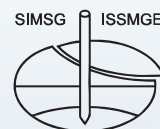




ROMANIAN SOCIETY
FOR GEOTECHNICAL AND
FOUNDATION ENGINEERING



INTERNATIONAL SOCIETY FOR
SOIL MECHANICS AND
GEOTECHNICAL ENGINEERING

17th DANUBE EUROPEAN CONFERENCE ON GEOTECHNICAL ENGINEERING

PROGRAM

European Geotechnical Engineering

Unity and diversity

June 2023, 7th – 10th

Bucharest

THIRTY YEARS OF EVOLVING TOGETHER



ABOUT ALLBIM NET

Founded in 1992, ALLBIM NET brings innovation to the Romanian construction industry through high-performance software and seminars on collaborative design methods.

Our goal is to work alongside our customers to help them create and build better, ranging from the simplest to the most daring projects.

We also assist future specialists during their university studies, by providing courses and educational licenses in our BIM laboratories within their respective faculties.

30
YEARS OF
EXPERIENCE

2K+
CLIENTS

15
SOFTWARE
SOLUTIONS

25+
BIM
LABORATORIES



WELCOME TO 17DECGE



Prof. Loretta Batali
Chair 17 DECGE and
President of SRGF

*The 17th edition of the Danube – European Conference is organised by the **Romanian Society for Geotechnical and Foundation Engineering (SRGF)**, under the auspices of the **International Society for Soil Mechanics and Foundation Engineering (ISSMGE)**, with the support of the main technical universities involved in this field in Romania – Technical University of Civil Engineering Bucharest (UTCB), Gheorghe Asachi Technical University Iași (TUIASI), Technical University of Cluj – Napoca (UTCN), Politehnica University of Timisoara (UPT).*

It is a privilege and an honour for me to chair this technical and scientific event, already hosted by Romania in 1995 (10th edition), which went well beyond the Danube region, regrouping many European countries and even countries from other continents.

*In 2018, at the 16th DECGE in Skopje, the Romanian Society for Geotechnical and Foundation Engineering (SRGF) has been chosen by the representatives of the Danube Societies of ISSMGE as organiser and host of **the 17th edition of the Danube – European Conference on Geotechnical Engineering**, scheduled initially for 2022. This came after Romania had expressed its interest in organising this conference also in 2014 at the 15th DECGE in Vienna. Following the COVID-19 pandemic disruption, as many conferences have been postponed, it has been decided to also delay **the 17DECGE** for June 2023. And here we are and now 17DECGE is finally happening.*

*The theme of the Conference is: **European Geotechnical Engineering – Unity and diversity**, willing to get together the Danube – European countries, each one with its specificity, and also finding the way for having unified practices within the European context. Therefore, the program of the conference is showing both the unified practices under the Eurocodes and the large variety of problems and approaches in the different countries.*

The Proceeding of the conference includes papers on various topics, as: geotechnical investigation and ground modelling, geotechnical design (including Eurocodes), geo-hazards, environmental geotechnics, hydrogeology and energy or information technology in geotechnical engineering, in total around 900 pages in 2 volumes. The digital proceedings are offered to all participants, while the printed version can be ordered separately.

The technical exhibition benefits from the presence of 27 exhibitors, from Romania and abroad, a good opportunity for sharing knowledge, experiences, for networking and establishing business contacts. A special acknowledgement to all our partners and sponsors who made all these possible.

After 2 days of intense working in the conference rooms and technical exhibition, 2 very interesting technical visits are offered to all attendees: a full-day visit to the very new suspended bridge over the Danube at Braila and a half-day visit to 2 job sites in Bucharest (one very deep excavation for 7 storeys basement and one new residential development in difficult soil conditions requiring pile foundations).

I would like to thank the members of our dedicated Organising and Scientific Committee, our Keynote and Invited speakers, to all authors and presenters.

*I hope you will enjoy **17DECGE** and we are pleased and honoured to welcome you!*



COMMITTEES

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Prof. Loretta Batali - President SRGF,
Technical University of Civil Engineering Bucharest

HONORARY CONFERENCE CHAIR

Prof. em. Sanda Manea - Honorary President SRGF,
Technical University of Civil Engineering Bucharest

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Organising committee vice-chair

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Lecturer Oana Colț – Gheorghe Asachi Technical University Iasi

Lecturer Florin Bejan – Gheorghe Asachi Technical University Iasi

Lecturer Dana Madalina Pohrib – Gheorghe Asachi Technical University Iasi

Dr. George Tsitsas – GT Ground Engineering & Construction Services Bucharest

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Eng. Adrian Centea – Cenconstruct Timișoara

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Prof. Dietmar Adam – TU Wien

Prof. Milorad Jovanovski – Ss. Cyril and Methodius University Skopje, chairman of 16DECGE

Prof. Andrea Dominijanni – Politecnico Torino, chairman TC 215 ISSMGE

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Dr. Mircea Galer – Geostruct Expert Bucharest
Eng. Dragoș Marcu – Popp & Assoc. Inginerie Geotehnică Bucharest

KEYNOTE SPEAKERS



Dr. Marc Ballouz

President ISSMGE

"Geotechnical engineering marriage between theory & practice"



