ISSMGE FOUNDATION
REPORT ON CONFERENCE ATTENDANCE

Your Name: Atul Raj	***Your Organization:*** Indian Institute of Technology Bhubaneswar, India	***Date of report:*** 06 July 2026
Conference Title: 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE)	***Location of Conference:*** Austria Center Vienna, Vienna, Austria	***Dates of Conference:*** 14 June 2026 to 19 June 2026

What you learned:

Attending the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE) 2026 in Vienna, Austria, from 14 to 19 June 2026 deepened my understanding of current developments in performance-based seismic design and nonlinear soil-structure interaction for foundation systems, through keynote lectures and technical sessions delivered by leading experts in geotechnical earthquake engineering. I gained valuable insight into how fragility-based assessment methods are evolving internationally, particularly how bi-directional ground motion effects are being incorporated into seismic demand evaluation for foundation systems. Presenting my research on the seismic fragility of piled raft foundations under bi-directional motions, both orally and as a poster, exposed my work to questions and discussion from a wide field of the geotechnical community. This feedback, particularly around damage state definitions, modelling of soil, and the treatment of near-field and far-field ground motions, helped me identify specific ways to refine my fragility curve development and strengthen my modelling assumptions for my ongoing research work.

The conference also gave me valuable exposure to experimental aspects of geotechnical engineering, including field testing and laboratory soil testing methods, through technical sessions and discussions with researchers working on physical and experimental studies. Having the opportunity to meet several pioneers of geotechnical engineering in person and engage with them directly was an invaluable and inspiring experience that I will carry forward into my own research. A particular highlight was visiting the Terzaghi Archive at TU Wien. I saw the bust of Terzaghi, the original cover of his 1925 book, his early soil testing equipment, and the first oedometers he and Casagrande built between 1929 and 1933. It was a memorable experience to see these original items from the Institute where modern soil mechanics began.

People you met:

The 21st ICSMGE conference provided an excellent platform to engage with eminent professors, renowned international researchers, industry leaders, and emerging geotechnical professionals. Among those I had the opportunity to connect with were:

1) **Prof. Kyle Rollins**, Brigham Young University
2) **Prof. Tatsunori Matsumoto**, Kanazawa University

3) **Dr. Anil Joseph**, President of Indian Geotechnical Society (IGS)
4) **Prof. Deepankar Choudhury**, Indian Institute of Technology Bombay
5) **Prof. Ashish Juneja**, Indian Institute of Technology Bombay
6) **Prof. Gali Madhavi Latha**, Indian Institute of Science, Bangalore
7) **Prof. Anand Puppala**, Texas A&M University
8) **Prof. Krishna R. Reddy**, University of Illinois Chicago
9) **Prof. Narendra Kumar Samadhiya**, Indian Institute of Technology Roorkee
10) **Prof. Bal Krishna Maheshwari**, Indian Institute of Technology Roorkee
11) **Prof. Neelima Satyam**, Indian Institute of Technology Indore
12) **Prof. Sarat Kumar Das**, Indian Institute of Technology (ISM), Dhanbad
13) **Dr. Akanksha Tyagi**, Indian Institute of Technology Roorkee
14) **Dr. Kaustav Chatterjee**, Indian Institute of Technology Roorkee
15) **Roman Markiewicz**, TU Wien

Main features of conference:

The 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE 2026) was held in Vienna, Austria, from 14 to 19 June 2026, marking the 100th anniversary of Karl Terzaghi's foundational 1925 publication, "Erdbaumechanik auf bodenmechanischer Grundlage", widely regarded as the birth of modern soil mechanics. The conference also commemorated the founding of the world's first soil mechanics institute at TU Wien in 1928, which earned Vienna its reputation as the "Mecca of Soil Mechanics" in the 1930s, and the founding of the International Society for Soil Mechanics and Foundation Engineering itself, with Terzaghi as its first President. Ninety years after the society's origins at Harvard, the ISSMGE returned to Vienna under the conference theme "Geotechnical Challenges in a Changing Environment," reflecting current global developments such as climate change, social transition, and artificial intelligence, and their growing impact on the geotechnical field. The conference attracted more than 2,000 participants, the largest turnout in the history of the series, with 2,250 abstracts submitted and reviewed through the involvement of the 91 National Societies of the ISSMGE, resulting in 1,257 papers published in the proceedings. The technical program was extensive and diverse, featuring the Terzaghi Oration, Special Lectures, State-of-the-Art Lectures, Invited Lectures, and Technical Committee Honour Lectures, alongside numerous parallel technical sessions and workshops. The event also included several notable highlights beyond the technical sessions: "A Tribute to Karl Terzaghi," the presentation of the "Heritage Time Capsule," and an Awards Ceremony recognizing outstanding contributions to the field. Guided tours of the newly established Terzaghi Archive at TU Wien gave participants the opportunity to view original equipment and documents associated with Terzaghi's pioneering work. The program was further complemented by technical visits, concerts, the conference banquet, and a range of activities for accompanying persons, creating a well-rounded experience that combined rigorous technical exchange with opportunities for networking, reflection on the discipline's history, and social engagement among the global geotechnical community.

