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Preview

2 Years post doc position: Experienced Researcher (ER1) within ITN project MUMOLADE (MUltiscale MOdelling of LAndslide and Debris flow)

Research activity in: Dynamic analysis of catastrophic landslides considering thermo-poro-mechanical effects.
The post is part of a Marie Curie Initial Training Network called MUMOLADE (http://www.mumolade.com), which involves 21 Institutions from 7 countries in Europe. Goal of MUMOLADE: high quality interdisciplinary, intersectorial and international training of 16 young researchers, thereby contributing to the development of a new generation of multidisciplinary researchers, fully able to work within the field of geohazards.
Eligible Researchers: see the section ''Additional Requirements'' of this announcement.

Description

Landslides and debris flows are serious geo-hazards common to countries with mountainous terrains and can be described as multiphase and multiscale. MUMOLADE will address the

Landslides and debris flows are serious geo-hazards common to countries with mountainous terrains and can be described as multiphase and multiscale. MUMOLADE will address the triggering mechanisms, reliable prediction of runout dynamics, deposition pattern and impact forces, and rational design of stabilization and protection structures.
The research activities aim to develop thermodynamic model for unsaturated soils. By means of the concepts of frictional and thermo-poro-mechanical soil behaviour dynamic post-failure analysis of catastrophic landslides can be described. Thermoplastic collapse release thermal energy in shear bands which leads to a rapid increase in pore pressure, and further to the loss of strength and a sliding motion on a frictionless base. In order to achieve credible predictions for the heat generated pore pressure, critical factors must be described.
Cooperation within the MUMOLADE international network will be fundamental. The researcher will be trained in a multi-disciplinary, international environment, preparing his/her for an international research career. His/her participation in the MUMOLADE network will provide his/her with a proven track-record at the forefront of research and training.
Host organisations for ER1 fellow: University of Padua, Italy, for 12 months, and Technical University of Darmstadt, Germany, for 12 months. (24 months in total)
Deliverable: Dynamic analysis of catastrophic landslides considering thermo-poro-mechanical effects.
Knowledge in mechanics of porous media, plasticity, dynamics, nonlinear FEM, Fortran90 and CFD is favourable.

Research Fields

Engineering - Civil engineering

Career Stage

Experienced researcher or 4-10 yrs (Post-Doc)

Research Profile

Recognised Researcher (R2)

Benefits

Full job position; Competitive salary plus mobility allowance; Vacation days according to law.

Comment/web site for additional job details

www.mumolade.com/jobs
Supervisors: Prof. Bernhard A. Schrefler, Dr. Lorenzo Sanavia - University of Padua, Italy (www.dicea.unipd.it); Prof. Yongqi Wang - Technical University of Darmstadt, Germany (www.tu-darmstadt.de)
Financial support for ER1 fellow: 12 months University of Padua, Italy, 12 months Technical University of Darmstadt, Germany.

Requirements

Required Education Level

Degree	PhD or equivalent
Degree Field	Engineering

Required Languages

Language	ENGLISH
Language Level	Excellent

Language	ENGLISH
Language Level	Excellent

Additional Requirements

Applicants must have a doctoral degree in engineering (or equivalent) or at least 4 years of research experience AND total research experience less or equal 5 years (from Diploma granting access to doctorate studies - full-time equivalent - the time spend on clear non-research activities do not count for the 5 years).
Applicants must non have lived or carried out the main activity (work, studies, etc.) in Italy and in Germany for more than 12 months in the 3 years immediately prior the application.
Applicants can be nationals of any country other than the country of the premises of the host organization where they will carry out the project.

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Other job details

Job ID
33867623

Type of Contract
Temporary

Status
Full-time

Hours Per Week
40

Company/Institute
University of Padova

Country
ITALY

City
Padova

Postal Code
35122

Street
via VIII Febbraio, 2

EU Research Framework Programme

Is the job funded through the EU Research Framework Programme?
FP7/People - Marie Curie

the EU Research Framework Programme?
FP7/People - Marie Curie Actions

Contract number
289911

Company/Institute

University of Padova
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Application details

Envisaged Job Starting Date
16/09/2013

Application Deadline
25/08/2013

Application e-mail
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