





# Romania - Greece Seminar

# Earthquake & Geotechnical Engineering

Conference Centre UTCB March 27th, 2025

The Romanian Society for Soil Mechanics and Foundation Engineering (SRGF), together with the Technical University of Civil Engineering Bucharest (UTCB), in cooperation with the Hellenic Society for Soil Mechanics and Foundation Engineering (HSSMGE) are announcing

# the 1st Romania – Greece Seminar on Earthquake and Geotechnical Engineering

For acknowledging the cooperation between the respective professional societies and to create a platform sharing expertise and fostering collaboration between the earthquake and geotechnical communities of Romania and Greece. With both Romania and Greece located in seismically active regions, the seminar will offer the opportunity to discuss the latest developments and challenges in earthquake and geotechnical engineering.

## Special guest speakers from Greece:



### **George Gazetas**

(Emeritus Professor of Geotechnical Engineering at the National Technical University of Athens)

### Foundation Design and Soil-Structure Interaction in the new Ec8

George Gazetas is Emeritus Professor of Geotechnical Engineering at the National Technical, University of Athens (NTUA, "Metsovion"), in which he served as Professor for 30 years, following an academic career in the US, where he taught at SUNY-Buffalo, Rensselaer (RPI), and Case Western Reserve University. He had studied as undergraduate at NTUA

(Diploma in Civil Engineering) and as graduate at MIT (MS and PhD in Geotechnical Earthquake Engineering). His main research interests have focused on the dynamic response of footings, piles and caissons; the seismic response of earth dams and quay-walls; soil amplification of seismic waves; and soil—structure interaction under static and seismic excitation. Much of his research has been inspired by observations after destructive earthquakes. An active lecturer, he was the keynote speaker in many international conferences. He is the author of significant journal publications (achieving an h-index of 84, the highest among all Greek civil engineers, and the highest worldwide in Soil Dynamics). He is a member of the Technical Committee for the revision of Eurocode 8, and has served as President of both, the Greek Committee of Soil Mechanics & Geotechnical Engineering and the Hellenic Association of Earthquake Engineering. He has also been a consultant or referee in some major dynamic geotechnical projects in several countries, including the: Rion-Antirrion Bridge (Greece), Diablo Canyon Nuclear Power Plant (USA), Brunsbüttel Reactor Building (Germany), Olympic Stadium Opening Ceremony Shaft (Greece), Queensboro and Williamsburg NY Bridges (USA), Tagus River Bridge (Portugal), Messochora CFR Dam (Greece), Ohba-Ohashi Bridge (Japan). Recipient of several awards for his research, he has delivered some prestigious lectures including the "Coulomb", "Ishihara", "Keneth Lee", and "Michele Maugeri" Lectures. In 2015 he was awarded the Excellence in University Teaching Prize, the ultimate teaching award in Greece. Recipient of the prestigious European Research Council's [ERC] Ideas Advanced Grant award, he was honored as the 59th Rankine Lecturer, 2019, in London, and as a GeoLegend by ASCE's Geotechnical Institute in the GeoStrata magazine, 2022.



### **Kyriazis Pitilakis**

(Emeritus Professor, Aristotle University Thessaloniki, Vice President of the European Association of Earthquake Engineering)

### Definition of seismic actions in the revised EC8 and implication in the seismic risk assessment

Professor Kyriazis Pitilakis has more than 45 years of intensive academic, research and professional experience in civil, earthquake and geotechnical engineering. President and since 2022 and since then Vice President of the European

