

Report on Nepal's Participation at 1ST Geotech Asia 2025

GeoVadis : The Future of Geotechnical Engineering

7-10 OCTOBER, 2025 | TAJ CIDADE DE GOA HORIZON, GOA, INDIA



About 1st Geotech Asia 2025

The Geotech Asia Conference is a newly established Asian-level initiative under the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), recognized as the second premier regional conference after the Asian Regional Conference (ARC). It was introduced to bridge the gap between ARCs and foster continuous collaboration, innovation, and knowledge exchange among Asia's geotechnical community.

Following the 17th ARC in Astana, Kazakhstan (August 2023), the 1st Geotech Asia 2025 was successfully held from October 7–10, 2025, at Taj Cidade De Goa Horizon, Goa, India. The event also featured pre-conference workshops on Forensic Geotechnical Engineering and Risk Management and Machine Learning, providing hands-on exposure to emerging practices in geotechnical risk analysis and natural hazard investigations.

The conference hosted the ISSMGE Board Meeting, attracting over 650 participants from 28+ countries. Recognized as one of Asia's most successful geotechnical conferences, Geotech Asia now stands as the second major ISSMGE Asian level conference. The next edition, the 2nd Geotech Asia, will be hosted by Iran in 2029, continuing the legacy of “Geotechnical Without Borders.”



Welcome Dance of 1st Geotech Asia 2025



Inauguration Ceremony of 1st Geotech Asia 2025



Group Photo after Closing Ceremony of 1st Geotech Asia 2025

Nepal's Participation

A team of Nepali engineers, researchers, and young professionals participated in the 1st Geotech Asia 2025. Representing Nepal on this international platform, 20 delegates attended the conference, among whom 13 presented technical papers on topics such as slope stability, foundation systems, geohazard risk management, and underground construction.

The event served as a valuable opportunity for Nepali participants to present their research, share experiences, and engage in meaningful networking with international experts and professionals. Their active involvement reflected the growing interest and capability of Nepal's young engineers in contributing to the regional geotechnical community.

The Nepal Geotechnical Society (NGS) continues to support and encourage youth participation, enabling emerging engineers to learn, collaborate, and engage with global peers. In line with this commitment, NGS partially sponsored (travel and accommodation) for Er. Bipul Mainali, an M.Sc. student in Geotechnical Engineering at Pulchowk Campus, to participate in the conference.

This participation underscores Nepal's dedication to advancing geotechnical knowledge, fostering youth leadership, and strengthening regional cooperation for sustainable and resilient infrastructure development.



Group Photo of Nepali representative (First Row from left to right: Suresh Neupane, Arvind Kumar Jha, Uday Neupane, Netra Prakash Bhandary, Indra Prasad Acharya, Mandip Subedi, Kalpana Adhikari, Aanchal Tiwari, Bandana Acharya, Mandakini Karki, Prava Baral and Shweta Sah) and (Top Row from Left to Right: Harish Paneru, Tulsi Ram Bhattarai, Khemraj Pokharel, Dhundi Raj Pathak, Darshan Babu Adhikari, Rajan KC, Rajkumar Adhikari and Bipul Mainali)

Activities at 1st Geotech Asia 2025

Keynote Presentation

Nepal's presence at the 1st Geotech Asia 2025 was significantly marked by a keynote address titled "A Decade After the 2015 Gorkha Earthquake: Reassessing Nepal's Readiness for Future Seismic Events." Delivered by Dr. Mandip Subedi, Immediate Past President of the Nepal Geotechnical Society, the presentation drew wide attention from participants across Asia for its depth and relevance to seismic risk management in mountainous regions.

The keynote revisited the 2015 Gorkha Earthquake, outlining the technical lessons learned and the progress made in the areas of slope stability, foundation systems, ground response studies, and infrastructure resilience. It also reflected on more recent seismic events, including the 2023 Jajarkot Earthquake, drawing parallels between past and present challenges in earthquake preparedness and recovery in Nepal.