Prof. Lyesse Laloui

Vice-president Europe ISSMGE, EPFL Switzerland

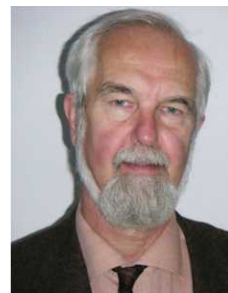
"Exploiting the renewable energy resources of our cities' underground"



Prof. Mario Manassero

Past Vice-president Europe ISSMGE, Politecnico Torino, Italy

"The importance of soil mechanics in the risk assessment of temporary storage deposits of crushed aggregate"



Prof. Ivan Vanicek

Past Vice-president Europe ISSMGE, Czech Technical University in Prague

"Earth structures – current trends"



Prof. Abdelmalek Bouazza

3rd R.K. Rowe lecture, Monash Univ., Australia

"Untangling the mysteries of geosynthetic clay liners behaviour in aggressive and challenging environments"



Prof. Dietmar Adam

TU Vienna, Austria

"Energy Foundations and Other Energy Geostructures – Geotechnical Contributions to Alleviate the Global Energy Crisis"



Eng. Adriaan van Seters

Chairman CEN TC 250/SC7, Fugro, The Netherlands

"General overview of the revision of Eurocode 7"



INVITED LECTURES



Prof. Sanda Manea
Technical University of
Civil Engineering Bucharest

*"Geotechnical problems in
Romania – focus on
Bucharest ground"*



Prof. Helmut Schweiger
Technical University Graz

*"Interpretation of CPT by
means of numerical
modelling"*



Prof. Andrea Dominijanni
Politecnico di Torino

*"Performance-based
design of landfill liners"*



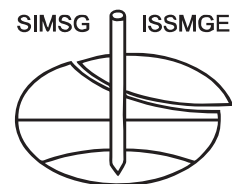
Prof. Kemal Onder Cetin
Middle East Technical
University Ankara

*"Geotechnical Aspects of
February 6, 2023
Kahramanmaraş-Türkiye
Earthquake Sequence"*

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17DECGE PROGRAM IN A GLANCE

**Wednesday,
7.06.2023**



17:00 - 19:00
Registration
(Lobby TERRA)

17:00 - 19:00
Meeting
representatives of
Danube European
societies

ROOM MERIDIANE

20:00 - 23:00
Welcome reception
(Ramada "La Parc" Restaurant & Garden)

**Thursday,
8.06.2023**

TECHNICAL EXHIBITION

8:00 - 8:30 Registration

Lobby

8:30 - 9:00 Opening

9:00 - 9:40
Keynote lecture Prof. Lyesse Laloui

9:40 - 10:25 Plenary session 1
2nd generation of Eurocode 7
- A new evolution of geotechnical design

ROOM TERRA

10:25 - 10:45 Coffee break

10:45 - 12:30 Plenary session 1
2nd generation of Eurocode 7
- A new evolution of geotechnical design

ROOM TERRA

12:30 - 13:00 - Sponsor session

13:00 - 14:00 Lunch

14:00 - 14:40
Keynote lecture Dr. Marc Ballouz

14:40 - 16:00 Plenary session 2
Geotechnical investigation and design
- European practices

ROOM TERRA

16:00 - 16:20 Coffee break

16:20 - 17:05 - Sponsor session

17:05 - 17:35
Keynote lecture Prof. Ivan Vanicek

17:35 - 18:30 Plenary session 2
Geotechnical investigation and design
- European practices

ROOM TERRA

20:00 - 23:00
Gala dinner
(Ramada "La Parc" Restaurant)

17DECGE PROGRAM IN A GLANCE

Friday, 9.06.2023				Saturday, 10.06.2023		
TECHNICAL EXHIBITION						
8:00 - 8:30 Registration			Lobby			
8:30 - 9:10 Keynote lecture Prof. Dietmar Adam			ROOM TERRA			
9:10 - 9:50 Keynote lecture, 3rd K. Rowe Lecture - Prof. Abdemalek Bouazza						
8:30 - 10:40 Plenary session 3 Environmental geotechnics, hydrogeology, energy geotechnics, 2ndSymposium Environmental Geotechnics (2SEG)						
10:40 - 11:00 coffee break						
11:00 - 11:30 - Sponsor session			ROOM TERRA			
11:30 - 12:10 Keynote lecture Prof.Mario Manassero						
12:10 - 12:45 Plenary session 4 Geo-hazards						
12:45 - 13:30 - Sponsor session						
13:30 - 14:30 Lunch						
14:30 - 16:30 Discussion session 1 - Geotechnical investigation and ground model		14:30 - 16:30 Discussion session 2 - Geotechnical design		14:30 - 16:30 Discussion session 3 - Environmental geotechnics, hydrogeology, energy (2SEG)		ROOMS TERRA 1, 2, 3
16:15 - 16:30 - Sponsor session		16:15 - 16:30 - Sponsor session		16:00 - 16:30 - Sponsor session		
16:30 - 16:45 coffee break						
16:45 - 18:00 Discussion session 4 - Geotechnical investigation and ground model		16:45 - 18:00 Discussion session 5 - Geotechnical design and Ground improvement		16:45 - 18:00 Discussion session 6 Geo-hazards		ROOMS TERRA 1, 2, 3
17:45 - 18:00 - Sponsor session		17:30 - 18:00 - Sponsor session		17:45 - 18:00 - Sponsor session		
18:00 - 18:30 Closing			TERRA 2			

