



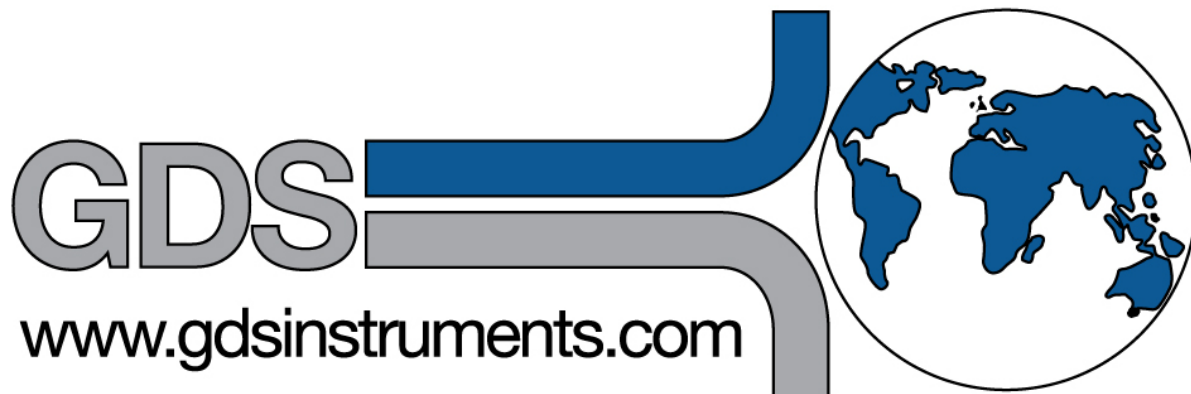
EUNSAT2025 + BGE

**5th European Conference on Unsaturated Soils
+ Biotechnology in Geotechnical Engineering
Lisbon, 1 to 3 September 2025**

FINAL PROGRAM



TÉCNICO LISBOA



METER



Co-funded by
the European Union



SAFE-LAND

Mitigating the risk of flooding and
landslides via artificial intelligence with
a view to extreme climate events

SAFE-LAND / UCP Knowledge Network



TÉCNICO LISBOA



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Civil Engineering Research
and Innovation for
Sustainability



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Fundação
para a Ciência
e a Tecnologia

Timetable:

	Monday 01-Sep	Tuesday 02-Sep	Wednesday 03-Sep
9 : 00	Opening EUNSAT		
9 : 30	Distinguished Lecture EUNSAT	EUNSAT Parallel sessions	Bright Spark lectures
10 : 00			
10 : 30	Break	Break	Break
11 : 00			
11 : 30	Keynote lectures EUNSAT	EUNSAT Parallel sessions	Keynote lectures EUNSAT + BGE
12 : 00			
12 : 30	Visit to the laboratory (T1)	Visit to the laboratory (T2)	Visit to the laboratory (T3)
13 : 00			
13 : 30	Lunch	Lunch	Lunch
14 : 00			
14 : 30	EUNSAT Parallel sessions	Opening BGE	EUNSAT session
15 : 00		Keynote lectures EUNSAT + BGE	BGE parallel sessions
15 : 30			
16 : 00	Break	Break	Break
16 : 30			
17 : 00	EUNSAT Parallel sessions	EUNSAT sessions	Keynote lectures EUNSAT + BGE
17 : 30		BGE sessions	
18 : 00			
18 : 30	Welcome reception	TC 106	Closing EUNSAT + BGE
19 : 00			
19 : 30			
20 : 00			
20 : 30			
21 : 00		BANQUET	
21 : 30			
22 : 00			
22 : 30			

Plan of the conference site:



Conference proceedings at:

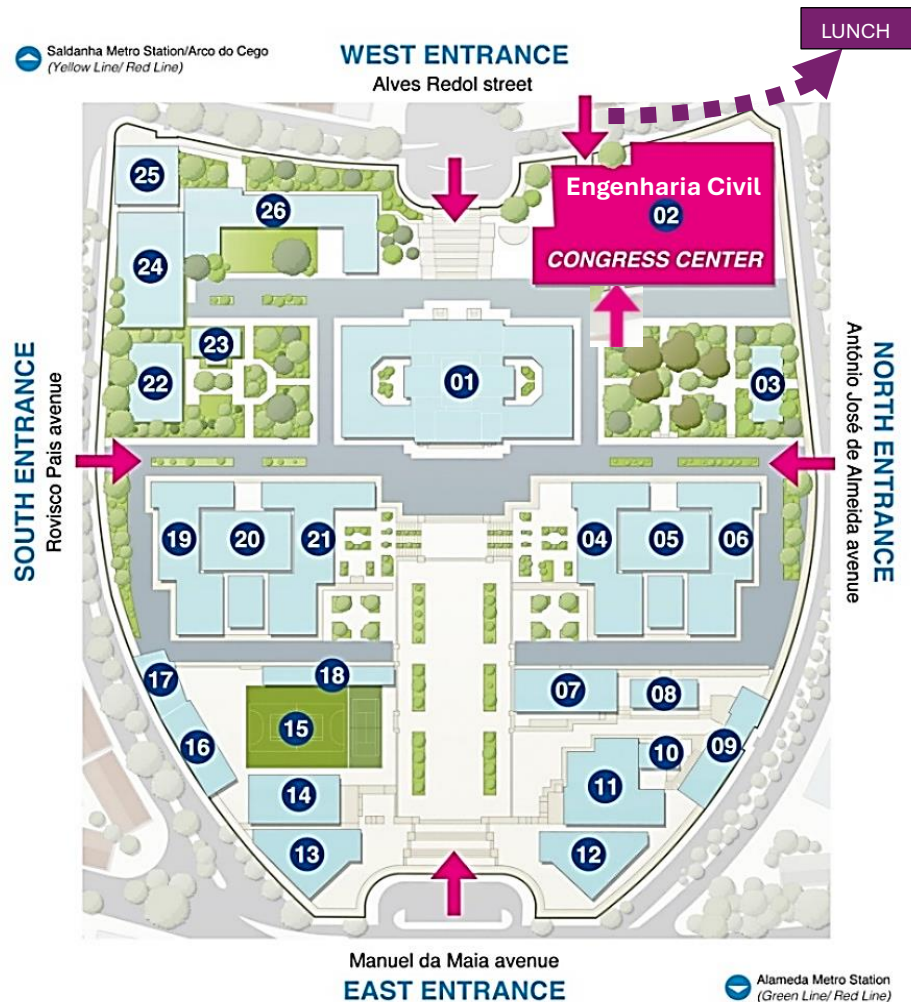
<https://www.e3s-conferences.org/articles/e3sconf/abs/2025/42/contents/contents.html>

VENUE:

INSTITUTO SUPERIOR TÉCNICO
Av. Rovisco Pais, 1
1049-001 Lisboa

LUNCH:

Hotel Holiday Inn
Av. António José de Almeida
(next to IST, 5 min walking)



BANQUET:

Casa do Alentejo
Rua Portas de Santo Antão, 58
1150-268 Lisboa
Metro station: Restauradores – Invitations mandatory

RECEPTION OF THE PRESENTATIONS (Power Point, size 16:9, 12 min + 3 min for questions)

Option 1 – By sending us (info@eunsat2025.tecnico.ulisboa.pt) the file by link until 29th August. You can use wetransfer or similar. This is independently from the size of the file and will prevent errors using e-mail boxes.

Option 2 - By uploading the presentation at the conference site, in the front desk room (floor 02). This can be done only during coffee and lunch breaks.

The authors can also use Option 2 to replace presentations previously sent following Option 1.

Monday - 1st September

8:00 Registration at the reception desk

9:00 to 10:30

Auditorium

Opening EUNSAT 2025

Chair: Enrique Romero

EUNSAT Distinguished Lecture

Cristina Jommi (Politecnico di Milano, Italy // TU Delft, Netherlands)

Coffee Break

11:00 to 12:30

Auditorium

Chair: Alessandro Tarantino

Keynote Lecture

Aikaterini Tsiampousi (Imperial College London, UK)

Integrating soil-atmosphere interaction into sustainable slope management.

Keynote Lecture

Chao-Sheng Tang (Nanjing University, China)

Unsaturated soil monitoring using distributed fiber optic sensing technology.

Visit to the laboratory of Geotechnics I (registration at the front desk)

Lunch at Holiday Inn hotel

14:00 to 16:00

Parallel Sessions

Constitutive models

Auditorium

Chair: Leonardo Maria Lalicata

106 Nazanin Mahboobi Motlagh, Arman Khoshghalb and Nasser Khalili

Effect of void ratio on soil-water retention curves of silty sands using a pore network model derived from sphere packs.