Association of Earthquake Engineering (EAEE) (www.eaee.org), ex-Chairman of the Technical Committee "Geotechnical Earthquake Engineering and Associated Problems" (TC203) of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), and past President of the Greek Society of Earthquake Engineering, he is presently Professor Emeritus in Aristotle University, Thessaloniki, Greece and

since 2019 visiting Professor in Tongji University, ILEE, Shanghai, China. With almost 700 publications in scientific journals and conference proceedings (h-index 66) he is according to the recent Stanford classification among the top 10 leading researchers in Civil Engineering in Greece, and among the top 10 leading researchers worldwide in Soil Dynamics, Geotechnical Earthquake Engineering and Engineering Seismology. His scientific and research interests cover a wide range from soil dynamics, site effects and microzonation studies, seismic hazard, strong ground motion, and risk assessment to various topics in geotechnical earthquake engineering from the seismic design, vulnerability and risk assessment of buildings, to tunnels, infrastructures and geotechnical structures. He has been invited keynote lecturer in many international and world conferences including (recently) the European Conference in Earthquake Engineering and the World Conference of Tunnels (2023). He is member of the Technical Committee and Working Groups for the revision of Eurocode 8 (Part 1-Seismic Actions and Part 5-Seismic design of foundations, retaining structures, soil-structure interaction, liquefaction, slope stability and underground structures). Many of his PhD and post-doc students hold academic positions in Greece and abroad, namely in China, Italy, UK, France, USA, Egypt, Hong-Kong. Honors: Chevalier dans l'Ordre des Palmes Academiques, French Republic.



### **Giorgos Belokas**

(Assistant Professor in Geotechnical Engineering, University of West Attica, General Secretary of the Hellenic Society on Soil Mechanics and Geotechnical Engineering)

### Ultimate Limit State Design Analysis of Foundations and Representative Strength of Soils in the new Ec7

Dr Giorgos Belokas is an Assistant Professor in Geotechnical Engineering and the Head of the "Hydraulic and Geotechnical Engineering Division" at the University of West Attica. He holds a Diploma in Civil Engineering from

National Technical University of Athens, an MSc in Soil Mechanics from Imperial College and a PhD from NTUA. His lecturing experience covers a wide range of geotechnical engineering courses, while currently he teaches Soil Mechanics, Geotechnical Works, Slope Stability – Embankments and Retaining Walls and Deep Excavations. His research work and interest includes constitutive modelling of anisotropic structured clays and of unsaturated soils, coupled deformation consolidation theory, field measurements and laboratory testing of unsaturated soils, numerical and probabilistic analyses of geotechnical works, soil – atmosphere effect on soil slope stability and foundation problems and, finally, resilience quantification methods for infrastructures. His professional experience is in the geotechnical engineering analysis and design of geotechnical major infrastructure works, with emphasis on the investigation and remediation of landslides, and in laboratory testing, with emphasis on the implementation and application of laboratory ISO 17025, while he has been a consultant for EIB. He is the Convenor of WG7 of ELOT/TC67 (mirroring CEN/TC 250/SC 7) and also member of TG A2 "NSB contact group" and TG B2 "Design Examples" for the ongoing development of the 2nd generation of CEN/TC 250/SC 7 "Eurocode 7 - Geotechnical design". He has been a member of various ISSMGE TCs including currently the ERTC10 "Evaluation of Eurocode 7" and the TC202 "Field Monitoring in Geomechanics. Since 2010 he is an elected board member and since 2019 the General Secretary of the Hellenic chapter of ISSMGE.

# Special invited speakers from Romania:



### Radu Văcăreanu

(Professor of Structural Reliability and Risk Analysis at the Technical University of Civil Engineering Bucharest, President of the European Association of Earthquake Engineering)

### Probabilistic seismic hazard assessment and calibration of elastic design spectra in Romania

Radu Văcăreanu graduated Civil Engineering in 1991 from the Technical University of Iasi, Romania. He got his Ph.D. from the Technical University of Civil Engineering of Bucharest (UTCB) in 1999 in the field of seismic risk assessment. Currently,

he is Professor of Structural Reliability and Seismic Risk Analysis at UTCB. Radu Văcăreanu is President of the European Association for Earthquake Engineering (EAEE), National Delegate of Romania at the International Association for Earthquake Engineering (IAEE) and Executive President of the National Commission for Earthquake Engineering of Ministry of Development, Public Works and Administration of Romania. In between 2002 and 2008 he served as the director of the National Centre for Seismic Risk Reduction, implementing the JICA (Japan Technical Cooperation Agency) Project on Seismic Risk Reduction for Buildings and Structures in Romania. Radu Văcăreanu participated in international projects and coordinated national projects aiming at seismic risk reduction. He published numerous papers in peer-reviewed journals and international conferences proceedings. His research interest covers mainly the seismic hazard, fragility and risk analyses. Since March 2016 he serves as Rector of the Technical University of Civil Engineering of Bucharest.



