



**KIMBERLY-CLARK  
DISTINGUISHED LECTURESHIP  
AWARD 2026**



**Lecturer: Prof. Lyesse Laloui**

Swiss Federal Institute of  
Technology at Lausanne (EPFL),  
Switzerland

Secure your chance to host  
Prof. Lyesse Laloui  
at your institute!

**Hosts may select one of two options detailed below:**

**Lecture 1—TAILORING SOIL PROPERTIES THROUGH BIO-GEO-CHEMICAL ENGINEERING**

As the demand for sustainable and efficient soil reinforcement solutions grows, bio-geotechnical engineering is emerging as a promising alternative to traditional chemical treatments. This talk explores the potential of Microbially Induced Calcite Precipitation (MICP)—a nature-inspired, environmentally friendly technique that enhances soil stability while mitigating the ecological impact of cement-based products.

By leveraging biogeochemical interactions and pore-scale microbial processes in soil, MICP improves soil mechanical properties and serves as a powerful tool for geohazard mitigation. We will present a comprehensive overview of MICP, from microscopic characterizations and pore-network analysis to laboratory experiments and large-scale applications. The discussion will also delve into the bio-chemo-hydro-mechanical (BCHM) couplings driving MICP, highlighting the expanding interest in this field and recent advancements in porous media modeling, reactive transport simulations, and multiphase flow characterization—all essential for optimizing MICP-based soil improvement strategies.

Attendees will gain insights into the latest research and multiscale modeling techniques, paving the way for resilient, nature-based solutions in subsurface engineering, and environmental geomechanics.

**Lecture 2 - CARBON DIOXIDE INJECTION INTO DEEP AQUIFERS: A GEOMECHANICAL PERSPECTIVE**

Carbon capture and storage (CCS) in deep geological formations is a key strategy for reducing atmospheric CO<sub>2</sub> emissions and mitigating climate change. However, the successful and safe implementation of CO<sub>2</sub> injection into deep aquifers requires a comprehensive understanding of the geomechanical and multiphase flow responses of the subsurface.

This lecture will explore the pore-scale to reservoir-scale challenges and opportunities associated with CO<sub>2</sub> sequestration, focusing on reservoir integrity, caprock stability, and reactive transport processes. By integrating experimental studies, numerical modeling, and field data, we will examine the complex interactions between fluid injection, pore pressure evolution, two-phase flow, and rock deformation within heterogeneous porous media.

The discussion will highlight recent advances in understanding and predicting thermo-hydro-mechanical (THM) processes triggered by CO<sub>2</sub> injection. Additionally, we will explore the role of permeability evolution and wettability effects in storage security. The development and evaluation of analytical and computational modeling approaches will be presented as essential tools for reliable risk assessment and process optimization. By providing a multiscale perspective, from microstructural effects to large-scale reservoir behavior, this presentation aims to foster cross-disciplinary discussions and contribute to the development of robust and sustainable CCS solutions, aligning with key challenges in porous media research, geomechanics, and subsurface engineering.

**Learn more:**

[Kimberly-Clark Distinguished Lectureship Award 2026](#)



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## BIO OF PROF. LYESSE LALOU

Prof. Laloui is a Full Professor at the Swiss Federal Institute of Technology at Lausanne (EPFL). He is a Full Member of the Swiss Academy of Engineering Sciences, a Member of the Academia Europaea, and the recipient of two honorary doctorates from Heriot-Watt University and the Technical University of Cluj-Napoca.

Professor Laloui's achievements personify excellence in multiple domains. He is an acclaimed scientist, a highly respected engineer, an innovative inventor, an accomplished manager, a serial entrepreneur, a visionary trendsetter, an outstanding teacher, a thoughtful mentor, and an influential public figure. As founder and Honorary Editor-in-Chief of *Geomechanics for Energy and the Environment*, Prof. Laloui shapes the field of sustainable geomechanics and geo-energy discourse.

His work has resulted in the creation of theories, models, computations, and experiments to address both fundamental and applied problems related to the mechanics of geomaterials (soils, shales, and rocks). These scientific contributions have underpinned the development of the modern science of geomechanics, providing solutions to address climate change, foster environmental conservation, and boost the clean energy transition through the harnessing and storage of resources and waste through the subsurface.

His lectures will inspire the world via his experience, expertise, and work on the science of porous media.

## KIMBERLY-CLARK DISTINGUISHED LECTURESHIP AWARD

Among other awards, each year, InterPore will select a porous media researcher with a very high international recognition as the "InterPore Kimberly-Clark Distinguished Lecturer on Porous Media Science & Technology". The award winner will share a topic relevant to the industrial porous media community through a series of lectures at various member and non-member organizations.

### A word of gratitude:

This award has been made possible by a generous grant from [Kimberly-Clark](#), home to some of the world's most iconic and trusted brands, including: Huggies, Scott, Kleenex, Cottonelle and Kotex. For more than a century Kimberly-Clark has been transforming insights and technologies into innovative products and services that improve the lives of nearly a quarter of the world's population.

## INTERPORE FOUNDATION

InterPore Foundation for Porous Media Science and Technology is a non-profit, non-governmental, independent organization. It was founded by the International Society for Porous Media in 2016.

Find out more about the [InterPore Foundation](#).

## HOW TO APPLY

Are you interested in hosting Prof. Laloui at your institution? Please submit your application online. Non-members may also apply.

To request a presentation, please visit:

[Kimberly-Clark Distinguished Lectureship Award](#), and fill out the application on the page.

For further questions please contact: Sandra Bartsch at [sandra.bartsch@interpore.org](mailto:sandra.bartsch@interpore.org)

Please be aware that the lecturer availability will be limited and not all requests can be honored by the lecturer. The deadline for requests to host Prof. Lyesse Laloui is December 31, 2025.

## LECTURE OPTIONS

In-person appearances are preferable, but Prof. Laloui will also be offering online lectures, when travel is not possible.

Hosts may select from one of the two lectures detailed in this brochure.



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