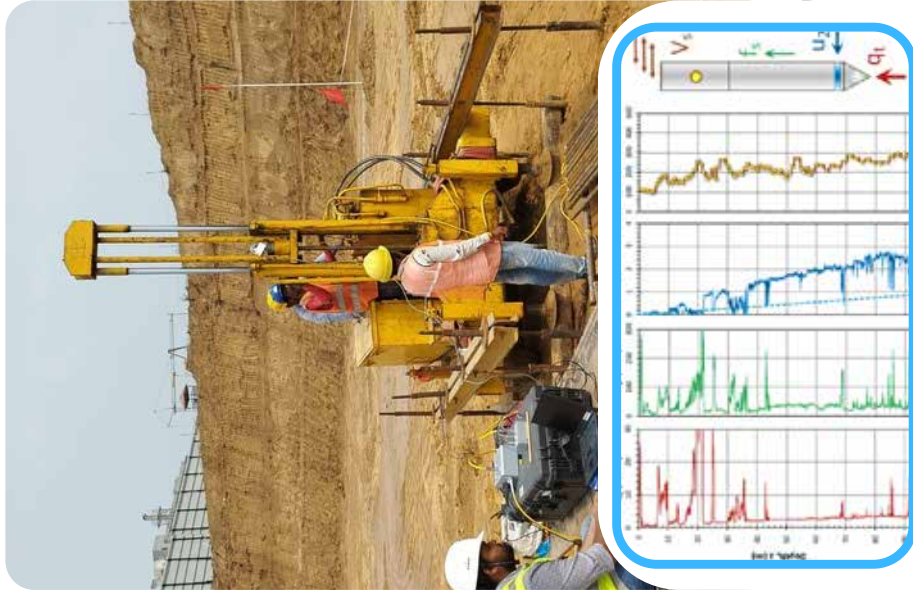
### EDITORIAL

Guest Editorial Message for Special Issue on IGC-2024 and 9IYGEC-2023 Keynote/Theme Volume <i>Manish S. Dixit, Neelima Satyam and A. P. Singh</i>	2217 - 2219
--	-------------