The presentation emphasized the need for improved geotechnical data collection, integration of digital modeling tools, and the adoption of site specific design practices to enhance seismic safety. It also highlighted Nepal's continued efforts toward disaster risk reduction through institutional collaboration, updated engineering codes, and capacity-building initiatives.

The address was well received by the international audience and was commended for its balanced perspective on both achievements and ongoing challenges. It reaffirmed Nepal's proactive role in promoting earthquake resilience and its growing contribution to regional dialogue on geotechnical disaster management.



Keynote session from Dr. Mandip Subedi, Immediate Past President of NGS

Activities at 1st Geotech Asia 2025

Presentations

At the 1st Geotech Asia 2025, 13 delegates from Nepal actively contributed through oral presentations, covering critical geotechnical topics such as slope stability, foundation systems, seismic risk assessment, and soil behavior. The presentations highlighted both theoretical insights and practical applications relevant to the region.

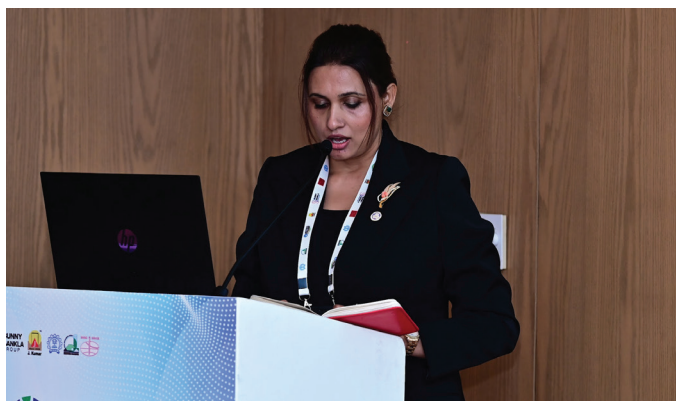
The conference offered an excellent platform for young engineers and researchers to demonstrate their technical expertise, engage with peers from across Asia, and gain valuable feedback from leading professionals. Their active participation underscores Nepal's growing role in advancing innovative and sustainable geotechnical practices at the international level.

**Title:**

Safe Utilization of Wastewater Sludge: From Lab Characterization to Field Use

Presenter:

Dhundi Raj Pathak,
Nepal Geotechnical Society

**Title:**

Integrated Geophysical and Geotechnical Assessment of Unstable Slope in Kaligandaki Corridor, Nepal

Presenter:

Kalpana Adhikari
Department of Roads, Government of Nepal

**Title:**

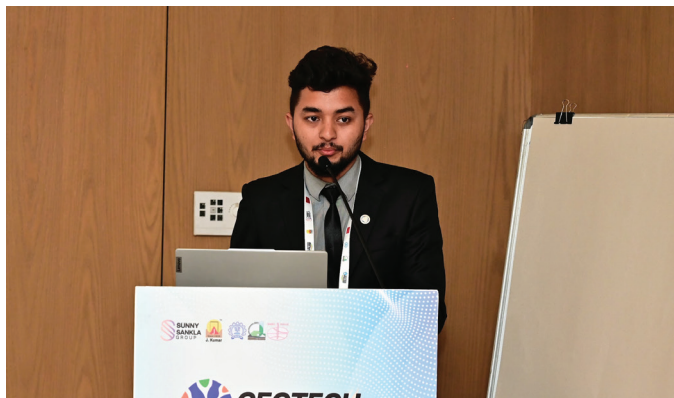
Rockfall Hazard Assessment and Mitigation Measures for Rasuwagadhi Hydroelectric Project, Nepal

Presenter:

Darshan Babu Adhikari,
Chilime Engineering and Services Company Ltd.