8:00 - 17:00 Technical visit suspended bridge over Danube at Braila (bus transfers & lunch included)		8:00 - 13:00 Technical visit at foundations in Bucharest (very deep excavation, pile foundations) express transfers included

DETAILED PROGRAM

Thursday, 8.06.2023

8:00 - 8:30	Registration
8:30 - 9:00	Opening Chairs: Loretta Batali, Sanda Manea Representatives SRGF, ISSMGE, UTCB, MDLPA and messages from partner associations
9:00 - 9:40	Keynote lecture Chair: Loretta Batali Lyesse Laloui - Exploiting the renewable energy resources of our cities' underground
09:40 - 13:00	Plenary session 1 Chairs: Loretta Batali, Alexandra Ene 2nd generation of Eurocode 7 - A new evolution of geotechnical design
9:40 - 10:10	Keynote lecture Adriaan van Seters - General overview of the revision of Eurocode 7
10:10 - 10:25	Panelist: Gunilla Franzén - Key modification of the basis of geotechnical design
10:25 - 10:45	<i>coffee break</i>
10:45 - 11:00	Panelist: Christian Moormann - EN1997-3: 'Geotechnical Structures' – Overview of design and key modifications on pile design
11:00 - 11:15	Panelist: Håkan Garin - Ground model in the future Eurocode 7
11:15 - 11:30	Panelist: Karolina Trybocka - Ground improvement - a new topic in Eurocode 7
11:30 - 11:45	Panelist: Sébastien Burlon - Eurocode 7 : Geotechnical design assisted by numerical methods
11:45 - 12:00	Panelist: Roger Frank - How geotechnical engineering adapted itself to the Eurocodes structural design
12:00 - 12:10	Hans-Peter Daxer , Helmut F. Schweiger, Franz Tschuchnigg - Ultimate limit state design for deep excavations according to Eurocode 7 by means of numerical methods
12:10 - 12:20	Maria Kovaïou, Georgios Belokas - A comparative evaluation of design approaches and computational models for shallow foundations based on Ec7
12:20 - 12:30	Cristina Chirea - Implementation of the 2nd generation of Eurocodes in Romania
12:30 - 13:00	Sponsor session Chair: Lóránd Sata Sponsor DIAMOND - ALL BIM NET: Adrian Ghencea - Point clouds for ground model definition. BIM parametric modeling in specific application such as ground engineering and foundations

13:00 - 14:00 *Lunch*

14:00 - 14:40 Keynote lecture
Chair: Irina Lungu
Marc Ballouz - Geotechnical engineering marriage between theory & practice

14:40 -18:30 Plenary session 2
Chairs: Christian Moormann, Adrian Ciutină
Geotechnical investigation and design - European practices

14:40 - 15:00 Invited lecture
Sanda Manea - Geotechnical problems in Romania - focus on Bucharest ground

15:00 - 15:20 Invited lecture
Helmut F. Schweiger, Laurin Hauser - Interpretation of CPT by means of numerical modelling

15:20 - 15:35 Panelist: Edina Koch; Edina Koch, Károly Gombás, Márton Maller -
Site characterization of the Szigetköz focusing on backward erosion piping

15:35 - 15:50 Panelist: Irina Lungu; Anghel Stanciu, Irina Lungu, Mircea Aniculăesi, Andrei Ilaş,
Oana Elena Colţ, Florin Bejan - New laboratory devices for testing soil samples

15:50 - 16:00 Paul Joseph Vardanega, Jun S. Gan - Comparison of data from fall-cone and
laboratory vane tests to investigate undrained shear strength for some fine-grained
materials

16:00 - 16:20 *Coffee break*

16:20 - 17:05 Sponsor session
Chair: Denisa Paşca
16:20 - 16:50 Sponsor Platinum Plus INOVECO GEOBRUGG TENSAR
Leo Kuljanski - Mechanically stabilised working platforms for windfarms using
the latest generation of stabilising geogrids
Roberto Luis - „DEFOX®. Optical system for continuous monitoring”
16:50 - 17:05 Sponsor Platinum SBR SOLETANCHE BACHY FUNDATII
Lóránd Sata - Innovation and sustainability by Soletanche Bachy

Plenary session 2 - cont -

17:05 - 17:35 Keynote lecture
Ivan Vaníček - Earth structures - current trends

17:35 - 17:50 Panelist: Özer Çinicioglu; Mostafa Almasraf, Araz Salimnezhad, S. Feyza Cinicioglu,
Ozer Cinicioglu - Parametrical Analysis of Soil Arching Behavior in Pile-Supported
Embankments

17:50 - 18:05 Panelist: Alexandra Ene; Alexandra Ene, Timo Schweckendiek, Horaţiu Popa -
Reliability-based design in geotechnical engineering – status of application in relation with
design codes

18:05 - 18:15 Katarzyna Zabielska-Adamska, Patryk Dobrzycki, Mariola Wasil -
Fibre-reinforcement of non-cohesive soil and its influence on CBR values