### ORIGINAL PAPERS

Insights into Centrifuge-Based Physical Modeling for Understanding the Performance of Geosttructures <i>B. V. S. Viswanadham</i>	2220 – 2296
Long-Term View on Sediment Disasters Under the Possible Effects of Climate Change <i>Ikuo Towhata</i>	2297 - 2307
Role of Finer Particles in Rheological Characterization of Debris Flows: Insights from Western Himalayas <i>Nikhil Kumar Pandey and Neelima Satyam</i>	2308 - 2324
Sustainability Assessment of Geopolymer Stabilized Highway Subgrades Using Industrial By-Products <i>Sunil S. Basarkar, G. Naveen and Tamoghna Dasgupta</i>	2325 - 2334
Challenges in Execution of Pile and Well Foundations for Infrastructural Projects <i>Sunil S. Basarkar, G. Naveen and Tamoghna Dasgupta</i>	2335 - 2347
Geosynthetic-Based Barrier System for Mitigating Ground Vibrations <i>Nitish Jauhari, Amarnath Hegde and Pradipta Chakraborty</i>	2348 - 2356
Failure and Retrofit Rectification of Reinforced Soil Wall on Hill Road <i>Atasi Das</i>	2357 - 2373
Assessment of Deformation Modulus in Reinforced and Unreinforced Pavement Layers using Semi- and Non-Destructive Testing Methods—Laboratory and Field Study <i>Prabodh Kumar Mahopatra, Vamsi Kommanamanchi, Sidhu Ramulu Duddu and Hariprasad Chennarapu</i>	2374 - 2383
Numerical Analysis of Shallow Foundation–Tunnel Interaction in Rock: Insights and Recommendations <i>Vinay Bhushan Chauhan</i>	2384 – 2393
Laboratory and Field Studies on Geogrid-Reinforced Pavements: Performance Evaluation and Carbon Footprint Analysis <i>Praveen Bodhanam S, Sai Meghana Polisetti and Ramu Baadiga</i>	2394 - 2415
Seismic Risk Management in Indian Urban Regions: A Comprehensive Approach <i>Tejaskumar Thaker and Aarohi Bhadiyadra</i>	2416 - 2429
Impact of Dynamic Load on Stability Analysis of Geotechnical Structures: Theoretical and Numerical Studies <i>Kaustav Chatterjee, Pratik Goel, Tapobrata Lodh, Somdutt Pathak, Rahul Verma, D.H. Siddalingeshwara and Mohit Kumar</i>	2430 - 2450
Uncertainties and Spatial Variability in Slope Stability and Landslide Runout Analysis <i>Abhijith Ajith C. Kavinkumar and Rakesh J. Pillai</i>	2451 - 2466
Scour Effects on the Dynamic Behavior of a Monopile-Supported Offshore Wind Turbine <i>Rituraj Singh, Sujawat Kottala Chandri Naidu and Ritesh Kumar</i>	2467 - 2476
Applications of Geophysical Techniques in Geotechnical Engineering <i>Divya Priya Balasubramani</i>	2477 – 2491
Damping Behavior of Bituminous Coal Under Impact Loading: A Comparison of Numerical and Experimental Study <i>Ankush Kumar Dogra, S. Rupal and illyas Ahmad Bhat</i>	2492 - 2502
Underground Storage Technologies for Storage of Hydrocarbons <i>Altaj Usmani</i>	2503 - 2509
Sustainability and Resilience: A New Paradigm in Geotechnical and Geoenvironmental Engineering <i>Krishna R. Reddy, Jagadeesh Kumar Janga and Girish Kumar</i>	2510 - 2531
Factors Affecting Crack Length of a Shallow Tunnel under Surface Impact Load <i>Swapnil Mishra, Avantika Mishra and N. K. Gupta</i>	2532 - 2546
An Integrated Approach to Co-seismic Landslide Hazard Assessment by Probabilistic Modeling of Parametrical Uncertainties in Modified Newmark's Model <i>Kunal Gupta and Neelima Satyam</i>	2547 - 2557
Potential of Bio-mediated Calcite Precipitation Methods for Heavy Metal Immobilization and Strength Enhancement of Contaminated Soils <i>Meghna Sharma</i>	2558 - 2562
A Review of the Negative Effects of Biochar on Soil in Green Infrastructure with Consideration of Soil Properties <i>Yuetong Lin, Qiqi Cai, Boneng Chen and Ankit Garg</i>	2563 - 2577
Economic and Environmental Assessment of RBI Grade 81-Stabilized and Polyester Fibre-Reinforced Soil Subgrades: A Comparative Study of Experimental and Theoretical Approaches <i>G. Gupta, H. Sood and P. K. Gupta</i>	2578 - 2612
Numerical Investigation on the Use of Scrap Tire Derivatives for Liquefaction Mitigation <i>Adyasha Swayamsiddha Amanta and Satyanarayana Murty Dasaka</i>	2613 - 2621
Geotechnical Behaviour and Utilisation of Sustainable Waste with Expensive Soil in Rural Roads as Subgrade Material <i>Faiqa Farooq and Murtaza Hasan</i>	2622- 2633
Elasto-Plastic Analysis of Machine Foundations Under Harmonic and Pulse Loading with Negative Phase <i>Kirtika Samanta and Priti Maheshwari</i>	2634 - 2668
Dynamic Behavior Analysis of Barak River Sand Using Resonant Column Apparatus <i>Gautam, Parikshit Dubey, Ankita Mazumdar and Debjit Bhowmik</i>	2669 - 2679
Numerical Modelling of Debris Flows for Simulation-Based Decision Support: An Indian Perspective <i>Minu Treasa Abraham, Neelima Satyam and Julia Kowalski</i>	2680 - 2692
Strength Development of Cohesive Soil Stabilized with Hazardous Wastes Fly Ash and Lime Sludge Powder-based Geopolymer Cured at Ambient Temperature <i>Jitendra Singh Yadav, Poonam Shekhawat and Praveen Kumar</i>	2693 - 2704





Elevate your geotechnical projects with **Seismic Cone Penetration Testing (SCPTu)** – the latest cutting-edge tool from Cengrs. Combining CPTu with the measurement of shear ( $V_s$ ) and compressional ( $V_p$ ) wave velocities, SCPTu offers unmatched insights into soil properties.

## Key Benefits:

- **Cost-Effective:** Cheaper and faster than Borehole Seismic Tests.
- **Enhanced Accuracy:** Independently measure soil  $V_s$  and  $V_p$  for improved reliability.
- **In-Depth Analysis:** Ideal for earthquake engineering, foundation design, and liquefaction assessments.
- **High Efficiency:** Evaluate up to 50m depth with precision, optimizing safety and performance.