- 22 Ryunosuke Kido and Yosuke Higo
Variation in principal curvature of air-water interface inside and outside shear band of dense unsaturated sand.
- 7 Hesam Ebrahimisadr, Sophie Lanckohr and Bertrand Francois
A methodology for the calibration of the effective stress parameter: From macroscopic considerations to microstructural validation.
- 74 Michelangelo Cardin and Alessio Ferrari
Modelling the swelling behaviour of Opalinus Clay shale using a double-structured model.
- 5 Nazanin Irani, Christoph Schmüdderich and Torsten Wichtmann
Application of a state-dependent hyperelastic-plastic constitutive model for slope stability analysis of fiber-reinforced sand.
- 60 Giada Maria Rotisciani
Effect of partial saturation on strain localisation in over-consolidated fine-grained soils.
- 46 Arianna Pucci, Ignacio Giomi, Giulia Guida, Vicente Navarro and Francesca Casini
Implementation and validation of a hydro-mechanical model based on the Clay and Sand Model extended to unsaturated condition.
- 92 Lluís Monforte, Abdallah Najdi and Mohamed Rouainia
Modelling the constitutive behaviour of unsaturated soils using a kinematic hardening model.
-

Experimental Studies I

VA1

Chair: Mathilde Morvan

- 24 Tomoyoshi Nishimura and Masafumi Matsumoto
Creep deformations for unsaturated-saturated soils with consider suction and pore-water pressure.
- 163 Hao Zeng, Laura Gonzalez-Blanco and Enrique Romero
Effect of gap-sealing on hydro-mechanical behaviour of granular bentonite.
- 53 Sparsh Bhardwaj, Tatsuya Ishikawa and Takahisa Nakamura
Influence of moisture content on shear behavior of differently aged ballast mixture.
- 112 Fausto Molina-Gómez, Rubén Galindo-Aires and Antonio Bobet
Stiffness of pyroclastic scoriae under different degrees of saturation.

- 49 Kadir Kocaman, Lucia Mele, Aşkın Özocak and Alessandro Flora
Effect of Matric Suction on Monotonic and Cyclic Behaviour of a Low-Plastic Silty Soil from Sakarya Region.
- 93 Jubert Pineda, Kaiwen Ouyang, Olivier Buzzi, Jianping Li and Stephen Fityus
Suction effects on the shear strength behavior of compacted dewatered tailings.
- 109 Jairo E. Yepes, Laureano R. Hoyos, Claudia L. Velosa and Anand J. Puppala
Assessment of Peak/Residual Failure Envelopes of Clayey Soil via Suction-controlled Ring Shear Testing.
- 118 Katia Bicalho, Anita Chrystello and Nelson Santos
Using the Filter Paper Method to determine soil suction data for sands and low plasticity clays. (RECORDED)
-

Water Retention Properties

VA2

Chair: Giulia Guida

- 128 Natasa Stambuk Cvitanovic and Ana Duhovic
Methodology for testing the soil water characteristic curves of soft rocks - example of Eocene marls.
- 129 Cen Gao, Yujun Cui, Nadia Benahmed and Sylvie Nicaise
A dual-porosity SWRC model for lime-treated soils upon curing.
- 134 Alana Dias de Oliveira, Renan Felipe Braga Zanin, Pedro Henrique Lopes Dal-Col, Narayana Saniele Massocco and Raquel Souza Teixeira
Influence of Particle Size Distribution and Microstructure on Water Retention and Infiltration in Lateritic Soils.
- 18 Viktor Krause, Meisam Goudarzy, Diethard König and Torsten Wichtman
Water retention and suction stress of a partially saturated sand-clay mixture subjected to hydraulic hysteresis: laboratory investigations and model evaluation.
- 131 Aditi Rana, Arash Azizi, Malcolm Whitworth, Marti Lloret-Cabot and David Toll
Effect of Water Retention Properties on the Shear Modulus of an Unsaturated Compacted Soil.
- 65 Zheng Zhou
Correlations between water-entry value and its affecting factors for hydrophobic soil: a review.
- 34 Megan McKellar, Feran Parera Morales, Greg Siemens and Andy Take
Visualizing air entry from footprints on the beach experiments using fine transparent soil.

152 Emőke Imre, Ágnes Bálint, Tibor Firgi, Delphin Kabey Mwinken, Giulia Guida, Vijay P. Singh and Kálmán Rajkai

Closed-Form SWCC Functions for Sand Fractions and Mixtures.

Coffee Break

16:30 to 18:00

Parallel Sessions

Numerical Studies I

Auditorium

Chair: Greg Siemens

68 German Matos Paucar, Wiebke Baille, Merita Tafili, Jan Machaček and Torsten Wichtmann

Mechanical effects and numerical simulation of wetting-induced volumetric behaviour of sandy soils from opencast lignite mining.