18:15 - 18:30 Dr Marc Ballouz - ISSMGE: Meet your international family

Friday, 9.06.2023

8:00 - 8:30	Registration
8:30 - 10:40	Plenary session 3 Environmental geotechnics, hydrogeology, energy geotechnics 2nd Symposium Environmental Geotechnics Chairs: Katarzyna Zabielska-Adamska, Iulia Prodan
8:30 - 9:10	Keynote lecture Dietmar Adam - Energy Foundations and Other Energy Geostructures – Geotechnical Contributions to Alleviate the Global Energy Crisis
9:10 - 9:50	Keynote lecture, 3rd R.K. Rowe Lecture Abdemalek Bouazza - Untangling the mysteries of geosynthetic clay liners behaviour in aggressive and challenging environments
9:50 - 10:10	Invited lecture Andrea Dominijanni - Performance-based design of landfill liners
10:10 - 10:25	Panelist: Sofie ten Bosch; Sofie ten Bosch, Jose Bosch, Dimitrios Terzis, Lyesse Laloui 3D multiphysical modelling of an MICP upscaling experiment with ex-situ hydrolysis
10:25 - 10:40	Panelist: Nicoleta Ilieș; Ilieș Nicoleta-Maria, Trîmbițaș (Urian) Ana-Maria, Nemeș Ovidiu, Nagy Andor-Csongor - Geotechnical and environmental aspects in soil improvement using plastic waste materials
10:40 - 11:00	<i>coffee break</i>
11:00 - 11:30	Sponsor session Chair: Oana Colț
11:00 - 11:15	Sponsor Platinum ZUBLIN - STRABAG - TPA Răzvan Zamfir - A Technology group for construction projects
11:15 - 11:30	Sponsor Gold Plus Extra POPP & ASOC. ING. GEOTEHNICA Dragoș Marcu - Complete approach of geotechnical works
11:30 - 12:45	Plenary session 4 Geo-hazards Chairs: S. Feyza Cinicioglu, Nicoleta Ilieș
11:30 - 12:10	Keynote lecture Mario Manassero - The importance of soil mechanics in the risk assessment of temporary storage deposits of crushed aggregate
12:10 - 12:30	Invited lecture Kemal Önder Çetin - Geotechnical Aspects of February 6, 2023 Kahramanmaraş-Türkiye Earthquake Sequence
12:30 - 12:45	Panelist: Cristian Arion; Cristian Arion, Cristian Neagu, Elena Călărașu, Florin Pavel, Alexandru Aldea, Radu Văcăreanu - Vertical seismic profiles for Bucharest

12:45 - 13:30	Sponsor session Chair: Alexandru Măgureanu
12:45 - 13:00	Sponsor Gold Plus Extra MIDAS GEOTECH JaeSeok Yang, Senior Geotechnical consultant of MIDAS IT - Numerical Modeling and Geotechnical Applications using MIDAS GTS NX
13:00 - 13:15	Sponsor Gold Plus SAIDEL ENGINEERING Tudor Saidel - SAIDEL Monopile – an Efficient Alternative to Pile & Shallow Foundations for All Column Types
13:15 - 13:30	Sponsor Gold Plus DEWATERING & SILENT PILING Darius Macijauskas - Environmentally-Friendly Quay Wall Solution – Case Study: Port Odesos PBM, Varna
13:30 - 14:30	<i>Lunch</i>
14:30 - 16:30	Discussion session 1 Geotechnical investigation and ground model Chairs: Edina Koch, Vasile Fărcaș
14:30 - 14:40	Shoei Osawa , Milev Nikolay, Takashi Kiyota, Masataka Shiga, Rana Ito, Toshihiko Katagiri, Atsunori Numata - Performing of Shaking Table Tests for Evaluation of Liquefaction Mitigation Effect of Log Pile Soil Densification Technique by Adopting Various Improvement Width Below a Low-rise Structure
14:40 - 14:50	Nikolay Milev , Noriyuki Fujii, Takashi Kiyota - Parallel between a numerical study and 1-g shaking table tests for estimating the effect of log-piling as shallow ground improvement technique for liquefaction mitigation
14:50 - 15:00	Božana Bačić , Ivo Herle - A simplified cyclic shear test for pore water pressure evolution
15:00 - 15:10	Ouarda Boumendjel-Game , Shuyin Feng, Paul J. Vardanega, Erdin Ibrahim, Andrea Diambra - Influence of soil grading on the coefficient of permeability of hydraulic fills
15:10 - 15:20	Syed Uzair Us Salam Shah , Roberto Cudmani, Andrés Alfonso Peña-Olarte - Micromechanics of the quasi-steady state: a DEM study
15:20 - 15:30	Abdalla Almukashfi , Svend Pilgaard Larsen, Niels Trads - Thermal conductivity dry-out curve of sand backfill for power cables
15:30 - 15:40	Charlotte E.L. Gilder, Rama M. Pokhrel, Flavia De Luca & Paul J. Vardanega - Further analysis of CPTu and seismic cone data collected in the Kathmandu valley, Nepal
15:40 - 15:50	Ioan Boți , Cătălin Bălăceanu - Use of dynamic penetration probing for anthropogenic fillings mapping
15:50 - 16:00	Cristian Arion , Cristian Neagu, Alexandru Aldea, Radu Văcăreanu - Laboratory investigations for estimation of low amplitude moduli for Bucharest soils
16:00 - 16:10	Conrad Boley , Claas Meier, Florian Hörtkorn - Collapse behavior and microstructure of loess soils in middle Asia
16:10 - 16:15	Discussions