Activities at 1st Geotech Asia 2025

Presentations



Title:

Weathering the Future: Climate-Resilient Road Design Lessons from Nepal's BP Highway Flood 2024

Presenter:

Rajan KC,
GeoInfra Research Institute



Title:

Comparative Study of Liquefaction Potential of Core areas of Kathmandu Valley using Microtremor Measurement

Presenter:

Khemraj Pokharel,
IOE, Pulchowk Campus



Title:

From Grains to Internal Friction Angle (ϕ) in the Siwalik of Nepal: Misinterpretation Risk

Presenter:

Mandakini Karki,
Soil Test Pvt. Ltd.



Title:

Application of Micro-pile for slope stability, case study of Jhyaple Khola, NM Road, Nepal

Presenter:

Udaya Raj Neupane,
Clay Engineering Pvt. Ltd.

Activities at 1st Geotech Asia 2025

Presentations



Title 1:

Seismic Response of Imja Lake Moraine Dam and Outlet Structure under Kobe and Chile Earthquakes

Title 2:

Seismic Response and Instability Analysis of Moraine Dam of Imja Glacier Lake

Presenter:

Aanchal Tiwari,
IOE, Pulchowk Campus

During the conference, the Nepali delegation had the pleasure of meeting two distinguished Nepali presenters making significant contributions in the geotechnical field. Dr. Arvind Kumar Jha, currently serving as an Associate Professor at IIT Patna, shared his valuable research insights and represented Nepal with academic excellence on this international platform. Similarly, Er. Shweta Sah, a graduate of Pulchowk Campus who completed her M.Tech in Geotechnical Engineering from IIT Hyderabad and is now working at Jacobs, also presented her work at the conference. Their achievements reflect the growing presence of Nepali professionals in renowned academic and industrial institutions, inspiring young engineers to pursue excellence and global engagement in geotechnical engineering.



Title:

Advancing Liquefaction Susceptibility Assessment Assessment with Machine Learning on Cyclic Triaxial Test Data

Presenter:

Shweta Sah,
IIT Hyderabad

Activities at 1st Geotech Asia 2025

Presentations

The Nepal Geotechnical Society (NGS) acknowledges the valuable contribution of Dr. Netra Prakash Bhandary, Past President of NGS and Professor at Ehime University, Japan. Dr. Bhandary, along with his Nepali PhD students, actively participated in the 1st Geotech Asia 2025, presenting their ongoing research and sharing insights. His continuous efforts to connect Nepali scholars with international academic and research communities have been instrumental in fostering collaboration and enhancing Nepal's academic presence in the global geotechnical field.

The following were the presenters and topics from Ehime University, Japan:



Title:

A Comparative Study on Machine Learning Models to Predict Landslide Susceptibility

Presenter:

Tulasi Ram Bhattarai,
Ehime University



Title:

A Comparative Study of ANN Models for the Prediction of Soil Compaction Parameters

Presenter:

Harish Paneru,
Ehime University



Title:

Comparative Assessment of Antecedent Rainfall Threshold for Roadside Landslide Prediction

Presenter:

Suresh Neupane,
Ehime University

Activities at 1st Geotech Asia 2025

ISSMGE Asian Council Meeting (11th AYGEC Announcement)

A proud moment for Nepal, the Nepal Geotechnical Society (NGS) secured the opportunity to host the 11th Asian Young Geotechnical Engineers Conference (AYGEC) during the ISSMGE Asian Council Meeting held alongside the 1st Geotech Asia 2025. Dr. Indra Prasad Acharya, President of NGS, presented the Society's activities over the past year. During the ISSMGE Asian Council Meeting, bids were presented for both the 2nd Geotech Asia and the 11th AYGEC. While the 2nd Geotech Asia is scheduled to be hosted by Iran in 2029, Nepal's bid to host the 11th AYGEC was graciously approved by all Asian member societies, reflecting their confidence in Nepal's ability to organize a meaningful and successful international event. ISSMGE Vice President for Asia, Keh-Jian Shou, and IGS President Dr. Anil Joseph pledged strong support to ensure its successful organization in May 2027.