**Unlock the future of geotechnical solutions  
with Cengrs' SCPTu testing.**

**Cengrs Geotechnica Pvt. Ltd.**

Corporate Office: A-100, Sec-63, Noida - 201309 (U.P) India | CIN- U74899DL1990PTC040605 | Phone: +91 120-4206771

Registered Office: Cengrs House, B- 3/87, Safdarjung Enclave, New Delhi-110029 E: [contact@cengrs.com](mailto:contact@cengrs.com), W: [www.cengrs.com](http://www.cengrs.com)



# 18SEE-2026

DEQ, IIT Roorkee



## ABOUT THE CONFERENCE

Organized every four years since 1959, the Symposia on Earthquake Engineering (SEE) have significantly contributed to advancing earthquake engineering education, research, and practice in India. The 18<sup>th</sup> Symposium on Earthquake Engineering (18SEE-2026) is being organized by Department of Earthquake Engineering (DEQ) and Indian Society of Earthquake Technology (ISET) at IIT Roorkee, during December 10-12, 2026.

## CALL FOR ABSTRACTS

Authors are invited to submit original research papers or case studies relevant to the themes of the symposium. All topics related to Earthquake Engineering and Earthquake Disaster Mitigation are invited. Select high-quality papers will be considered for publication in a peer-reviewed journal. All the accepted papers will be published as conference proceedings/book chapters in Springer.

**Submit your abstract:** [www.iitr.ac.in/18see](http://www.iitr.ac.in/18see)

## IMPORTANT DATES

- Last date for abstract submission : 15<sup>th</sup> December, 2025
- Acceptance of abstracts : 15<sup>th</sup> January, 2026
- Full-length manuscript submission : 15<sup>th</sup> March, 2026
- Intimation of acceptance/Reviewer comments : 30<sup>th</sup> April, 2026
- Submission of final revised manuscripts : 15<sup>th</sup> May, 2026

## SPONSORSHIP CATEGORIES

- Title Sponsor (Exclusive) : 15 Lakhs
- Platinum Sponsor : 10 Lakhs
- Diamond Sponsor : 7 Lakhs
- Gold Sponsor : 5 Lakhs
- Silver Sponsor : 3 Lakhs
- Bronze Sponsor : 2 Lakhs

The names of all sponsors will be prominently acknowledged.

## CONTACT US

Prof. Ravi S. Jakka,  
Organising Secretary, DEQ, IIT Roorkee,  
Roorkee, Uttarakhand-247667, India.

**Telephone** : +91-1332-28-5710/5675/5591.

**Email** : 18see@iitr.ac.in



Scan me!

## Supporting Organizations







# TECHGRID POLYESTER GEOGRID

For Mechanically Stabilized Earth Structure!

For over 22 Years TechFab  
has provided world-class  
Products & Solutions to all  
of our customers.

Tensile Strength :  
40 kN/m to 600 kN/m



[info@techfabindia.com](mailto:info@techfabindia.com)



[www.techfabindia.com](http://www.techfabindia.com)



TechFab India Industries Ltd.  
46/47, Maker Chambers VI, Nariman Point,  
Mumbai - 400021



# 12TH INTERNATIONAL SYMPOSIUM ON FIELD MONITORING IN GEOMECHANICS (ISFMG 2026)

## Abstract Submission is Open Now

### Venue

Indian Institute of Technology, Indore,  
Madhya Pradesh, India

### Invitation

It is with great pleasure that we extend a warm invitation to the 12th International Symposium on Field Monitoring in Geomechanics (ISFMG 2026) that will take place in **Indore**, from **August 6th to 10th, 2026**.

### Symposium Theme

The main theme of the symposium is "Advances in Field Monitoring for Geomechanics".

