

Tuesday, Jan. 17

15:00 - 16:30 Visit of LMS laboratory at EPFL (optional)

16:30 - 18:00 Bus transfer to Villars-sur-Ollon (optional)

18:00 - 19:30 Registration

19:30 - 21:00 Welcome cocktail

Wednesday, Jan. 18

08:00 - 08:20 Registration

08:20 - 08:40 Workshop opening

08:40 - 09:20 Keynote lecture
Bernardo Caicedo
Hydro - mechanical behaviour of unsaturated argillaceous rocks

09:20 - 09:50 Feature lecture
Zhang Feng
Measurement of supercritical CO₂ permeability in porous rock at reservoir conditions

09:50 - 10:10 Coffee Break

10:10 - 12:10 SESSION A:
Unsaturated behaviour of soils and shales

SESSION B:
Soil – structure interactions

SESSION A:
Determining fluid compressibility and soil permeability of quasi saturated sand with the alternating flow apparatus
Jeanne Ewers, Fabian Karl

Use of psychrometers, capacitive sensors and vapour transfer technique to determine the water retention curve of compacted bentonite
María Victoria Villar, Rubén Javier Iglesias, Carlos Gutiérrez-Álvarez, Gemma Campos

Water content effect on the fault rupture propagation through wet soil-using direct shear tests
Mohammad Ahmadi, Seyed Mojtaba Moosavi, Mohammad Kazem Jafari

Specimen preparation techniques for testing fully and partially saturated sands in dynamic simple shear (DSS) test device with confining pressure
Derya Burcu Gulen, E. Ece Eseller – Bayat

Measurement of vertical strain of compacted bentonite at changing of potential of without lateral stress
Tomoyoshi Nishimura, Keita Iwasaki

	<p>Response of clay rock to moisture change <i>Chun-Liang Zhang</i></p> <p>SESSION B: Embedment Depth Effect on the Reverse Fault Rupture-Shallow Foundation Interaction <i>Mehdi Ashtiani, Abbas Ghalandarzadeh</i></p> <p>Experimental and numerical study of the thermo-mechanical behaviour of energy piles for Belgian practice <i>Malek Allani, Gust Van Lysebetten, Noël Huybrechts</i></p> <p>Drained & Undrained Analysis for Foundations based on Triaxial Tests <i>André Arnold, Manuel Krähenbühl, Andreas Schmid</i></p> <p>Impact of thermally induced deformation of soils on the serviceability of energy pile groups <i>Alessandro Rotta Loria, Lyesse Laloui</i></p> <p>Numerical analysis of seismic soil-pile-structure interaction in soft soil with strong nonlinearity and its validation by 1g shaking table test <i>Kheradi Hamayoon, Ye Bin, Morikawa Yukihiro, Zhang Feng</i></p> <p>On the interface shearing behavior between granular soil and artificial rough surfaces <i>Xue-Ying Jing, Wan-Huan Zhou, Hua-Xiang Zhu, Zhen-Yu Yin, Yangmin Li</i></p>	
12:10 - 12:30	Discussion	Discussion
12:30 - 13:30	Lunch	
13:30 - 16:30	<p>Enjoy your stay in the Swiss Alps: skiing, relaxing or just working in a beautiful landscape</p> 	
16:30 - 17:10	<p>Keynote lecture Charles Wang Wai Ng</p>	
17:10 - 17:40	<p>Feature lecture Mathieu Vandamme Measurement of mechanical properties of thin clay films and comparison with molecular simulations</p>	
17:40 - 18:00	Coffee Break	
18:00 - 19:00	<p>SESSION A: Unsaturated behaviour of soils and shales</p>	<p>SESSION B : Advance multiphysical laboratory testing</p>
	<p>SESSION A: Evaluation of the instantaneous profile method for the determination of the relative permeability function <i>Anne-Catherine Dieudonné, Robert Charlier</i></p>	

	<p>Volumetric behaviour of lime treated high plasticity clay subjected to suction controlled drying and wetting cycles <i>Marco Rosone, Camillo Airó Farulla, Clara Celauro, Alessio Ferrari</i></p>
	<p>Crack initiation and propagation of clays under indirect tensile strength test by bending related to the initial suction <i>Lamine Ighil Ameer, Mahdia Hattab</i></p>
	<p>SESSION B: A double cell triaxial apparatus for testing un-saturated soil under heating and cooling <i>Qing Cheng, Raejee Kaewsong, Chao Zhou, Charles Wang Wai Ng</i></p>
	<p>A suction- and temperature-controlled oedometric device <i>Hugo Troupe, Jean-Michel Pereira, Matthieu Vandamme</i></p>
	<p>Acoustic emission technology to investigate internal micro-structure behavior of shear banding in sands <i>Wenli Lin, Wuwei Mao, Junichi Koseki</i></p>