16:15 - 16:30 **Sponsor Gold GEO SEARCH**
Florin Borbei - Unlocking Geotechnical Potential: Integrating Data for Enhanced Solutions -

14:30 - 16:30 Discussion session 2
Geotechnical design
Chairs: Andrey Totsev, Dan Carastoian

14:30 - 14:40 **Ionela Ciocaniu**, Alexandra Ene, Horațiu Popa - Analysis and correlations between design estimations and monitoring works for a deep excavation in Bucharest

14:40 - 14:50 Ilian Markov, **Andrey Totsev** - Sensitivity analysis of parameters on a deep excavation in the city of Sofia

14:50 - 15:00 Moritz Schlee, **Christian Moormann** - Bearing capacity of unreinforced and reinforced working platforms – verification of different design methods by model tests, field measurements and numerical simulations

15:00 - 15:10 Dan Carastoian, **Andreea Bitir**, Adrian Iliesi, Oana Elena Colț, Nicolae Boțu - Technical solutions to assure construction areas in urban zones

15:10 - 15:20 Szerző Árpád, **Lóránd Sata**, Ciumeică Daniel - Circular diaphragm wall for a deep shaft

15:20 - 15:30 **Abigail H. Bateman**, George Mylonakis - “p-y” curves for piles in radially inhomogeneous soil

15:30 - 15:40 Andreas Paraschos, **Georgios Tsitsas** - State integral abutment bridge practices in the United States

15:40 - 15:50 Paul Olteanu, **Tudor Saidel**, Ion Răileanu, Tudor Stanciu, Cornel Rădulescu, Divian Tăbăcaru, Andrei Coman - Full scale cyclic loaded Monopile in extreme geotechnical conditions vs. numerical analyses

15:50 - 16:00 Berend Schmidt, Leo Kuljanski, **Lars van Rouwendaal** - Innovative quay wall structures for inland ports

16:00 - 16:10 **Zsombor Illés**, László Nagy, Örs Antal - Dike deterioration along the Danube and its tributaries

16:10 - 16:15 Discussions

16:15 - 16:30 **Sponsor Gold TERRATEST GEOTEHNIC - GEOPIER**
Adrian Botezatu - Terratest Group + Geopier - 60 years of excellence in geotechnical works

14:30 - 16:30 Discussion session 3
Chairs: Andrea Dominijanni, Ioan Boți
Environmental geotechnics, hydrogeology, energy
2nd Symposium on Environmental geotechnics

14:30 - 14:40 Igor Simeonovski, **Jovan Br. Papić**, Slobodan B. Mickovski, Igor Pesevski - Contribution of vegetation to the shearing resistance of soil

14:40 - 14:50	Navila Tabassum , Kimitoshi Hayano, Yamauchi Hiromoto - Effect of dry and wet cycles on the strength development of clay treated with paper sludge ash-based stabilizer
14:50 - 15:00	Feten Chihi , Gabriella Varga - Municipal solid waste characteristic determination through field investigation
15:00 - 15:10	Stefan Niewerth , Vitomir Dobric - Remediation of a former industrial landfill using a multifunctional active surface sealing
15:10 - 15:20	Adrian Brunner , Roman Markiewicz, Johannes Pistol, Dietmar Adam - Long-term monitoring data of the energy walls at Vienna's metro station Taborstraße
15:20 - 15:30	Matthias Wojnarowicz , Aldo Madaschi, Lyesse Laloui - THM multiphysical optimization and uncertainties propagation around the full-scale experiment of a nuclear waste repository concept
15:30 - 15:40	João Martins, Shilton Rica , Cécile Prüm, José Humberto Matias de Paula Filho - Sustainable quay wall construction
15:40 - 15:50	Katarzyna Gabryś , Kamil Zając, Wojciech Sas - Compaction characteristics of waste materials: recycled concrete aggregate, recycled rubber waste and recycled concrete aggregate-recycled rubber waste mixtures
15:50 - 16:00	Discussions
16:00 - 16:15	Sponsor Gold Plus HOLCIM Ştefan Zghibarcea - Sustainable solutions for geotechnical works in construction projects
16:15 - 16:30	Sponsor Gold Plus HOELSCHER WASSERBAU Joseph Dreissiger , Cristian Bădoiu - Hoelscher Group – general presentation & Brăila Bridge - Dewatering System
16:30 - 16:45	Coffee break
16:45 - 18:00	Discussion session 4 Geotechnical investigation and ground modelling Chairs: Jovan Papić, Olimpiu Mureşan
16:45 - 16:55	Daniel Meyer, Svend Pilgaard Larsen , Niels Trads - Comparison of results from pinned and "saw tooth" end plates in DSS testing
16:55 - 17:05	Andreea Vasilica Dascălu, Irina Lungu, Mircea Aniculăeşi , Florin Bejan - Influence of the compaction moisture content on the soil shear strength parameters
17:05 - 17:15	Erick Baziw, Gerald Verbeek - Minimizing the Effects of Variable Cone Tip Diameters by Implementing the qcHMM Algorithm on Cone Bearing Measurements
17:15 - 17:25	Paul Țurcanu, Dana-Mădălina Pohrib, Irina Lungu - Studies, investigations and time monitoring regarding the stabilization of a structure located close to the top of an unstable slope

17:25 - 17:35 **Jose A. Bosch**, Dimitrios Terzis, Lyesse Laloui - Towards a better understanding of microbially-induced calcite precipitation in geotechnics using numerical models

