School of Architecture, Civil & Environmental Engineering
Data-Driven Mechanics Laboratory

PhD Position in Interpretable AI for Coupled Multiphysics of Geomaterials

The **Data-Driven Mechanics Laboratory** invites applications for a fully funded PhD position at the intersection of computational mechanics, multiphysics of geomaterials, and interpretable machine learning. The project focuses on the discovery of governing equations and constitutive relations for key multiphysics phenomena on the basis of rich micromechanical and experimental data. It pushes the boundaries of modeling and understanding crucial processes in geomaterials across scales, with application to geophysics, energy and sustainability.

Main roles and responsibilities:
The successful candidate will contribute to a next-generation data-driven framework for scientific discovery in geomaterials. Research will involve the development of techniques spanning mechanics and AI, including physics-based modeling across scales (discrete/mesoscale/continuum), thermodynamics-informed machine learning and neurosymbolic AI. They will also have the opportunity to lead international collaborations with experimental research groups.

Requirements:
- Master's degree in Mechanics, Civil Engineering, Mechanical Engineering, Geophysics, Applied Mathematics, Computational Science or related areas.
- Strong computational/programming skills (Python/C/C++) including computational mechanics, and scientific machine learning.
- Excellent English communication skills (oral and written).

We offer:
- World-class multi-cultural environment on the shores of beautiful Lake Leman.
- Innovative interdisciplinary research at the Data-Driven Mechanics Lab.
- Exceptional research infrastructure and access to world-class computational resources.
- Competitive salary and employment conditions.

Application procedure:
Please email **a single PDF** consisting of i) a Curriculum vitae (max. 2 pages) with contact details of at least 2 referees, ii) Detailed transcripts, and iii) a Motivation letter (max. 1 page), to konstantinos.karapiperis@epfl.ch, indicating in the subject "PhD Application LMD – *Last Name*" until July 15th 2026. Applications will be evaluated on a rolling basis in the order that they are received. For inquiries please contact Prof. Kostas Karapiperis at the same email.

Expected Start Date: Fall/Winter 2026
Duration: 4 years

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