20 Shizuka Eshiro and Yosuke Higo

Theoretical modelling of water retention curves based on the X-ray micro-CT observations.

42 Zharry Bueno, Gabriel Barbosa and Manoel Cordão Neto

Effects of Water Retention Curve and Infiltration process in progressive landslides using the Material Point Method(MPM).

57 Erik Tengblad, Vicente Navarro and Rubén López-Vizcaíno

Proposal of a suction approximation to simulate the behaviour of real gases.

98 Man Xu, Cristina Jommi and Stefano Muraro

An analysis of pore pressure measurement in gassy soils.

142 Govinda Bakna and Jagdish Prasad Sahoo

Pullout capacity of plate anchor in unsaturated frictional soil using particle size-based soil water retention curve.

Coupled problems

VA1

Chair: Laura Gonzalez Blanco

138 Layla Aquino, Camille Mannarino, Elisabeth Ritter and Rafaela Cardoso

Chemo-hydro-mechanical Coupled Performance of Geosynthetic Clay Liners in the Presence of Synthetic Leachates.

146 Sandra Orlandi, Cecilia Laskowski, Diego Manzanal and Irna Mendez

Expansive clay treated with lignin: insight on water pollution. (RECORDED)

- 54 Zihao Liu, Shin-Ichi Kanazawa, Masanori Kohno and Kira Iida
Investigation of the Strength Characteristics of Various Bentonites under Different Temperature and Saturation Conditions.
- 3 Rodrigo Polo-Mendoza, David Mašín, Jan Najser and Jakub Roháč
Thermo-hydro-mechanical behaviour of Malaysian kaolin under one-dimensional conditions.
- 143 Luciano Campos, Alex Zubrow and Sherif Abdelaziz
Impact of temperature variations on at-rest earth pressures in unsaturated soils.
- 110 Daniel R.C. Green, Laureano R. Hoyos and Anand J. Puppala
Response of Cohesive-frictional Soils Under Thermo-Controlled Cyclic Simple Shear Testing: Preliminary Observations.

Experimental Studies II

VA2

Chair: Tomoyoshi Nishimura

- 145 Talenta Pitso, Agostino Walter Bruno, Giuseppe Pedone, Marianna Pirone and Domenico Gallipoli
Synergic effect of hydrated lime and guar gum treatments on the shear strength and retention behaviour of a pyroclastic soil.
- 126 Francesco Moscato, Marco Rosone, Clara Celauro and Alessio Ferrari
Activation of marble industry waste for sustainable stabilization of clays.
- 44 Jiahang Xu, Dariusz Wanatowski, Xianfeng Liu, Shengyang Yuan and Jie Ma
Multiscale study on the shearing behaviour of unsaturated basalt fibre modified red mudstone as subgrade fill material.
- 29 Wei Yan and Emanuel Birle
Experimental Investigation of the Geosynthetic Capillary Barrier Effect in multi-layer Road Embankments.
- 59 Pooria Ghadir and Matteo Pedrotti
Nanoporous synthetic roots: effect of drying paths on Colloidal Silica-Plants Interaction.
- 1 Maria Margarida Barriga, Ana Filipa Calheiros, Sofia O. D. Duarte, Gabriel A. Monteiro and Rafaela Cardoso
Influence of fines on the hydromechanical properties of a biocemented uniform-size sand.

18:00 to 19:30

Welcome Reception EUNSAT2025+BGE

At the Museo of Civil Engineering

Tuesday – 2nd September

9:00 to 10:30	Parallel Sessions
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Field Cases

Auditorium

Chair: Tacio Campos

151 Ignacio Giomi, Ricardo J. Rocca and Franco M. Francisca
Inverse and probabilistic analysis of induced settlements by wetting in collapsible soils.

130 Håkon Heyerdahl and Marius Mathisen Søvik
Landslides triggered by snowmelt, Eastern Norway.

75 Otávio Alfama Neto, Larissa Reis Silva, Emerson Batista Silva, Rafael Cerqueira Silva, Carlos Medeiros and Manoel Porfírio Cordão Neto
Geotechnical Behavior of Collapsible Soils in the Federal District: Integration of Physical, Mechanical, and Hydraulic Parameters.

69 Nancy Anataba Kyorku Dzikunu-Bansah
Climate Change Trends as measured by the Thornthwaite Moisture Index Maps for Ghana.