Your comments on the conference:

Participating in ICSMGE 2026 was a deeply enriching experience, both academically and professionally. I had the honour of presenting my research, "Seismic Fragility Analysis of Piled Raft Foundations Under Bi-Directional Motions," co-authored with my supervisors Prof. Sumanta Haldar and Dr. Shantanu Patra, both orally and as a poster, to a wide international audience of geotechnical researchers and practitioners. Representing IIT Bhubaneswar at such a prestigious event was a great honour. The conference was exceptionally well-organised, bringing together a remarkable breadth of technical content across traditional and emerging geotechnical themes, while also creating space to reflect on the discipline's history through the Terzaghi Archive and the broader tribute to Karl Terzaghi's legacy. Vienna itself proved to be a beautiful and welcoming city, adding to the overall experience. The technical sessions, keynote lectures, and discussions with fellow researchers offered valuable feedback that will directly strengthen my ongoing work on seismic fragility assessment. I would also like to thank the conference organising team for their excellent support throughout, including their quick and helpful responses over email. I am sincerely grateful to my supervisors for their continued guidance, to the ISSMGE Foundation for enabling my participation, and to the organisers for facilitating such a memorable and intellectually stimulating international platform.

Please attach short report (maximum 400 words) suitable for publication in the ISSMGE Bulletin:

Attending the 21st International Conference on Soil Mechanics and Geotechnical Engineering (ICSMGE 2026) in Vienna was a memorable and rewarding experience. Held to mark the centenary of Karl Terzaghi's foundational contributions to soil mechanics, the conference offered a unique opportunity to engage with the discipline's history while exchanging ideas on its current and future challenges, bringing together academics and practising engineers from across the global geotechnical community. I had the honour of presenting my research, "Seismic Fragility Analysis of Piled Raft Foundations Under Bi-Directional Motions," co-authored with my supervisors Prof. Sumanta Haldar and Dr. Shantanu Patra, both as an oral presentation and a poster. My work investigates the seismic fragility of piled raft foundations supporting reinforced concrete superstructures embedded in sand, using three-dimensional finite element analysis in SAP2000, with soil modelled through nonlinear *p-y*, *t-z*, and *Q-z* springs incorporating Takeda hysteretic behaviour. Incremental dynamic analyses were conducted under bi-directional (near-field and far-field) ground motions to develop seismic fragility curves for distinct damage states in both the superstructure and the foundation. Presenting this work to an international audience provided valuable suggestions and discussion, which will help refine my ongoing research work. Papers presented by other researchers on field testing, laboratory investigations, and numerical studies also offered valuable new perspectives. These presentations broadened my understanding of how experimental and computational approaches complement one another in advancing geotechnical knowledge and gave me useful ideas for incorporating field and laboratory

testing methods into my future research to validate and strengthen numerical findings. The conference offered meaningful opportunities to engage with eminent professors, researchers, and practitioners from across the global geotechnical community, and representing IIT Bhubaneswar at such a prestigious event was a great honour. A particular highlight was visiting the Terzaghi Archive at TU Wien, where I saw original artefacts, including the bust of Terzaghi, the first edition of his landmark 1925 book, his early soil-testing apparatus, and the original oedometers built by Terzaghi and Casagrande between 1929 and 1933. Vienna proved to be a beautiful and welcoming host city, and the organising team's efficient communication and support throughout added to a thoroughly memorable experience. I am sincerely grateful to my supervisors for their continued guidance and support, and to the ISSMGE Foundation for enabling my participation in this landmark conference, which has meaningfully contributed to both my technical growth and professional development as an early-career researcher.