This achievement highlights Nepal's growing role in the regional geotechnical community and provides a dynamic platform for young engineers and researchers to engage with peers across Asia, advance innovative practices, and strengthen professional collaboration.



Dr. Indra Prasad Acharya, President, NGS and Dr. Mandip Subedi, Immediate Past President, NGS at ISSMGE Asian Council Meeting

Activities at 1st Geotech Asia 2025

Panel Discussion

Nepal made a prominent mark at the panel discussion on “Advances in Geotechnical Engineering in Asia”, with Assoc. Prof. Dr. Indra Prasad Acharya, President of Nepal Geotechnical Society representing the country alongside leading experts from across the continent. The discussion highlighted emerging trends, innovative solutions, and regional challenges in geotechnical engineering, including slope stability, foundation systems, underground construction, and sustainable practices.

The session provided an excellent platform for Nepal to showcase its technical expertise and thought leadership, while enabling both senior and young professionals to engage in knowledge exchange with international peers. Through active participation, Nepalese delegates reinforced their commitment to advancing research-driven and practical geotechnical solutions, strengthening the country’s profile within the Asian geotechnical community.



Dr. Indra Prasad Acharya, President, NGS in Panel discussion on topic “Advances in Geotechnical Engineering in Asia”

Activities at 1st Geotech Asia 2025

Collaborative Forums

During the 1st Geotech Asia 2025 in Goa, the Nepal Geotechnical Society (NGS) held productive discussions with the Indian Geotechnical Society (IGS) and the Sri Lankan Geotechnical Society (SLGS) to strengthen regional cooperation and academic partnership in geotechnical engineering.

The meetings emphasized joint workshops, technical seminars, and youth exchange initiatives, aiming to enhance professional capacity and foster innovation across South Asia. NGS extended heartfelt appreciation to Dr. Anil Joseph, President of IGS, and his team for their warm hospitality and excellent organization of the event.

The exchange of tokens of love symbolized mutual respect, friendship, and the shared vision of “Geotechnical without Borders.” These engagements reinforced NGS’s growing collaboration with neighboring societies, laying the foundation for continued cooperation in research, training, and professional development.



Interaction with Indian Geotechnical Society and Sri Lankan Geotechnical Society



Token of Love presented to Dr. Anil Joseph, President of IGS



Token of Love presented to Dr. A.P. Singh, Honorary Secretary of IGS

Activities at 1st Geotech Asia 2025

Collaborative Forums

During the 1st Geotech Asia 2025, the Nepal Geotechnical Society (NGS) met with the President of the Japanese Geotechnical Society (JGS) to discuss future collaboration. The meeting focused on developing a Geotechnical Database System for Nepal, supporting data-driven design.

This partnership reflects JGS's support for Nepal's geotechnical advancement and NGS's commitment to digital transformation, knowledge exchange, and joint research for sustainable infrastructure development.



Meeting with President of The Japanese Geotechnical Society

At the 1st Geotech Asia 2025 in Goa, the Nepal Geotechnical Society (NGS) held productive discussions with representatives from the Korean Geotechnical Society (KGS) to explore future avenues for collaboration. Both societies expressed strong interest in promoting joint research initiatives, academic exchanges, and professional training programs aimed at advancing geotechnical engineering practices. The discussions also highlighted potential partnerships in youth engagement, workshops, and knowledge-sharing platforms, providing opportunities for Nepali and Korean engineers to learn from each other's experiences and innovations. This engagement reflects NGS's commitment to strengthening regional cooperation, fostering innovation, and positioning Nepal as an active contributor to Asia's geotechnical community.



Interaction with Korean Geotechnical Society

Activities at 1st Geotech Asia 2025

Collaborative Forums

During the 1st Geotech Asia 2025, the Nepal Geotechnical Society (NGS) engaged with Dr. Chaido Doulala-Rigby, a distinguished member of the British Geotechnical Association (BGA), to explore avenues for collaboration. Leveraging her extensive expertise in geotechnical engineering, risk management, and international projects, the discussions focused on joint research initiatives, professional training programs, and knowledge sharing opportunities. This collaboration aims to strengthen Nepal's engagement with global geotechnical practices and foster innovation within the regional engineering community.