101 Giuseppe Vitiello, Filomena Sabatino, Marco Valerio Nicotera and Marianna Pirone
Hydro-mechanical characterization of the pyroclastic cover at the Salerno Test Site (Southern Italy). (RECORDED)

78 Lucia Coppola, Luca Pagano and Francesco Silvestri
Observations on hydrological state of volcanic soil covers: the Celario slope case.

Experimental Studies III

VA1

Chair: Laureano Hoyos

156 Giusy Floriana Valentino, Marco Rosone and Alessio Ferrari
Effect of extended drying on the mechanical behaviour of a sand.

147 Zahraa Leahaf, Mathilde Morvan and Pierre Breul
Effect of Clay Content on Suction and Swelling Behavior in Unsaturated Soils: Insights from Water Retention and Oedometric Testing.

144 Samuel Ampadu, Felix Ayeh, Frederick Owusu-Nimo, Frederick Nai Charkley and Fred Adjei

A laboratory study of climate change and subgrade strength of a lateritic soil in a tropical environment.

55 Lucia Mele, Marco V. Nicotera, Fabio Vivona and Alessandro Flora

Monotonic Behavior of Pompeii Pyroclastic Soil Under Unsaturated Conditions.

137 Jubert Pineda and Hoang Long Dinh

Evolution of K_o in compacted loess upon loading and wetting paths.

125 Fausto Molina-Gómez, Rubén Galindo-Aires and Antonio Viana da Fonseca

On the undrained cyclic resistance of a partially saturated sand.

THM coupled behaviour

VA2

Chair: Nuria Sau

51 Alice Gamble, Ruan Murison, Elisabeth Bowman and Tiago Gaspar

Hydromechanical behaviour of a waste foundry sand.

38 Benedetta Tosti and Giulia Guida

Experimental investigation of Frost Heave in clayey sands: Effects of Density and Thermal conditions.

17 Yonghan Ying, Jidong Teng, Antai Dong and Daichao Sheng

Investigating the Freezing-Thawing Hysteresis of Soils.

52 Shin Sato, Florian Kober, Raphael Schneeberger and Tomoyuki Shimura

THM modelling for HotBENT experiment using the 3D model.

6 Timon Kayser, Wiebke Baille, Merita Tafili and Torsten Wichtmann

Experimental and numerical investigation of coupled thermo-hydro-mechanical behaviour of Kaolin clay.

16 Leonardo Maria Lalicata, Agostino Walter Bruno and Domenico Gallipoli

On the indoor hygrothermal regulation ability of earth building walls.

Coffee Break

Equipment development**Auditorium**

Chair: Jubert Pineda

119 Alessandro Tarantino, Roberta Dainese, Carla Pendino and Giulia Guida
Dielectric permittivity method to monitor (liquid) water content in unsaturated soils, frozen soils, and snow.

161 Laura Gonzalez-Blanco, Enrique Romero and Hao Zeng
Coupling X-ray CT and MIP to Assess Freeze-Drying Effects on the Structural Arrangement of Granular Bentonite.

19 Tomoyoshi Nishimura
Investigation of hydro-mechanical property for unsaturated expansive soil using developed suction control system.

122 Benedek Nagy, Grainne El Mountassir and Alessandro Tarantino
Suction monitored apparatus to investigate shear strength of unsaturated granular material.

120 Andrew Darby, Matteo Pedrotti and Alessandro Tarantino
Short-wave infrared (SWIR) imaging to illuminate hydraulic processes in the rhizosphere.

Numerical and experimental methods**VA1**

Chair: Marco Rosone

157 Armen Ghazaryan and Anna Kirakosyan
Deep learning-based classification and segmentation of rock discontinuities from photogrammetry and lidar data.

39 Narayana Saniele Massocco, Luana Lenzi, Alana Dias de Oliveira and Orlando Martini de Oliveira
Application of Transformed and Normalized Models for Hydraulic and Mechanical Characterization of Granite Residual Soils.

50 Andrea Muñoz Ibáñez, Camilo Guerrero and J. Carlos Santamarina
Suction-Induced Volume Changes in Rocks (Anisotropy and Cementation) – Geotechnical and Geoenergy Implications.

160 Dawei Xue, Bowen Song and Xilin Lu
Modeling hydro-mechanical coupling effects on creep-induced compaction deformation around boreholes.

40 Gasper Abima, Anita Atukunda and Richard Kizza

Development and performance evaluation of a method to determine the maximum dry density of lateritic soils using specific gravity.

Numerical Studies II

VA2

Chair: Marius Milatz

108 Inge de Wolf, Stefano Muraro and Cristina Jommi

Time series analysis of atmospheric-driven hydromechanical history of soft soil geo-structures.