### Symposium Sub-Themes

- Tunnels and Underground Spaces
- Bridges and Transport Infrastructure
- Dams and Embankments
- Slopes and Earthworks
- Buildings and Foundations
- Mining and Landfill
- Environmental Monitoring
- The Observational Methods
- Specifications and Standards
- Excavation and Retaining Structure
- Inverse Modelling
- Advanced Design Technology

### Key Dates

Open for submission of abstracts	20 Feb 2025
Deadline for abstracts submission	15 Sep 2025
Notification of abstracts acceptance	07 July 2025
Submission of full manuscripts	01 Aug 2025
Deadline for final paper submission	31 Dec 2026
Notification of paper acceptance	01 Jan 2026

### Supported by

INDIAN GEOTECHNICAL SOCIETY



### Registration Fees

Registration Type	By 24.11.2025	After 24.11.2025	Onsite 24.02.2026
	\$	\$	\$
Standard Registration	600	700	900
Student Registration	300	350	500
SAARC Country Delegates	500	600	800
SAARC Country Students	250	300	400
Registration fee for IGS members		₹ 15000	

### 2<sup>nd</sup> Dunnicliff Honor Lecture



**Dr. (-Ing) Giorgio Pezzetti**

### Keynote Speakers



**Per Sparrevik**  
(Expert advisor, Field testing and Offshore Instrument at NGI)



**Prof. Ikuo Towhata**  
(Professor, Department of Civil Engineering, University of Tokyo)



**Prof. Jamie Standing**  
(Professor, Imperial College London)



**Arushi Bhalla**  
(Managing Director: Encardio Rite Group)

### Address for Correspondence

**Prof. Neelima Satyam**  
Symposium Convener  
Department of Civil Engineering,  
Indian Institute of Technology Indore  
+91-9440488034 (Mobile)  
convener@isfm2026.com  
neelima.satyam@iiti.ac.in  
neelima.satyam@gmail.com  
Visit us : [www.isfm2026.com](http://www.isfm2026.com)





## HYDRAULIC & ENGINEERING INSTRUMENTS

### LARGE SIZE CYCLIC TRIAXIAL SETUP (300 x 600 mm) FOR ROCK FILL MATERIAL. REDEFINING GEOTECHNICAL TESTING WITH ACCURACY & RELIABILITY



#### KEY FEATURES OF CYCLIC LARGE SIZE TRIAXIAL SETUP

- **High-Performance Actuator:** Capable of cyclic loading for dynamic triaxial testing with exceptional precision.
- **Advanced Control System:** Fully automated with real-time data acquisition and control for seamless operation.
- **Robust & Rigid Frame:** Engineered for stability and high-load capacity, ensuring consistent test results.
- **High-Resolution Sensors:** Equipped with precision transducers for axial load, displacement, and pore pressure measurements.
- **User-Friendly Software:** Intuitive interface for easy test setup, monitoring, and analysis.
- **Versatile Testing Capabilities:** Supports static and dynamic triaxial tests, including liquefaction, modulus, and strength determination.
- **Efficient Hydraulic System:** Ensures smooth and controlled loading with minimal noise and energy consumption.
- High quality rubber membranes are provided along with the machine which can take the confining pressure up to 3000KPA

### ADVANCED DYNAMIC TRIAXIAL TEST APPARATUS (300 x 600 mm)



#### KEY FEATURES

- Tests both saturated & unsaturated soils with dynamic/static cyclic loading
- Fully computer-controlled system with closed-loop operation
- Capable of stress path, bender element, and liquefaction tests
- Modular triaxial cells for specimens from 38mm to 100mm diameter
- Real-time monitoring of load, pressure, volume change & cycles
- Includes HAE disc system for accurate unsaturated soil testing
- Supports advanced testing modes: Stress/Strain controlled, Dynamic Ramps,  $K_0$  tests, and more
- Windows-based software with detailed graphical analysis as per ASTM D5311 & D3999
- Supplied with PC, oscilloscope, function generator, amplifier, and bender element setup

B-59/4, Naraina Industrial Area, Phase-2, New Delhi - 110028

Phone: +91-11-41418424, 47553820, Mobile: +91-8826898490, E-mail: [info@heicoin.com](mailto:info@heicoin.com), [www.heicoin.com](http://www.heicoin.com)

Plot No. 1403 & 1276, Sector-38, Phase-1, HSIIDC, Industrial Estate, Rai, Sonapat, Haryana - 131029

Offices at: Delhi, Sonapat, Pune, Chennai, Kolkata, Hyderabad, Uttar Pradesh, Chandigarh.