Token of Love presented to Dr. Chaido Doulala-Rigby, Member, British Geotechnical Association (BGA)



Token of Love presented to Dr. Marc Ballouz, President of ISSMGE and Group Photo



Token of Love presented to Prof. Ashish Juneja, IIT Bombay



Token of Love presented to Prof. Dasaka S. Murthy, IIT Bombay



Activities at 1st Geotech Asia 2025

Student Perspectives and Media Engagement

Er. Bipul Mainali,

Student Member, NGS and IOE, Pulchowk Campus

Attending the 1st Geotech Asia 2025 in Goa was my first international conference outside Nepal, following my involvement in the first and second editions of GeoMandu. It provided a valuable opportunity to engage with the global geotechnical community and exchange ideas on topics ranging from geotechnical engineering and geohazard risk management to Physics Informed Machine Learning. Interacting with professors from institutions worldwide, including several from the Indian Institutes of Technology, broadened my perspective in Computational GeoMechanics and Geohazard Risk Management.

I am grateful to the Nepal Geotechnical Society for this opportunity and look forward to contributing further to research, collaboration, and innovation in geotechnical engineering.



Er. Rajkumar Adhikari,

Student Member, Engineer को कथा

As a student participant and media partner for the Nepal Geotechnical Society, my engagement at Geotech Asia 2025 was exceptionally valuable. I had the honor of conducting interviews with distinguished leaders, including the Vice President of ISSMGE, the President of the Indian Geotechnical Society, and esteemed professors from various IITs. These interactions, highlighted in the accompanying photographs, provided deep insights into our field's future. From an engineering media perspective, the conference was an inspiring and dynamic platform for knowledge dissemination and professional networking.



Glimpses of media interactions conducted by Er. Rajkumar Adhikari with various delegates

Activities at 1st Geotech Asia 2025

Pre-Conference Workshop

Prior to the main sessions of Geotech Asia 2025, a series of pre-conference workshops were conducted, providing participants with hands-on learning and exposure to emerging trends in geotechnical engineering. Nepali delegates actively participated in two major workshops “Forensic Geotechnical Engineering for Natural Hazards Impacts” and “Risk Management and Machine Learning.”

The Forensic Geotechnical Engineering workshop focused on post-event investigations, failure analysis, and lessons learned from natural hazard impacts, emphasizing the importance of resilient and evidence-based design. Meanwhile, the Risk Management and Machine Learning Workshop explored the use of data analytics, predictive modeling, and artificial intelligence in geotechnical risk assessment and decision-making.

Participation in these workshops offered young Nepali engineers and researchers a valuable opportunity to enhance their technical knowledge, interact with international experts, and gain insights into innovative methodologies shaping the future of geotechnical practice.



Er. Bipul Mainali, NGS Youth Coordinator participating in Risk Management and Machine Learning Workshop

Activities at 1st Geotech Asia 2025

Exhibition and Technical Stalls

The Exhibition and Technical Stalls at the 1st Geotech Asia 2025 served as platform for showcasing the latest technologies, products, and innovations in geotechnical engineering. Leading international and regional companies, research institutions, and professional societies presented their cutting edge solutions related to geotechnical Engineering.

The Nepal Geotechnical Society delegates actively visited these stalls, engaging with exhibitors to explore emerging technologies and potential applications relevant to Nepal's geotechnical and infrastructure development context. The exhibition also provided valuable opportunities for knowledge exchange, networking, and fostering partnerships with technology providers and research organizations.

Such interactions not only enhanced participants' understanding of global advancements but also inspired new ideas for integrating innovative tools and methods into Nepal's geotechnical practices, contributing to sustainable and resilient infrastructure development.