19:00 - 19:10	Discussion	Discussion
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21:00 - 22:00	<p>Bishop Lecture Hervé Di Benedetto Advanced testing and modelling of granular materials with and without viscous glue: Research and practical implication</p>
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22:00 - 22:30	<p>"Wine and cheese" party</p> 
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Thursday, Jan. 19

08:40 - 09:20	<p>Keynote lecture Russel Ewy Shale capillarity, osmotic suction and permeability, and solutions to practical testing</p>
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09:20 - 09:50	<p>Feature lecture Frank Wuttke Advanced meso - scale modelling to study the effective T-M parameter in solid geomaterial</p>
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09:50 - 10:10	Coffee Break
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10:10 - 12:10	<p>SESSION A : Opalinus Clay</p>	<p>SESSION B: Advanced laboratory testing for site characterization studies</p>
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	<p>SESSION A : The role of anisotropy on the volumetric behaviour of Opalinus Clay upon suction change <i>Alberto Minardi, Eleonora Crisci, Alessio Ferrari, Lyesse Laloui</i></p>
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1D Compression Behaviour of Opalinu Clay

Valentina Favero, Alessio Ferrari, Lyesse Laloui

Consolidated-undrained triaxial test results of Opalinus Clay and comparison with caprock shales

Silvio Giger, Russell Ewy, Rudy Stankovic

One dimensional consolidation of Opalinus Clay from shallow depth

Eleonora Crisci, Alessio Ferrari, Silvio Giger, Lyesse Laloui

Lessons learned from electron microscopy of deformed Opalinus Clay

Ben Laurich, Janos L. Urai, Guillaume Desbois, Jop Klaver, Christian Vollmer, Christophe Nussbaum

The rock mechanical behavior of Opalinus Clay – 20 years of experience in the Mont Terri rock laboratory

David Jaeggi, Paul Bossart, Christophe Nussbaum

SESSION B:

Cyclic testing on low - density chalk

Sven Pilgaard Larsen, Nataša Katić, Niels Trads

Effect of Specimen Confinement Method on Simple Shear Test of Clay

Bhagaban Acharya, David Airey

Evaluation of soil bearing capacity by plate load test

Ali Al-Shamoosi, Qasim Al-Obaidi, Azad Ahmed

Long duration oedometric tests to analyse the creep behaviour of lacustrine sediments

Luca Bonzanigo, Fabrizio Jauch

Profiling the In situ Compressibility of Cretaceous Shale using Grouted-in Piezometers and Laboratory Testing

Laura Smith, S. Lee Barbour, M. Jim Hendry

Pont-Bourquin Landslide: numerical modelling of the hydro-mechanical behavior and risk analysis

Samuel Grangier, Lyesse Laloui, Alessio Ferrari, Ch. Bonnard

12:10 - 12:30

Discussion

Discussion

12:30 - 13:30

Lunch

13:30 - 16:30

Enjoy your stay in the Swiss Alps: skiing, relaxing or just working in a beautiful landscape



16:30 - 17:10	Keynote lecture Antonio Gens Modelling the mechanical behaviour of Callovo - Oxfordian argillite. Formulation and application	
17:10 - 17:40	Feature lecture Mahdia Hattab Identification of local mechanisms in clays and energy - based modelling	
17:40 - 18:00	Coffee Break	
18:00 - 19:20	SESSION A : Advance multiphysical laboratory testing	SESSION B: Constitutive and numerical modeling of soils and shales
	SESSION A: Aspects of Thermal Fracturing of Clays with Electromagnetic Excitation <i>Morteza Mohamadj, Richard G. Wan</i> Development of Laboratory Test Facilities for Design of Geotextile Filter for Earthen Dams <i>Satyendra Mittal, Sangeeta Singh, Ms. Anamika</i> Direct and indirect local deformations of sand in undrained cyclic triaxial tests by image analysis technique <i>Chuang Zhao, Junichi Koseki, Yukika Miyashita</i> Electrical resistivity of periodic hydrocarbon contaminated bentonite clay and its correlation with geotechnical properties of marine clays <i>Manish .V. Shah</i> SESSION B: Constitutive framework for unsaturated soils with differentiation of capillarity and adsorption <i>Yafei Qiao, Wenqi Ding, Lyesse Laloui</i> Coupled analysis of CO₂ injection induced stress variation in the caprock <i>Chao Li, Lyesse Laloui</i> Efficient Parameter Identification for THM Behaviour of claystone using optimization methods <i>Roger Schlegel, Johannes Will</i> A thermodynamic model for rate-dependent geomaterials <i>Hao Wang, Xiaohui Cheng</i>	
19:20 - 19:30	Discussion	Discussion