Photographs from Conference: Insert here or attach to email

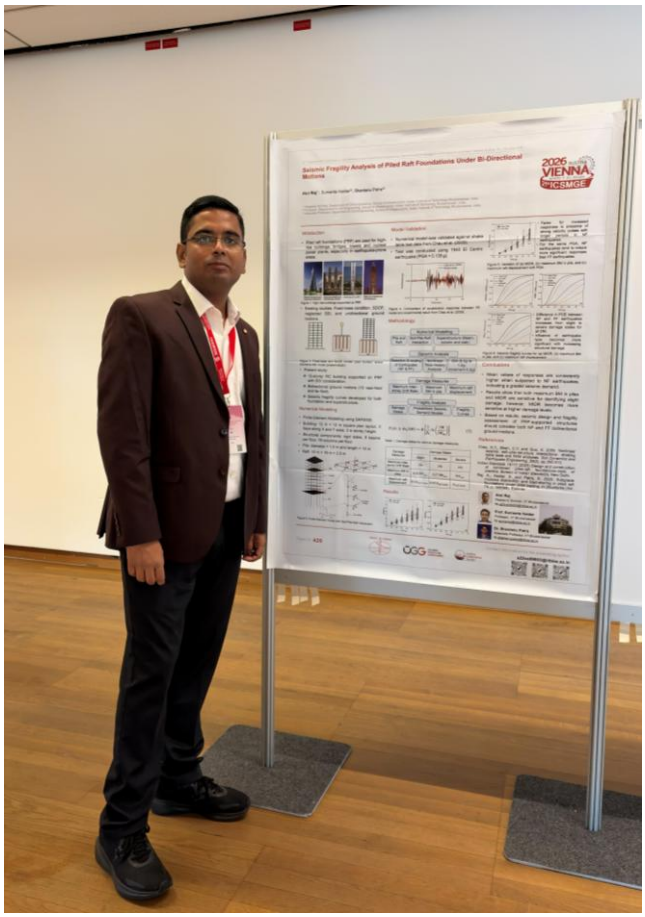


Figure 1. My photo in 21st ICSMGE 2026 in Vienna during poster presentation.