**ANNUAL CONFERENCE OF THE INDIAN GEOTECHNICAL SOCIETY  
INDIAN GEOTECHNICAL CONFERENCE -2026**

**IGC 2026: GEOCHENNAI**

**“GEOTECHNICAL CHALLENGES IN ENGINEERING ASSOCIATED WITH  
INFRASTRUCTURE”**

**Organised by**

**IGS CHENNAI CHAPTER IN ASSOCIATION WITH INDIAN INSTITUTE OF TECHNOLOGY MADRAS  
AND COLLEGE OF ENGINEERING (CEG), GUINDY CAMPUS, ANNA UNIVERSITY, CHENNAI**

**December 17-19, 2026; RESEARCH PARK, IIT Madras, Chennai**

**ABSTRACT SUBMISSION IS OPENING SOON**



**INVITATION**

Indian Geotechnical Society (IGS) Chennai Chapter in association with IIT Madras and CEG Anna University, extend a warm invitation to the IGC 2026 to be held at IITM research park, IIT Madras, Chennai.

**CONFERENCE THEME**

Geotechnical challenges in engineering associated with infrastructure, GEOCHENNAI.

**SUB-THEMES**

- Geotechnical Investigation, Laboratory and Field Testing
- Foundations Engineering and Earth-retaining structures
- Geosynthetics and Reinforced Soil Structures
- Ground Improvement
- AI-ML Applications in Geotechnical Engineering
- Case Studies in Geotechnical Engineering
- Case Studies in Geotechnical Engineering
- Slope Stability and landslides.
- Uncertainties, risk and reliability in geotechnical engineering
- Soil dynamics and Earthquake Engineering
- Offshore Geotechnical engineering
- Computational Geomechanics and Numerical modelling
- Rock mechanics, tunnelling and underground structures
- Transportation Geotechnics
- Geo-environmental engineering and unsaturated soil

**Important Dates**

Last Date for abstract Submission	15.03.2026
Intimation of abstract acceptance	15.05.2026
Last Date for full paper submission	15.07.2026
Intimation of Paper acceptance	15.09.2026
Submission of Camera-ready Paper	30.09.2026
Last date for registration of accepted papers	15.10.2026

Visit the website [www.igc2026.org](http://www.igc2026.org) to register and abstract submission. Selected papers will be published in Scopus indexed Springer proceedings.

**Sponsorship**

Sponsorship Category	Fee (INR Lakhs)	Number of Free Delegates	Exhibition Space
Diamond	20.0	8	Yes
Platinum	15.0	6	Yes
Gold	10.0	4	Yes
Silver	5.0	3	--
Bronze	2.0	2	--
Supporters	0.50	1	--

**Registration Charges**

Delegation Category	Upto 31 <sup>st</sup> Oct.2026 INR	After 31 <sup>st</sup> Oct. 2026 INR
IGS Member	9000	10000
Non-IGS member	10000	11000
Senior Citizens	4500	4500
Spouse	4000	4000
Students / Research Scholars	4000	4500

**CORRESPONDENCE**

**R. G. Robinson/V.B. Maji**

On behalf of TEAM IGC-2026: GEOCHENNAI

Department of Civil Engineering,

Indian Institute of Technology Madras, Chennai-600036.

Website: [www.igc2026.org](http://www.igc2026.org), Email: [igcgeochennai@gmail.com](mailto:igcgeochennai@gmail.com)

Ph: 044 2257 4294 / Mobile: 9445422073



CELEBRATING  
**18** YEARS OF  
EXCELLENCE



## SARATHY GEOTECH AND ENGINEERING SERVICES PVT. LTD.

Explore the New Depths with Us

SGES is a leading geotechnical and foundation engineering consulting company specialized in various geotechnical services that provide comprehensive information via our Integrated Survey Services for Offshore & On-land Projects.



+91 9844875900



[www.sarathygeotech.com](http://www.sarathygeotech.com)



[info@sarathygeotech.com](mailto:info@sarathygeotech.com)



# Welcome to New Members

*The Executive Committee of IGS extends hearty welcome to the following members who have been admitted to the Society recently/ elevated to Fellowship.*