96 Kwangwoo Lee, Alessio Ferrari and Lyesse Laloui

The effect of pore water pressure distribution induced by rainfall infiltration on the failure of unsaturated soil slopes.

37 Gorizia D'Alessio, Leonardo Maria Lalicata and Francesca Casini

Hydro-mechanical analysis of embankments stability in partially saturated soils under rainfall events.

8 Maryam Sadat Maddah Sadatieh, Aikaterini Tsiampousi and Athanasios Paschalis

Modelling the impact of depth distributed plant water uptake on Soil-Plant-Atmosphere Interactions.

32 Hideki Nagai, Yuki Takada, Kazuhide Yamaguchi and Shingo Horimi

Response analysis during liquefaction considering unsaturated soils.

77 Lucia Coppola, Luca Pagano, Stefania Sica and Mariagrazia Tretola

Suction-induced effects on the seismic response of a zoned earth dam through simplified dynamic analyses.

Visit to the laboratory of Geotechnics II (registration at the front desk)

Lunch at Holiday Inn hotel

14:00 to 16:00	Auditorium
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Opening BGE

Chair: Francesca Casini

Keynote Lecture

Lyessse Laloui (Swiss Federal Institute of Technology, EPFL, Switzerland)

From Microbial Bonds to Macroscopic Strength: A Mechanical Perspective on Biocemented Soils.

Keynote Lecture

Grainne El Mountassir (University of Strathclyde, UK)

Interplay between biological processes and unsaturated soil behaviour.

Coffee Break

16:30 to 18:00	Parallel Sessions
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Selected Lectures I (FUNDEC course)

Auditorium

Chair: Rui Carrilho Gomes

27 Rafaela Cardoso, Ana Carolina Farinhas, Mário Oliveira, Miguel Q. Cruz, Isabel Gonzalez, Ana Teresa Rodrigues, Leslie Sapin and Annette Esnault-Filet
Study of the durability of biocementation treatment applied to a real slope in Portugal.

76 Natascha Kallerhoff, Ricarda Sellinghoff, Wolfgang Lieske, Wiebke Baille and Torsten Wichtmann
Biopolymer-modified bentonite-silt composites to improve the hydro-mechanical properties of landfill mineral sealings.

104 Giuseppe Pedone, Agostino Walter Bruno, Marianna Pirone, Talenta Pitso and Domenico Gallipoli
On the combined use of hydrated lime and guar gum for rainfall-induced shallow landslide risk mitigation.

9 Jiale Zhu, Abbas El-Zein, Thomas Hubble and Guien Miao
Root Biomechanics Testing Challenges: Findings from Experiments on Native Australian Trees. (RECORDED)

100 Lluís Monforte, Laurin Hauser, Josep Maria Carbonell and Marcos Arroyo
An exploratory model of tree root pull-out in partly saturated soils.

162 Marius Milatz
Experimental investigation of the pull-out resistance of simplified root system architecture models in dry sand.

Experimental Bio

VA1

Chair: Maria Mavroulidou

2 Amanda Mendonça, Paulo da Venda Oliveira, Paula Morais, Nuno Simões and Pedro Farias

Biocementation potential of Sporosarcina pasteurii and Pseudomonas M47T1 for sustainable soil stabilization.

127 Marco Rosone, Annamaria Gallo, Rosa Alduina and Giorgio Manno
Preliminary investigation on a novel bacterium from a hydrothermal vent for biocementation of soils.

124 Anna D. Kwablah, Adesola H. Adegoke, Kannan K. R. Iyer and Emmanuel Salifu
Hydromechanical Response of Moderately Calcareous Clayey-Sand Treated with Nutrient Additive or Cementation Solution.

150 Qi Zhang, Benedek Nagy, Alessandro Tarantino and Grainne El Mountassir
Experimental investigation of the influence of the growth of saprotrophic fungi (Pleurotus ostreatus) on the aggregate stability of a silty sand.

56 Enza Vitale, Pietro Gian Pesce, Rossella Petti, Giacomo Russo, Michael Plötze, Alexander Puzrin and Claudia Vitone
Mussel shells powder as biogenic precursor of alkali activated binders for soil stabilisation.

155 Alessandro Fraccica, Andrea Lepri, Nicola Papini and Manuela Cecconi
On the measurement of in situ unsaturated shear strength of a beech-rooted soils.