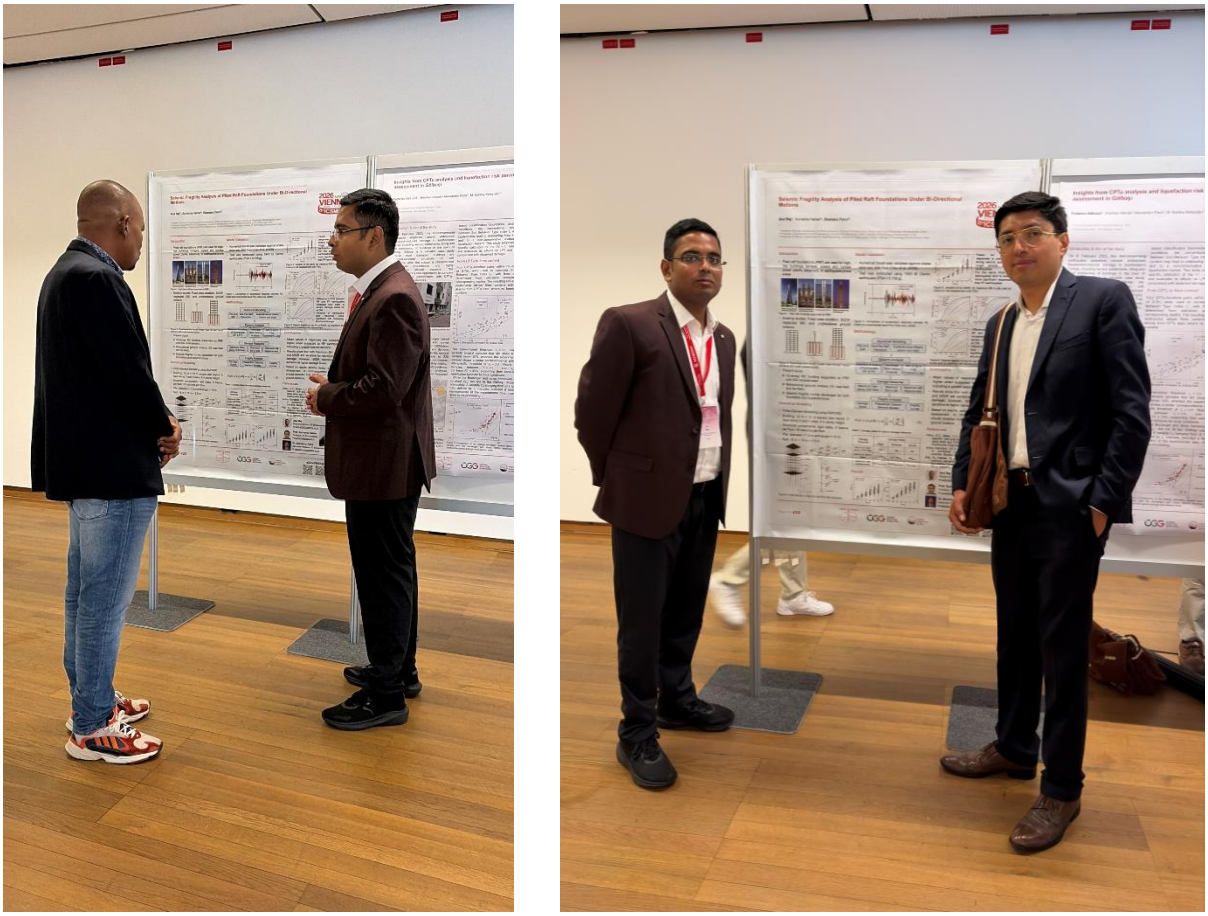


Figure 2. Explaining my work in 21st ICSMGE 2026 in Vienna during poster presentation.





Figure 3. Explaining my poster in 21st ICSMGE 2026 in Vienna during poster presentation.



Figure 4. My photo during my oral presentation.



Figure 5. Photo with Indian delegates at the ICSMGE 2026



Figure 6. My photo with Prof. Kyle Rollins, Brigham Young University.



Figure 7. My photo with Prof. Tatsunori Matsumoto, Kanazawa University and Prof. Junji Hamada.



Figure 8. My photo with Prof. Krishna R. Reddy, University of Illinois Chicago.

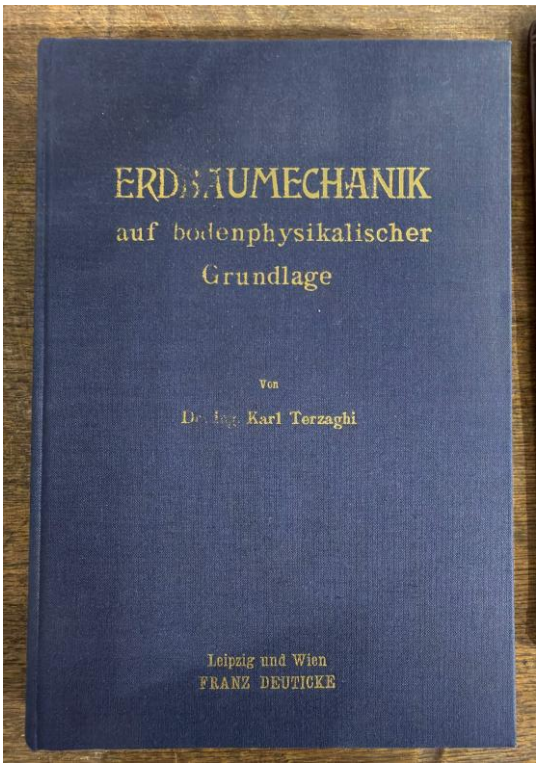


Figure 9. My photo with Prof. Bal Krishna Maheshwari, Indian Institute of Technology Roorkee.