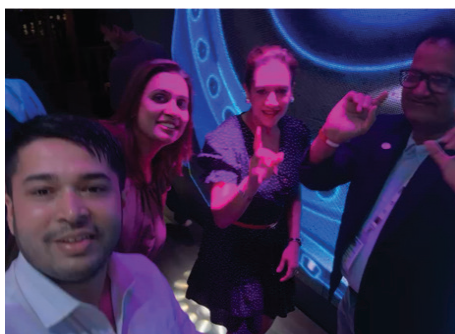


Some stall photographs at 1st Geotech Asia 2025

Activities at 1st Geotech Asia 2025

Gala Dinner and Cultural Exchange

Nepali delegates actively participated in the Gala Dinner and cultural programs, interacting with peers, senior professionals, and experts from across Asia. These events offered a unique platform to share experiences, exchange ideas, and foster cross cultural understanding. Delegates also enjoyed learning Portuguese dance, adding a lively cultural touch to the evening while building meaningful professional connections and strengthening Nepal's presence within the international geotechnical community.



Participants from Nepal at Gala Dinner and Cultural Program at 1st Geotech Asia 2025

Beyond the Conference

Exploration of Goa

During Geotech Asia 2025, the Nepali delegation explored Goa's vibrant culture and scenic beauty, visiting beaches, landmarks, and local markets. They also engaged in cultural exchange during the Gala Dinner and programs, learning Portuguese dance and sharing Nepali traditions. These experiences fostered camaraderie, strengthened professional connections, and enriched their international representation of Nepal.



Nepali Delegates enjoying different activities in Goa

Beyond the Conference

Exploration of Goa



Nepali Delegates enjoying different activities in Goa

Beyond the Conference

Youth Opportunity and Networking

The 1st Geotech Asia 2025 provided a dynamic platform for young Nepali engineers and researchers to engage with the global geotechnical community. A highlight was Dr. Mandip Subedi's conversation with Ashe Cooper, Chair of the Young Member Presidential Group (YMPG-ISSMGE), focusing on youth collaboration opportunities with Nepal. This interaction emphasized the importance of networking, mentorship, and active participation of young professionals in shaping the future of geotechnical engineering.

In addition, several youth delegates from Nepal actively interacted with distinguished professors, researchers, and experts representing various universities and organizations worldwide. These engagements facilitated meaningful discussions on current research trends, academic-industry partnerships, and emerging technologies in geotechnical engineering. Such interactions not only broadened the participants' perspectives but also encouraged them to contribute more actively to international forums. The experience truly reinforced Nepal's growing presence, capability, and enthusiasm within the global geotechnical engineering community.



Some Glimpses of Youth Engagement with International Delegates

Concluding Message

Message Based on the Closing Ceremony Speech by Dr. Mandip Subedi

The participation of the Nepali at the 1st Geotech Asia 2025 has been a truly inspiring and memorable experience. These few days in Goa were filled with learning, collaboration, and friendship strengthening our bond with the Asian and global geotechnical community. NGS, extend heartfelt gratitude to the Indian Geotechnical Society for their warm hospitality and outstanding organization. Special appreciation goes to Dr. Anil Joseph, President of IGS, and Prof. Dr. Ashish Juneja of IIT Bombay, whose dedication and leadership made this event a grand success.

For Nepal, Geotech Asia 2025 was not only a platform to share technical knowledge but also a moment of pride and connection. With over 20 participants, including enthusiastic young engineers and researchers, Nepal's presence reflected a growing spirit of collaboration and contribution to geotechnical advancement in the region.

A defining milestone for NGS was the announcement of Nepal being selected to host the 11th AYGEC. This achievement symbolizes the trust and recognition Nepal has earned within the international community, and we are committed to making this upcoming event in Kathmandu a meaningful and impactful gathering for all young professionals.

As Dr. Marc Ballouz says, "Geotechnical without borders," and as Dr. Anil Joseph beautifully reminds us, "Brothers without borders." In the same spirit, we truly believe in mutual feeling of "Friendship without borders creates knowledge without limits."

