



ALERT Geomaterials

Alliance of Laboratories in Europe for Education, Research and Technology

<http://alertgeomaterials.eu>

13th ALERT Olek Zienkiewicz course

Multiphysics and multiscale coupled processes in geomaterials

*Focus on thermal effects and gas transfer impact on the
behaviour of geomaterials*

Liege, 28th August to 1st September 2023

General information

(May 2023)



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OVERVIEW

We are happy to invite you to the 13th Olek Zienkiewicz course jointly organised with the GAS/HITEC EURAD projects, which will be held in Liege between 28 August and 1 September 2023.

Geomechanics plays a significant role in the understanding of the multiphysics and multiscale processes taking place in a geological disposal facility for radioactive waste. The objective of the school is to introduce state-of-the-art understanding, concepts and methods related to thermo-hydro-mechanical coupled processes, the physical impacts of thermal loading and the mechanistic understanding of gas migration in geomaterials. Results arising from the EURAD project will be also integrated to the school, and a half day will be dedicated to presentations by early-career researchers. A visit to the HADES Underground Research Laboratory will be organised on the last day of the school.

TARGET AUDIENCE

- (Early-career) researchers affiliated to an ALERT Geomaterials member
- (Early-career) researchers involved in the WP GAS or WP HITEC of EURAD
- Members of waste management organisations and technology support organisations

VENUE

The PhD school will be held in the buildings of the **ULiege (Sart-Tilman campus)**, Liege, Belgium. Liege is well connected with a range of public transport options and offers plenty of options for accommodation.



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PROGRAMME

Monday 28 August	
9.00 – 12.30	Basics of thermo-hydro-mechanical processes in geomaterials <i>Sebastià Olivella (Universitat Politècnica de Catalunya)</i>
13.30 – 17.00	Basics of experimental testing of geomaterials <i>Alessio Ferrari (Ecole Polytechnique Fédérale de Lausanne)</i>
Tuesday 29 August	
9.00 – 12.30	Constitutive modelling of thermo-hydro-mechanical processes in geomaterials <i>Jean-Michel Pereira (Ecole des Ponts ParisTech)</i>
13.30 – 17.00	Development, validation and maintenance of numerical codes <i>Olaf Kolditz (Helmholtz Center for Environmental Research)</i>
19.30	Banquet at the city centre
Wednesday 30 August	
9.00 – 12.30	PhD day: poster sessions and pitches
13.30 – 17.00	Advanced multiphysics experimental testing and imaging of geomaterials <i>Laura Gonzalez-Blanco (Universitat Politècnica de Catalunya), Dragan Grigc (Université de Lorraine), Jiri Svoboda (Czech Technical University), Andrew Wiseall (British Geological Survey)</i>
Thursday 31 August	
9.00 – 12.30	Advanced multiphysics modelling of geomaterials: multiscale approaches and heterogeneities <i>Pierre Bésuelle (Université Grenoble Alpes), Frédéric Collin (ULiege), Anne-Catherine Dieudonné (Delft University of Technology), Sebastià Olivella (Universitat Politècnica de Catalunya)</i>
13.30 – 17.00	<i>In situ</i> THM and gas experiments <i>Arnaud Dizier (Euridice), Raphael Schneeberger or Emiliano Stopelli (Nagra), Carlos Plua (Andra), Maria Victoria Villar (CIEMAT)</i>
Friday 1 September	
8.00 – 17.30	Visit of the HADES underground research laboratory

REGISTRATION

Registration is free of charge and possible on the following website: <https://euradschool.eu/event/gas-hitec-training-course/>

A maximum of 80 participants will be able to join the school. Priority will be given to researchers involved in EURAD and members of ALERT Geomaterials until 1 July 2023.

CONTACT

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