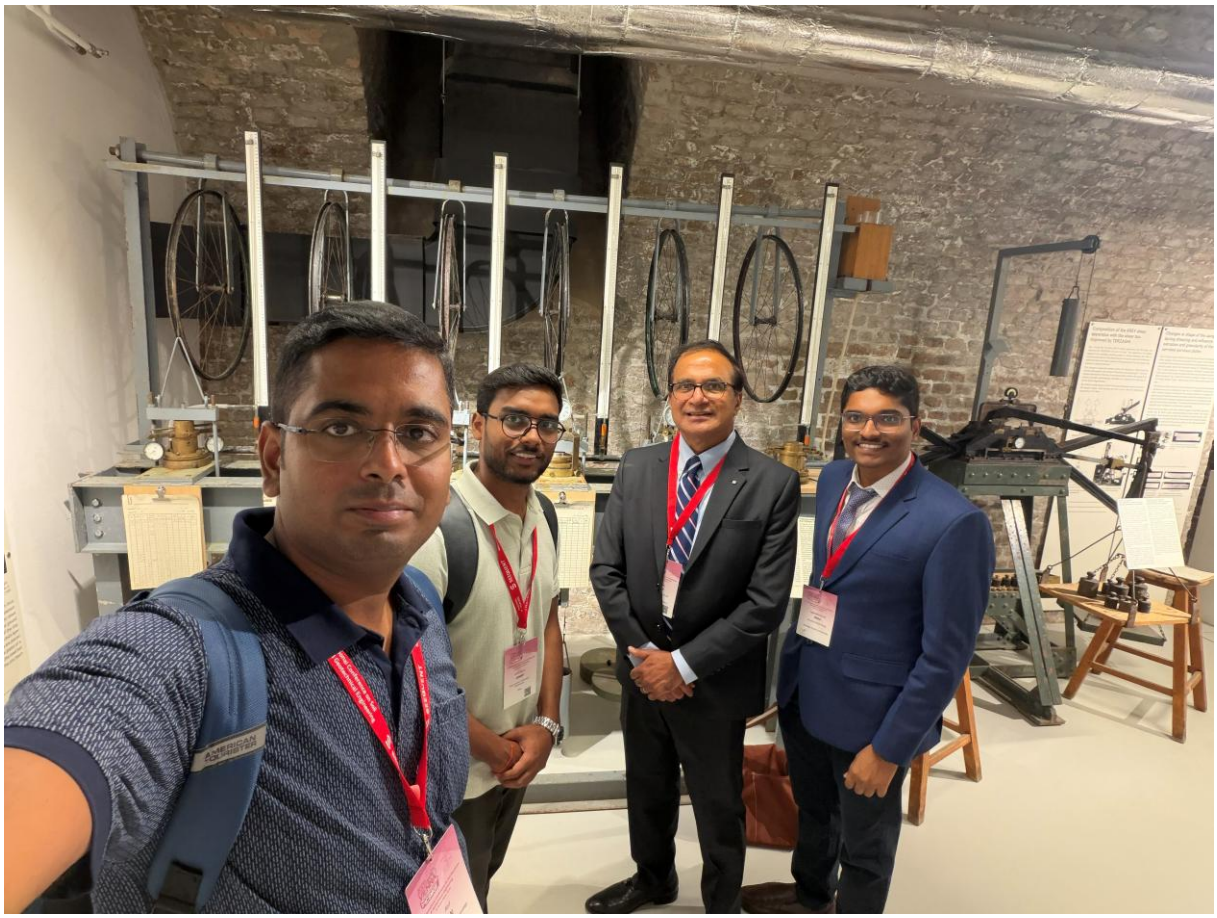


Figure 10. My photo with Prof. Neelima Satyam, Indian Institute of Technology Indore


the KREY shear
the shear box
ERZAGHI
Changes in shape of the sample during shearing and influence of serration and granularity of the serrated pervious plates
Karl von Terzaghi
Karl
TERZAGHI
bust donated by A. CASAGRANDE for lecture hall XVI at TU Wien in 1967


ERDBAUMECHANIK
auf bodenphysikalischer
Grundlage
Von
Dr.-Ing. Karl Terzaghi
Leipzig und Wien
FRANZ DEUTICKE


Composition of the KREY shear apparatus with the shear box improved by TERZAGHI
Karl
TERZAGHI




Karl
TERZAGHI
bust donated by A. CASAGRANDE for
lecture hall XVI at TU Wien in 1967
Karl von Terzaghi



Figure 11. Photos at Terzaghi Archive at TU Wien, Vienna.