The Nepal Geotechnical Society deeply values its friendship with the Indian Geotechnical Society and the wider ISSMGE family. Together, let us continue to learn, innovate, and build safer, more resilient communities across Asia and beyond.

We sincerely thank all participants of the 1st Geotech Asia 2025 and look forward to seeing you at the 3rd GeoMandu and 11th AYGEC in Kathmandu.



Dr. Mandip Subedi, Immediate Past President, NGS with his remarks in Closing Ceremony of 1st Geotech Asia 2025

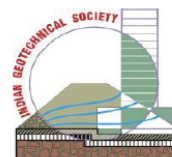
Thank You Message from 1st Geotech Asia 2025

Letter of Thanks by organizing chairs to Keynote Speaker Dr. Mandip Subedi, NGS

INDIAN GEOTECHNICAL SOCIETY

Registered under Societies Act vide Regn. No. S/18957 dated 16.05.1988)

(Affiliated to INTERNATIONAL SOCIETY FOR SOIL MECHANICS AND GEOTECHNICAL ENGINEERING)



President: Dr. Anil Joseph
Hon. Secy. Dr. A.P. Singh

24.10.2025
New Delhi

Dr. Mandip Subedi
Immediate Past President
Nepal Geotechnical Society

Subject: Heartfelt Thanks from the Organizing Committee of the 1st Geotech Asia Conference 2025, Goa, India

Dear Dr. Mandip Subedi,

As the curtains falls on the spectacular **1st Geotech Asia 2025**, held at *Taj Cidade de Goa, Horizon*, overlooking the serene Dona Paula Bay, we write to express our heartfelt gratitude to you and all our distinguished speakers for making this historic event an extraordinary success. The week-long celebration of geotechnical excellence began with the **FedIGS Board Meeting** chaired by Prof. Chungsik Yoo, followed by four insightful pre-conference workshops: Portugal–Brazil–India, Indo–US, Risk Assessment & Machine Learning, and Forensic Geotechnical Engineering held on 6th October 2025. The main conference, themed “**GeoVadis: Future of Geotechnical Engineering**” held during 7–10 October 2025, culminated with the **ISSMGE Board Meeting** on 11th October 2025. Each session truly elevated the standard of knowledge exchange and collaboration.

As the **Organizing Chairmen of the conference**, we take immense pride in India hosting this landmark inaugural edition, 65 years after the first Asian Regional Conference in 1960. With participation of over 600 delegates representing more than 40 countries, making Goa the epicenter of global technical exchange. We are profoundly grateful to you for graciously accepting our invitation despite your demanding schedule, and for travelling from Nepal to deliver a **Keynote Lecture** at this milestone event. Your talk on “*A Decade After the 2015 Gorkha Earthquake: Reassessing Nepal’s Readiness for Future Seismic Events*” evoked an overwhelming response from participants. It offered valuable insights into post-earthquake reconstruction efforts, evolving seismic resilience strategies, and the importance of integrating geotechnical expertise into disaster preparedness and mitigation planning. We are also delighted that the Nepal Geotechnical Society has won the bid to host the 11th Asian Young Geotechnical Engineers Conference (AYGEC) during the Asian Council meeting held on 8th October during the Geotech Asia Conference. Please accept our heartfelt congratulations and best wishes for the successful organization of this prestigious event.

We sincerely look forward to your continued collaboration and support in future initiatives of the **Indian Geotechnical Society**.

Warm Regards,

Dr. Anil Joseph
Organizing Chairman
1st Geotech Asia 2025
President, IGS

Prof. Ashish Juneja
Organizing Chairman
1st Geotech Asia 2025
Professor, IIT Bombay

Prof. Dasaka S Murty
Organizing Chairman
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Professor, IIT Bombay

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Nepal Geotechnical Society (NGS)

Participation Report – 1st Geotech Asia 2025, Goa, India (October 7–10, 2025)