### Loretta Batali

(Professor of Geotechnical Engineering, President of the Romanian Society for Soil Mechanics and Foundation Engineering, Vice Chair of CENTC 250/SC7)

### Evolution and perspectives in the geotechnical design according to the 2nd generation of Eurocode 7

Loretta Batali is full professor and habilitated for PhD research at the Technical University of Civil Engineering Bucharest (UTCB), Department of Geotechnics and Foundations and Director of the Council for Doctoral Studies. She graduated the

Hydraulic Works Faculty of UTCB in 1990, then she obtained a Master degree in 1993 and her PhD degree in 1997, both from INSA Lyon France (with a PhD thesis on the Use of geosynthetic clay liners for landfills).

Topics of interest: Soil mechanics, Foundation engineering, Landfills, Geosynthetics, Retaining structures, Unsaturated soils, Slope stability Loretta Batali led 4 research projects as director (2 international and 2 national) and was member of another 7 international and 14 national research projects. She published several speciality books and numerous scientific and technical papers in journals and conference proceedings.

Loretta Batali also has a rich technical activity for geotechnical investigations, geotechnical design and consultancy, verification and expertise, as well as author of technical norms and standards and member of various state commissions. She was involved in the revision of the Eurocode 7 at CEN (TC 250/SC7), first as member of PT1 and then leading TG B on design examples and from 1.01.2025 vice chair of SC7.

Since 2021 Loretta Batali is the President of the Romanian Society for Soil mechanics and Foundation Engineering (SRGF), after being vice-president of it for 9 years. She is also member of the International Society for Soil Mechanics and Foundation Engineering (ISSMGE) and chair of the Awards Board Level Committee (AWAC).



### **Cristian Arion**

(Associated Professor of Structural Reliability and Risk Analysis at the Technical University of Civil Engineering Bucharest)

### Direct and proxy seismic site characterisation in Romania

Cristian Arion is associate professor of Structural Reliability and Risk Analysis at UTCB. He was an author of the national building codes for wind action, snow action, and earthquake resistance. As part of his research he worked at CEDEX

Madrid, Building Research Institute, Tsukuba, Japan, Tokyo University (Towhata lab), Waseda University (Hamada lab) and at Tokyo Soil Research Co.Ltd. He holds a postgraduate diploma in Earthquake Engineering of the International Institute of Seismology and Earthquake Engineering Tsukuba, Japan. He has expertise in site seismic analysis for industrial facilities, hotels, banks; seismic design of reinforced concrete buildings; acquiring ground and underground vibration measurements for buildings; assessment of soil amplification factors and the dynamic characteristics of soils; running the dynamic triaxial equipment; seismic prospecting; seismic monitoring; and the development of GIS microzonations. He has conducted studies of the probabilistic and deterministic seismic hazard of Romania, seismic sources affecting Romania, seismic response, and geophysical exploration (downhole, microtremor measurements).

Contributions are welcomed and proposals can be sent before **January, 30th 2025** by email (loretta.batali@utcb.ro).

The final agenda and the details for the registration to the event will be shared in due time, beginning of 2025.

We invite all engineers, researchers, students, and professionals interested in earthquake and geotechnical engineering to join us for this unique opportunity to exchange knowledge and expertise with the Greek specialists.

We look forward to your participation in this exciting and informative event!

Prof. Loretta Batali President SRGF