Friday, Jan. 20

08:40 - 09:20	Keynote lecture Mario Manassero Intrinsic and state parameters governing the efficiency of bentonite barriers for contaminant control
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09:20 - 09:50	Feature lecture Charles Shackelford Coupled membrane and diffusion testing of active clays for barrier applications	
09:50 - 10:10	Coffee Break	
10:10 - 11:50	SESSION A: Hydro - mechanical behaviour of shales and stiff clays	SESSION B: Advanced laboratory testing for in situ application studies
	<p>SESSION A:</p> <p>Fractal analysis of the progressive failure of shales and stiff clays under shear <i>Luis E. Vallejo, Jairo M. Espitia, Bernardo Caicedo</i></p> <p>Recent Developments in Measurement and Use of Fully Softened Shear Strength in the USA <i>Bernardo A. Castellanos, Thomas L. Brandon</i></p> <p>Chemical influence of pore pressure on brine flow in clay-rich material <i>Etienne Cassini, Roman Makhnenko, Danila Mylnikov</i></p> <p>Development of Classification Charts for Q index of shale from Parameters <i>Nandyala Darga Kumar, Ravikant R. Singh, Fajjal Ali, Efray'im</i></p> <p>Exploring fissure opening in a Cenozoic clay induced by gas injection <i>Laura-Gonzalez Blanco, Romero Enrique, Cristina Jommi, Xavier Sillen, Xiangling Li</i></p> <p>SESSION B:</p> <p>A New Laboratory Setup for Phase Equilibria Studies of Methane Hydrate in Porous Media <i>Brice Y. Kim, I. Yucel Akkutlu</i></p> <p>Deep soil mixing method for the bio-cement by means of bender element test <i>Keeratikan Piriyaikul, Janjit Jamchaturapatr</i></p> <p>Studying of shale organic matter structure and pore space transformations during hydrocarbon generation <i>Dina Giliazetdinova, Dmitry Korost</i></p> <p>On the application of the microbially induced calcite precipitations for soils: a multiscale study <i>Dimitrios Terzis, Lyesse Laloui</i></p> <p>Reproduction of discrete element model by 3D printing and its experimental validation on permeability issue <i>Akihiko Kondo, S. Matsumura, T. Mizutani, E. Kohama</i></p>	
11:50 - 12:10	Discussion	Discussion
12:10 - 13:30	Lunch	

13:30 - 16:30

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16:30 - 17:10

Keynote lecture

Richard Wan

Multiscale approach to micro - poro - mechanical modelling of unsaturated shales

17:10 - 17:40

Feature lecture

17:40 - 18:00

Coffee Break

18:00 - 19:20

SESSION A:

Impact of structure, composition and grain size on the behaviour of soils and shales

SESSION B:

Constitutive and numerical modeling of soils and shales

SESSION A:

3D particle shape of calcareous sand conducted by X-Ray computed tomography

Pham Huu Ha Giang, Peter Van Impe, William Van Impe, Patrick Menge, Veerle Cnudde, Wim Haegeman

Determination of intergranular strain parameters and their dependence on properties of grain assemblies

Sparsha Nagula and Jürgen Grabe

Effects of particle size and gradation on shear strength of calcareous sand

Pham Huu Ha Giang, Peter Van Impe, William Van Impe, Patrick Menge, Wim Haegeman

The influence of surface roughness of the fracture on hydraulic characteristics of rock mass

Wenquan Zhang, Jiudang Yuan, Guibin Zhang, Bo Li

SESSION B:

Thermo-viscoplastic subloading soil model for isotropic stress and strain conditions

João R. Maranhã, C. Pereira, A. Vieira

Numerical simulation of multi-phase flow in CO₂ geological sequestration

X.W. Wang, Bin Ye, Y.L. Xiong, F. Zhang, K.Y. Li, W.M. Ye

Mechanics and modeling of cohesive frictional granular materials

Saurabh Singh, Ramesh K. Kandasami, Tejas G. Murthy

Numerical modelling of liquefaction tests of partially saturated sands in CSSLB

Seyed Mohsen Seyed Viand, E.Ece Eseller-Bayat

19:20 - 19:30

Discussion

Discussion

20:00 - 23:30

Workshop Gala dinner