17:35 - 17:45 **Mohammad Ali Khodabandeh**, Katalin Kopecskó, Gábor Nagy - Strength properties of collapsible soils stabilized by innovative materials

17:45 - 18:00 **Sponsor Gold Plus Extra INGEO & GEOCORE:**
Łukasz Baran - Modern methods of geological investigation on land and nearshore

16:45 - 18:00 **Discussion session 5**
Geotechnical design - Ground improvement
Chairs: András Mahler, George Tsitsas

16:45 - 16:55 **Matthias J. Rebhan**, Hans-Peter Daxer, Jörg Edler, Florian Scharinger, Franz Tschuchnigg, Roman Marte - Determination of the conservation status of anchored structures in Austria

16:55 - 17:05 **Andrzej Głuchowski**, Maciej Miturski, Kamil Zając, Luiza Rzepczyńska, Wojciech Sas - Geopolymerization as a stabilization method for low plasticity clayey silts

17:05 - 17:15 **Nemanja Marković**, Elefterija Zlatanović, Zoran Bonić, Nikola Romić, Branimir Stanković, Dušan Cvetković - Improvement of physical and mechanical properties of soil for road construction purposes by adding chemical stabilisers

17:15 - 17:25 **Conrad Boley**, Paul Pratter - Design aspects of a soil improvement in saturated clay - requirements for the material properties of an innovative composite

17:25 - 17:30 Discussions

17:30 - 17:45 **Sponsors GOLD CARMEUSE**
Radu Mosteanu , Diana Oprean - Treating and improving difficult soils with lime-based binders

17:45 - 18:00 **Sponsors GOLD MENARD**
Karolina Trybocka - Different techniques for different needs

16:45 - 18:00 **Discussion session 6**
Geo-hazards
Chairs: Georgios Belokas, Cristian Arion

16:45 - 16:55 **Alexandru Praporgescu**, Vasile F. Chiorean, Olimpiu C. Mureşan, Augustin Popa - Comparative study between different methods of evaluating slope stability in geotechnical engineering

16:55 - 17:05 Camilo Zapata, Elizabeth A Holcombe, **Paul J Vardanega**, Eliana Jimenez - Modelling the effect of hydraulic conductivity variability on slope stability calculations for a site in South-East Quito, Ecuador

17:05 - 17:15 **G. Bonci, B. Klappstein** - Real time geotechnical monitoring systems for an open pit coal mine. Thresholds for the alarm systems and the increase of safety of operations. Update

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- 17:15 - 17:25 **Mihaela Stanciucu**, Adrian Mihai Diaconu - Hazards induced in infrastructure projects by unrevealed geological features
-
- 17:25 -17:35 **Sara Amoroso** et al - Site investigations for liquefaction assessment after the 2020 Petrinja Mw6.4 earthquake (Croatia)
-
- 17:35 - 17:45 **Claudia Klotz**, Lukas Riedl, Lennart Buehn - A study on different methods for slope stability evaluation with and without supporting elements
-
- 17:45 - 18:00 **Sponsor Bronze Plus GEOSTRU**
Zanellato Gianluca - **Geostru: Innovation and technology to always be a step ahead**
-
- 18:00 - 18:30 Closing**
-
- 18:00 - 18:05 **Marc Ballouz**, president ISSMGE
-
- 18:05 - 18:10 **Lyesse Laloui**, VP Europe, ISSMGE
-
- 18:05 - 18:10 Presentation **18DECGE**
-
- 18:10 - 18:15 Presentation **21ICSMGE**
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- 18:15 - 18:20 Presentation **18ECSMGE**
-
- 18:20 - 18:30 **Loretta Batali**, Chair 17DECGE
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SOCIAL PROGRAM

WELCOME RECEPTION

Let's officially open the Conference at "La Parc" Restaurant and Garden, in a friendly atmosphere, entertained by Anima quartet. A nice moment to socialise, to meet colleagues and friends and start networking.

- **Where?** Ramada Parc, "La Parc" Restaurant and Garden, Bd Poligrafiei no. 3-5 Bucharest
- **When ?** Wednesday, 7th of June @20:00
- **Who?** All attendees
- **Dress code:** Business casual



GALA DINNER

A more formal dinner, a good occasion to discuss, to share a drink and enjoy some jazz music performed by Andra Covaleov and Puiu Pascu.

- **Where?** Ramada Parc, "La Parc" Restaurant and Garden, Bd Poligrafiei no. 3-5 Bucharest
- **When ?** Thursday, 8th of June @20:00
- **Who?** Subject to special fee / Easy registration by scanning this qrcode:
- **Dress code:** Cocktail



TECHNICAL VISITS

All technical visits will take place on Saturday, 10.06.2023.

Number of places is limited for each visit and will be filled on the “first come – first served” basis (based on the order of response to the survey).

1. SUSPENDED BRIDGE OVER DANUBE AT BRAILA

Full day 10.06.2023

The jobsite to be visited is a suspended road bridge over Danube at Braila, with 4 traffic lanes, connecting 2 important counties – Braila and Galati – to Tulcea county, being also important for connecting SE Europe to the European transport corridors IV and IX.

The Suspended Bridge over the Danube at Braila is almost completed at present and the inauguration is expected at the end of June 2023.