Micro

VA2

Chair: Dawei Xue

133 Mehana Allache, Yu Jun Cui and Nadia Mokni
On the determination of pore size distribution by Nitrogen Adsorption and Mercury Intrusion Porosimetry for Claystone.

23 Hamed Faizi and Abbas El-Zein
Evaluating Swelling Behaviour and Durability of Geopolymerised Expansive Soils Under Cyclic Moisture Conditions. (RECORDED)

99 Luis José Parra Gómez, Cristina Jommi and Stefano Muraro
Observation of peat porosity and water retention upon drying.

79 Mohamed Ali Marrakchi, Yu Jun Cui, Patrice Chardard, Pascale Massaad, Gildas Potin, Laurent Desmurs, Simon Bonne and Philippe Gotteland
Air Permeability and Microstructure of a compacted silt treated with different binder dosages.

132 Yu Lei, Yujun Cui and Nadia Mokni
pH and time dependent microstructure features of compacted bentonite-sand mixture.

123 Marco Starvaggi, Marco Rosone, Pathmanathan Rajeev and Alessio Ferrari
Fabric evolution of a double-structured 3D-printed clayey soil upon drying.

18:00 to 19:00 TC106 Meeting DECivil room (V4:41 – 2nd Floor)

20:00 to 23:00 **Banquet**
Casa do ALENTEJO
(Lisbon Downtown, Metro: station Restauradores
The invitation is mandatory



5th European Conference on Unsaturated Soils
 Biotechnology in Geotechnical Engineering

Lisbon, 1 to 3 September 2025

<https://eunsat2025.tecnico.ulisboa.pt>

Wednesday – 3rd September

9:00 to 10:30 Auditorium

Chair: David Toll

Bright Spark Lecture I

Alessandro Fraccica

Bright Spark Lecture II

Ana Sofia Dias

Coffee Break

11:00 to 12:30	Auditorium
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Chair: Michael Bardanis

Keynote lecture

Alessio Ferrari (University of Palermo, Italy // EPFL, Switzerland)

Shales: an unsaturated Soil Mechanics perspective.

Keynote lecture

Claudia Vitone (Politecnico di Bari, Italy)

Bio-Materials and Nature-Based Solutions for Marine Waste Valorisation: Multiscale Investigations, Coupled Phenomena, and Engineering Applications.

Visit to the laboratory of Geotechnics III (registration at the front desk)

Lunch at Holiday Inn hotel

14:00 to 16:00	Parallel Sessions
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Selected Lectures II (FUNDEC course)

Auditorium

Chair: Jaime Santos

105 Marianna Pirone and Gianfranco Urciuoli

Multi-Factor Rainfall Thresholds (MF-RT) for shallow slip prediction based on field monitoring.

91 Georgios Belokas, Dimitrios Kokoviadis and Michael Bardanis

A fully instrumented field station to monitor essential unsaturated soil variables: Records and lessons during the Mediane Daniel.

116 Marianna Pirone, Giuseppe Vitiello, Giuseppe Pedone, Francesca Casini, Antonio Santo and Gianfranco Urciuoli

The PROMISE Project: An integrated approach for mitigation of flowslide risk – Preliminary results from the Salerno Test Site.

159 Alessandro Fraccica, Matteo Maggi, Danilo D'Angiò, Mauro Bonasera, Gianluigi Di Paola, Vittorio Chiessi and Giovanni Bertolini

Hydro-mechanical characterisation and monitoring through conventional and satellite data: the Calita landslide case (Italy).

47 Amanda DiBiagio, Vittoria Capobianco, Amy Oen and Lena M. Tallaksen

Hydro-mechanical effects of deciduous forest on slope stability: first results from a case study in Western Norway.

14 Ethelbert O. Mezie, Aikaterini Tsiampousi and Ken Vinck
Numerical simulation of pore water pressure effects on landslides - case study of Nanka in southeastern Nigeria.

139 Shunsuke Fujino, Shin-Ichi Kanazawa, Satoe Suzuki and Satoru Ohtsuka
Study on rainfall infiltration behavior of soil structures considering vegetation's slope failure prevention function.

31 Andrea Giusti, Rafaela Cardoso, João Nascimento and Teresa Melo
Impact of climate on groundwater levels at a case study in Alentejo, Portugal, considering unsaturated infiltration.

Experimental Studies VII

VA1

Chair: Natasa Stambuk Cvitanovic

67 Smitha Sivadasan, Sravan Muguda, Emmanuel Salifu, Hamed Khodadadi Tirkolaei, Agostino Walter Bruno and Domenico Gallipoli
Hydraulic Response of Sandy Soil to Fungi-Biopolymer Treatment.

