

# Preview

## • Job Description

- **Job Title:** Early Stage Researcher (ESR5) within ITN project MUMOLADE (MULTIscale MOdelling of LAndslide and Debris flow)
- **Job Summary:** Research activity in: Finite element regularization for post localized bifurcation in fluid saturated media. This position can lead to PhD in Engineering. The post is part of the Marie Curie Initial Training Network called MUMOLADE (<http://www.mumolade.com>), which involves 21 Institutions from 7 countries in Europe. Applicant must have a MSc (or equivalent), less than 4 years of full time research experience, and must non have lived or carried out the main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior the application. Competitive salary plus mobility allowance. 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 geo-hazards.
- **Job Description:** Landslides and debris flows are serious geo-hazards common to countries with mountainous terrains and can be described as multi-phase and multi-scale. MUMOLADE will address the triggering mechanisms, reliable prediction of run-out dynamics, deposition pattern and impact forces, and rational design of stabilization and protection structures. This research fellow aims to implement and validate a FEM regularization technique for the simulation of the post localized bifurcation in fluid saturated media. The multiphase FEM analysis will provide realistic description of the failure process from initiation and beyond under drained and partially undrained conditions. An optimal regularisation technique will be adopted in the post bifurcation regime. 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. Deliverable: Multiphase analysis of slope failure in the post bifurcation regime.
- **Nr of positions available:** 1
- **Main Research Field:** Engineering
- **Sub Research Field:** Civil engineering
- **Career Stage:** Early stage researcher or 0-4 yrs (Post graduate)
- **Research Profile:** First Stage Researcher (R1)
- **Benefits:** -
- **Comment/web site for additional job details:** [www.mumolade.com/jobs](http://www.mumolade.com/jobs)  
Supervisors: Prof. Bernhard A. Schrefler, Dr. Lorenzo Sanavia - University of Padua ([www.dic.unipd.it](http://www.dic.unipd.it)) Financial support for ESR5 fellow: 22(or 24) months University of Padua, Italy, 12 months Baugrund Dresden Ing. mbH, Germany.

## • EU Research Framework Programme

- **Is the job funded through the EU Research Framework Programme?:**  
FP7/People - Marie Curie Actions
- **Marie Curie Job Reference Number:** ESR5 - FEM regularization for post localized bifurcation in fluid saturated media.
- **SESAM Agreement Number:** 289911

## • Job Details

- **Type of Contract:** Temporary
- **Status:** Full-time
- **Hours Per Week:** 40
- **Company/Institute:** University of Padova
- **Country:** ITALY
- **Community Language:** -
- **State/Province:** -
- **City:** Padova
- **Postal Code:** 35122
- **Street:** via VIII Febbraio, 2

## • Organisation/Institute Contact Data

- **Organisation:** University of Padova
- **Organisation/Institution Type:** Academic
- **Faculty/Department/Research Lab:** Department of Civil, Environmental and Architectural Engineering
- **Country:** ITALY
- **City:** Padova
- **State/Province:** -
- **Postal Code:** 35131
- **Street:** via F. Marzolo, 9
- **E-Mail:** lorenzo.sanavia@unipd.it
- **E-Mail:** bas@dic.unipd.it
- **Website:** <http://www.unipd.it>
- **Website:** <http://www.dic.unipd.it>
- **Website:** <http://www.mumolade.com>
- **Phone:** +390498275599
- **Mobile Phone:** -
- **Fax:** +390498275604

## • Application Details

- **Envisaged Job Starting Date:** 14/01/2013
- **Application Deadline:** 31/12/2012
- **How To Apply:** e-mail
- **Application e-mail:** lorenzo.sanavia@unipd.it
- **Application website:** -

## • Required Education Level

- **Required Education Level 1**
- **Degree:** Master Degree or equivalent
- **Degree Field:** Engineering
- **Required Education Level 2**
- **Degree:** Master Degree or equivalent
- **Degree Field:** Environmental science

- **Required Research Experiences**

- *Required Research Experiences 1*
- **Main Research Field:** -
- **Research Sub Field:** -
- **Years of Research Experience:** -

- **Required Languages**

- *Required Languages 1*
- **Language:** ENGLISH
- **Language Level:** Good

- **Additional Requirements**

- **Skill:** -
- **Specific Requirements:** -

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