The bridge is connecting Braila and Jijia and has a total length of 1974.30 m, with a central span of 1120 m and lateral spans of 489.65 m (Braila) and 364.65 m (Jijia). The bridge deck is 29.70 m wide and the central span will leave a navigation corridor of 180 m wide and 38 m high.

The bridge is continued with 2 access viaducts, each one of 90 m long and 29.70 m wide, having the piers and abutments founded on bored piles ϕ 1500, 35 – 42 m long.

The visit will take one full day (8:00 – 17:00) and will comprise transportation with buses from and to Ramada Parc and a lunch.

The technical visit is organised and sponsored by **HOELSCHER WASSERBAU România**.

Departure: 10.06.2023 – 8:00 in front of Ramada Parc Hotel.



TECHNICAL VISITS

2. TECHNICAL VISITS TO JOB SITES (deep excavation, piles) in Bucharest Half day morning 10.06.2023

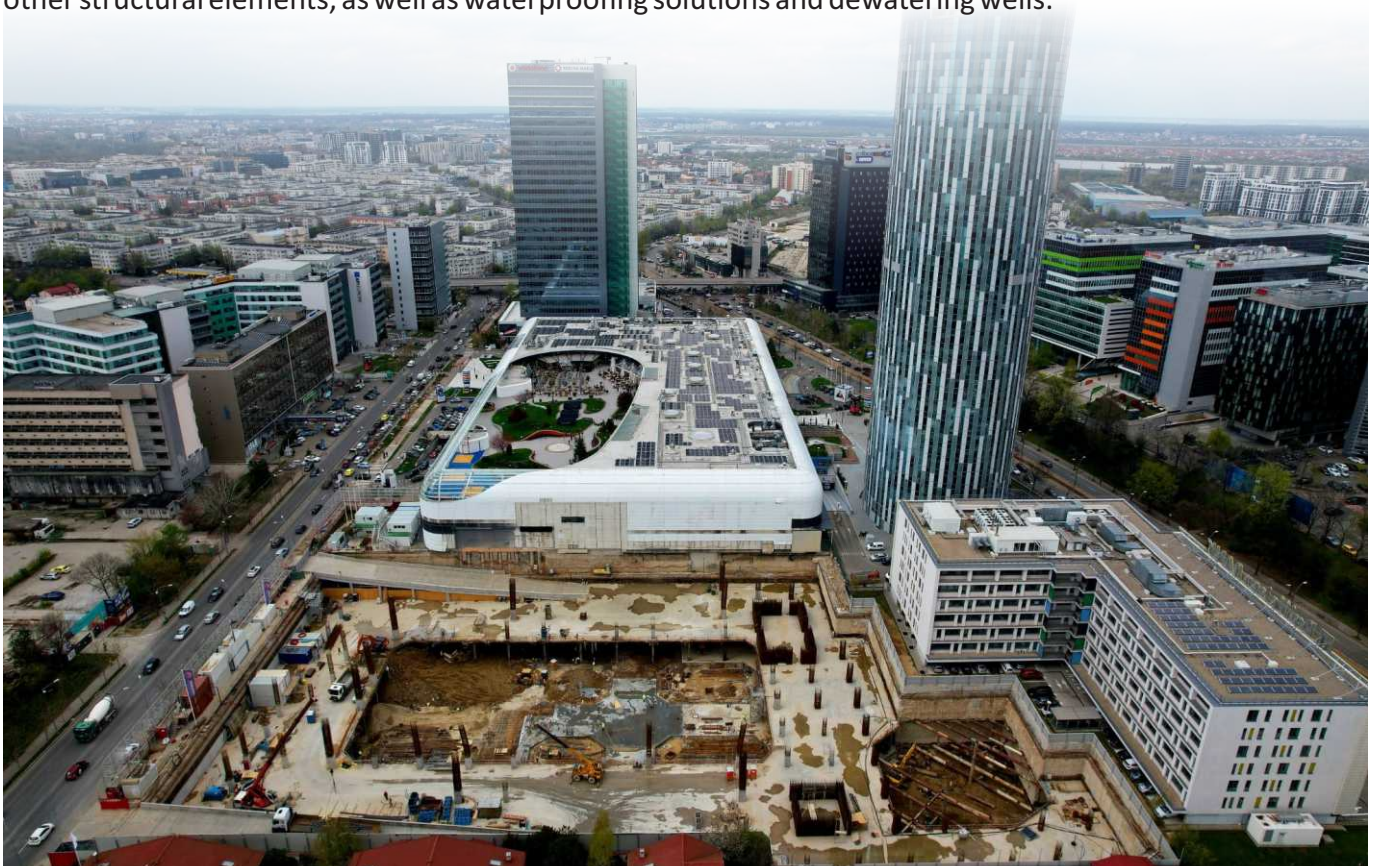
Two job sites will be visited in Bucharest. Transportation will be provided from and back to Ramada Parc hotel. Departure: 10.06 9:00 in front of Ramada Parc hotel

2.1. NEW PROMENADA

A 23 m deep excavation for a future commercial center constructed using top-down method. The top down method has been adopted for constructing 7 underground levels (3 top-down slabs being constructed) inside an excavation pit protected by slurry walls (diaphragm walls) with a thickness of 1.00m.