62 Elise Lefevre and Alessia Cuccurullo
Geotechnical characterisation of recycled EICP stabilized earthen materials.

35 Hanieh Babaeizad, Wiebke Baille and Torsten Wichtmann
Comparative Analysis of Bioaugmentation and Biostimulation Approaches for Biocementation of Sandy Soils.

102 Maria Mavroulidou, Michael Gunn, Sumit Joshi, Intisar Sanam, Christopher Gray, Louis Le Pen, Jonathan Garelick and Juan Antonio Laguna Librado
Assessment of the strength and swelling potential of soft soils before and after electrokinetic biocementation.

135 Hamed Abdeh Keykha, Maria Mavroulidou and Michael Gunn
A comparative assessment of biogrouting versus electro-biogrouting for the treatment of fine-grained soils.

21 Rui Qi and Sergio Lourenço
Self-healing of clay desiccation cracks by biopolymeric microcapsules – sharing good and bad results.

25 Rui Qi and Sergio Lourenço
Biopolymeric microcapsules and their evaluation as additives in sand improvement.

Experimental Studies VI (Bio)

VA2

Chair: Wiebke Baile

15 Shanshan Li, Holger Reith, Andreas Bieberstein, Volker Schlüter and Hans Henning Stutz

Root distribution in willow brush mattresses: experimental framework and preliminary findings.

115 Mariagiovanna Moscariello, Sabatino Cuomo, Vito Foresta and Rita Ciaglia
Interaction of long rooted grass with natural unsaturated pyroclastic soils: new tests.

12 Yuchen Wang, Trishia Liezl Dela Cruz and Junjun Ni
Eggshell hydrochar application to enhance soil fertility and promote plant growth.

13 Trishia Liezl Dela Cruz, Yuchen Wang and Charles Wang Wai Ng
Effects of Biochar on Vegetation and Material Fertility of Construction Waste and Completely Decomposed Granite

94 Gerald Innocent Otim, Alena Zhelezova, Gianmario Sorrentino, Stefan Trapp and Irene Rocchi

Hydraulic properties of rooted soils from Salix sp. Pot experiments.

Coffee Break

16:30 to 18:00

Auditorium

Chair: Cristina Jommi

Keynote Lecture

Annette Esnault Fillet (Soletanche-Bachy, France)

Industry perspective in soil improvement by biocementation.

Keynote Lecture

Leon Van Paassen (Boskalis, Netherlands/ Arizona State University, USA)

UNSAT meets BGE: How burping bacteria mitigate earthquake-induced liquefaction.

Closure EUNSAT2025 + BGE

Closure EUNSAT 2025 +BGE

CORRESPONDENCE TABLE

Conference proceedings at:

<https://www.e3s-conferences.org/articles/e3sconf/abs/2025/42/contents/contents.html>

Number from easychair system versus the number in the table of contents of the conference proceedings (114 papers in total).

Number Easychair paper	Table of contents	Number Easychair paper	Table of contents	Number Easychair paper	Table of contents	Number Easychair paper	Table of contents	Number Easychair paper	Table of contents
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5	02005	34	03015	67	05009	109	03007	138	04001
6	04011	35	05011	68	02009	110	04006	139	06011
7	02003	37	02022	69	01004	112	03004	142	02014
8	02023	38	04008	74	02004	115	06006	143	04005
9	06001	39	02016	75	01003	116	01009	144	03018
12	06007	40	02019	76	05002	118	03008	145	03031
13	06008	42	02011	77	02025	119	03022	146	04002
14	01012	44	03033	78	01006	120	06012	147	03017
15	06005	46	02007	79	03028	122	03025	150	05007
16	04012	47	01011	91	01008	123	03030	151	01001
17	04009	49	03005	92	02008	124	05006	152	03035
18	03012	50	02017	93	03006	125	03021	155	06004
19	03024	51	04007	94	06009	126	03032	156	03016
20	02010	52	04010	96	02021	127	05005	157	02015
21	05014	53	03003	98	02013	128	03009	159	01010
22	02002	54	04003	99	03027	129	03010	160	02018
23	05016	55	03019	100	06002	130	01002	161	03023
24	03001	56	05008	101	01005	131	03013	162	06003
25	05015	57	02012	102	05012	132	03029	163	03002
27	05001	59	06010	104	05003	133	03026		

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03011	134
03012	18
03013	131
03014	65
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04008	38
04009	17
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05007	150
05008	56
05009	67
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05012	102
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