## LIFE FELLOWS

SUBBA REDDY NELLURU	LF-0681
ANNALURU USHA	LF-0682

## ASSOCIATE MEMBER

GARWARE TECHNICAL FIBRES LTD	AM-0046
------------------------------	---------

## LIFE MEMBERS

SUDARSHAN BHAUSAHEB SHINDE	LM-5993
PRAKHAR TYAGI	LM-5994
RAJAT VERMA	LM-5995
SAURABH PANDEY	LM-5996
DILEEP KUMAR	LM-5997
RAM JANAM VERMA	LM-5998
ROMIT RAJENDRA KAWARE	LM-5999
RITVICK BHALLA	LM-6000
ZISHAN RAZA KHAN	LM-6001
SYED AQEEL AHMAD	LM-6002
AJAY SHARMA	LM-6003
UJJWAL SRIVASTAVA	LM-6004
HARSHA VARDHAN BELLAMKONDA	LM-6005
VISHWESHWARAN M	LM-6006
ABIRAMACHANDER TAMILARASAN	LM-6007
VENUSHREE SURYAKANT KHANKE	LM-6008
RAJAT BANIK	LM-6009
ANKITA ROY GHATAK	LM-6010
VIKAS NIVRUTTI PIMPALKAR	LM-6011
SAMPAT RANGNATH MANDLIK	LM-6012
SAGAR M	LM-6013
DEBTANU SETH	LM-6014
ABITHA BABU	LM-6015
HIMANSHU SAURAV	LM-6016
ARJUN S	LM-6017
SIDHARTH K C	LM-6018
DEEPIKA TIRUMALA	LM-6019
SRIDHAR VALLURI	LM-6020
RAHUL KHANNA	LM-6021
BINDHU LAL	LM-6022
NEERAJ KUMAR	LM-6023
T SARADA	LM-6024
PHANINDRA GUDAPATI	LM-6025
SUBHANKAR KARMAKAR	LM-6026
MD EMAD UDDIN	LM-6027
MIDHULA JAYANANDAN	LM-6028
HARDIK BHARATBHAI ASHARA	LM-6029
ADITYA ABHAYKUMAR GANDHI	LM-6030
SANYAM DANGAYACH	LM-6031
LOHITHA B.	LM-6032
KEERTHANA S.	LM-6033
VAIBHAV SHARMA	LM-6034
AAYUSH KUMAR	LM-6035
PRABHAKAR VISHWAKARMA	LM-6036
NAMITHA ROY	LM-6037
SUMIT KUMAR	LM-6038
AMRESH KUMAR YADAV	LM-6039

VIJAYAKUMAR SUREBAN	LM-6040
PRAMOD KESHAV KOLASE	LM-6041
SARAVANAN G.	LM-6042
CHIRANJIB PRASAD SARMA	LM-6043
RAJESH KUMAR SHUKLA	LM-6044
SUMAN ROY	LM-6045
SATADAL DEBNATH	LM-6046
ALEENA BINTH K.H.	LM-6047
SUMIT SINGH	LM-6048
MANISH DEWRARI	LM-6049
MAYURA SHRIRAM TATE	LM-6050
SHASHIKANT	LM-6051
HARSHWARDHAN DHANANJAY PATIL	LM-6052
ABHISHEK SUBHASH KHADE	LM-6053
SUNIL SINGH	LM-6054
GOURAV BAVEJA	LM-6055
SHYAM NARAYAN TRIPATHI	LM-6056
SHIRISH VINAYAK DEO	LM-6057
SHANKAR KUMAR	LM-6058
ANURAG SHANTARAM CHAFALE	LM-6059
KARTHIK N	LM-6060
RAKESH BHATT	LM-6061
APARNA HIMMATRAO CHAVAN	LM-6062
SRUTHI SEKHAR PALLELA	LM-6063
ARATI SAURABH GUND	LM-6064
SREENIVASA VENKATARAMANA JETTY	LM-6065
VISHWAJEET KHAN	LM-6066
NITHIN JACOB JOHN	LM-6067
VENKATA ABHISHEK SAKLESHPUR	LM-6068
LIJITH K P	LM-6069
SHOBHA RANI ARANGI	LM-6070
SHRESHTHA RAWAT	LM-6071
NEERO GUMSAR SORUM	LM-6072
ANKIT KUMAR YADAV	LM-6073
SAURABH KUMAR	LM-6074
BHUKYA PRAKASH	LM-6075
BABITA SAH	LM-6076
KUMBAMUTLANG WAR	LM-6077