A particular aspect will be the presentation of the analyses for the undergoing excavation works performed for various stages of construction with respect to the site's lithology, hydrogeological conditions and constructed surrounding buildings. The future building is laid on a deep foundation system based at approx. 45m below ground level comprising in bored piles with a diameter of 1.00m, 1.20m and 1.50m as well as 80 cm thick barettes.

Load testing has been performed based on Osterberg cells and results have been relevant to the final design of the pile layout. Predicted works that will be undergone during the visit's period consist in excavations that will be situated between -15.00m and -20.00m with the construction of top down elements (slabs, columns, perimetral walls) and the construction of specific details such as struts and metallic caps, couplers, and other structural elements, as well as waterproofing solutions and dewatering wells.



2.2. ONE LAKE DISTRICT

One Lake District will be an exclusive residential complex developing on the shore of Plumbuita Lake, consisting of nine residential buildings with around 2075 exclusive apartments, with commercial spaces and various services available on the ground floor.

The development, situated on a land of approximately eight hectares on Gherghitei Street, will include modern apartments, amazing views, a lakefront location, sustainable principles, innovative design, and many integrated services.

On a surface of 8 ha, under the fillings having a variable a considerable thickness between 1.50m and 9.30m, there is an alternation of complexes formed both from cohesive formations represented by clays, silty clays, sandy silty clays, clayey silts and clayey sands, mainly medium – soft consistency, with high to very high compressibility, as well as non-cohesive formations represented by gravels, sandy gravels and even boulder elements, from medium to dense, wet to saturated state.

The solution designed is a reinforced concrete raft on pile foundation, the design model considering that all the loads are carried by the piles, due to the high compressibility of the soils on shallow depth.

To search economic and sustainable alternatives to lower the costs, hence, to increase the bearing capacities compared with the bored piles, but also to reduce the carbon footprint of the foundations, the Screwsol threaded displacement piling system was selected.



INFORMATION FOR DELEGATES

- **Venue:** Ramada Parc Hotel, Bd. Poligrafiei no. 3-5, Sector 1, Bucharest
- **All plenary sessions** are held in **TERRA** room, while the discussion sessions in TERRA 1, 2 and 3 rooms.
- **The meeting of the Danube countries delegates** on 7.06 (17:00 – 19:00) is held in **MERIDIANE** room.
- **Registration desk** is located near the entrance in **TERRA** room.
- **Technical exhibition** takes place in the lobby and foyer of **TERRA** room.
- **All coffee breaks** are served in the **TERRA foyer** inside the technical exhibition.
- **Lunch** is served in “La Parc” Restaurant.
- **Wi-Fi:** Ramada Parc Password: hotelramada
- **Car parking:** The hotel has a parking – free of charge for the hotel guests. For the conference attendees not staying in the hotel the price is 5 lei/hour or 40lei/day (min. 8h).
- Delegates are invited to **join the 17DECGE chat** by scanning the qrcode below. Here you can address questions and discuss about the topics of the presentations with the authors and the other attendees.



SPEAKERS and CHAIRS

- Speakers are requested to handover their presentation to the designated technician, on USB stick, the day before their scheduled presentation to allow sufficient time to upload and check the files.
- Please ensure that you are available in your presentation room 10 minutes prior to the start of the session to meet with the Session Chair.
- Session chairs are kindly requested to be present in the conference room at least 10 minutes prior to the start and to check the presence of the speakers in their session.
- Please refer to specific instructions on the website: <https://17decge.ro/>



DISCLAIMER

- The Conference Committee reserves the right to make changes to the Conference program at any time without notice.





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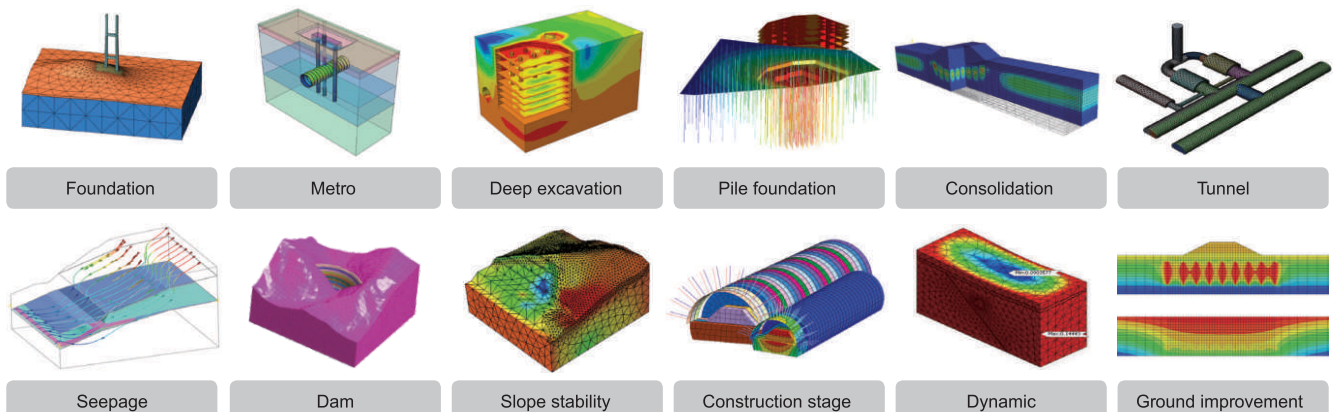
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