## STUDENT MEMBERS

SANGEETH P.	SM-0426
ARUNIMA K.	SM-0427
AYYUB KHAN	SM-0428
ANUNANDA A.	SM-0429
VISHAL MOURYA KUMAR	SM-0430
LADI KRANTI KUMAR	SM-0431
ANKIT KUMAR SUMAN	SM-0432
MANISH SHARMA	SM-0433
TANISHQ KARANWAL	SM-0434
KUMARI SHRADDH	SM-0435
VANDANA BRAR	SM-0436
BALAJI SAI KUMAR BANDARU	SM-0437
SAHIL WANI	SM-0438
NANDINI SINGH	SM-0439



# Pioneers in Instrumentation Shaping the Future Together

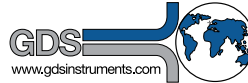
## Shear System

The GDS Electromechanical Dynamic Cyclic Simple Shear Device (EMDCSS) is a high-precision, upgradeable system for simple and direct shear testing, capable of dynamic cyclic and quasi-static tests across a wide strain range ideal for advanced commercial and academic research



## PLUS GDSLAB

The leading Geotechnical Testing Software on the market.

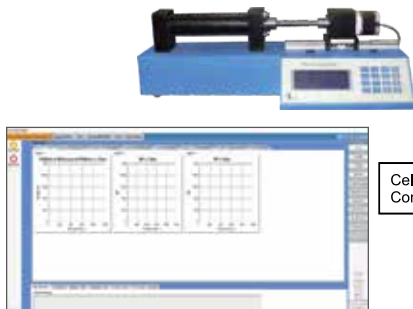


## Automatic Rock Static Triaxial System

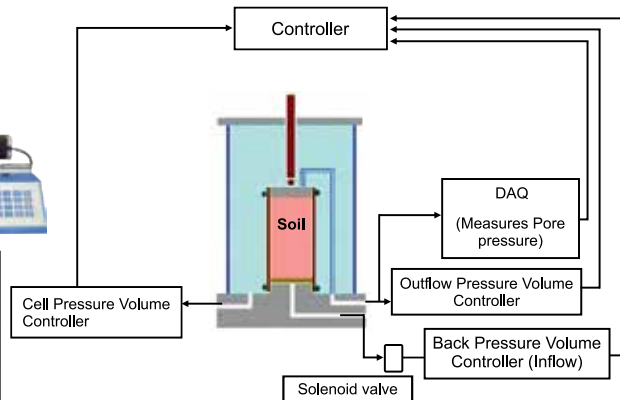
Rock Static Triaxial Cum Unconfined Compressive Strength System is a fully automated, software-controlled testing machine (500 kN–3000 kN range) that ensures precise PID-based pace rate control, automatic pump operation, and test reinitialization with load resolution



## Accelerated Permeability System



Online Test Graph



Block Diagram of Accelerated Permeability System



Visit us at:  
**Indian Geotechnical Conference,**  
NIT Jalandhar  
18<sup>th</sup> - 20<sup>th</sup> Dec, 2025



For further information, please contact us:

E-mail: [delhi@aimil.com](mailto:delhi@aimil.com) | Tel: 91-11-6131 0200 | [www.aimil.com](http://www.aimil.com)

### Offices at :

• Delhi (H.O.) • Mumbai • Bengaluru • Kolkata • Chennai • Vadodara  
• Hyderabad • Chandigarh • Guwahati • Bhubaneswar • Indore  
• Nagpur • Pune • Bangladesh • Thiruvananthapuram



Aimil/Ad/Civil/25-26/10/12

## Instrumentation & Technologies

**Editor** : Dr. A.P. Singh, Hon. Secretary, IGS & Director, Explore Engineering Consultants Pvt. Ltd., C-273, Sector 63, Noida, Uttar Pradesh 201301

**Assoc. Editor** : Mr. Sanjay Arora, Exec. Secretary, Indian Geotechnical Society, 206, Manisha, 75-76, Nehru Place, New Delhi-110019

**Published by** : Indian Geotechnical Society (Regn. No. S/18957), 206, Manisha, 75-76, Nehru Place, New Delhi-110019  
Email : [admin@igs.org.in](mailto:admin@igs.org.in), [igsheadquarter@gmail.com](mailto:igsheadquarter@gmail.com), Website: [www.igs.org.in](http://www.igs.org.in), Ph. : 011-26210361

**Printed by** : Pushpak Press Pvt. Ltd., 203-204, DSIDC Complex, Okhla Phase-I, New Delhi-110020