SLATE – Submarine landslides and Their impact on European continental margins

The European Training Network SLATE funded by the European Commission in the frame of the Marie-Sklodowska-Curie program offers an

**Early Stage Researcher position (“AdR GRANT” for the duration of 36 month)**

in the area of geology and environmental engineering in the frame of the project

*Multi and single-stage marine landslides in the Central Mediterranean: causes and recurrences (ESR3)*

The Early Stage Researcher will be located and employed at the Institute of Marine Sciences (ISMAR) – National Research Council (Bologna, Italy). The candidate will be enrolled and become a member of graduate program at the Department of Civil, Chemical, Environmental and Materials Engineering - DICAM - at the University of Bologna (Italy) as the purpose of the ESR project is research and training leading to the successful completion of a PhD degree.

**Project Description**

Predisposing factors to margin instability include a variety of external causes such as earthquakes, tectonic setting, interstitial fluid flow and fast rates of sediment accumulation, especially at the edge of the continental shelf and in the upper slope. ESR3 project will focus on three case studies located in the Central Mediterranean Sea with the aim of identifying the different mechanisms of failure and the deriving hazard on coastal and marine infrastructures, such as some existing oil&gas installations. These case studies are hosted in different geodynamic contexts (back-arc, foredeep and foreland basins) with quite the most diverse stratigraphic architecture and morphology of the continental margin, seismotectonic settings, uplift rates and seismicity. The project will try to gain general conceptual models on concurrent and/or prevailing triggering mechanisms and recurrence from the analysis of these three specific slopes.

The candidate will work in a composite research environment and will have to combine data and information from sedimentology, structural geology, seismic stratigraphy, biostratigraphy, tephrostratigraphy to assess the age of the different displaced masses. Quantitative geomorphometry will be used also to reconstruct slide dynamics, especially to constrain multi-stage failures. The candidate will apply numerical models with focus on the rheology and multi-layer/multi-stage structure of the landslides and their coupling to tsunami generation. Geotechnical data will be eventually acquired in a later stage of the project and will be used in models of risk and damage scenarios on marine infrastructures. Participation in and co-organization of joint and national cruises will be requested.

We are searching for an enthusiastic and dynamic early career researcher who is interested in joining a multidisciplinary research team. Very good written and oral English language skills are required because the studies will be carried in an international program. The applicant is expected to visit partners from the SLATE consortium in another European country for extended secondments of up to approx. 10 months and will have to participate in joint network-wide training activities, e.g. our joint annual workshop.

**Specific requirements:**
- Completed MSc or Diploma degree in Geophysics, Geology, Earth Sciences, Geotechnics, Physics, Environmental Engineering or related fields
- Basic knowledge in geophysics, sedimentology and structural geology, geotechnics
• Skills in marine geophysical data processing and visualization by means of a pool of software including both commercial and open source, would be helpful
• Basic knowledge in mechanics, physics or numerical modeling will be required for the tsunami generation modelling

The position is limited to a term of up to 3 years and funded by the European Commission with a salary “AdR GRANT” linked to the Italian system.

There are no restrictions on nationality. However, to be eligible for employment according to EU mobility rules, candidates must match the definition of an Early Stage Researcher. Accordingly, ESR3 candidates must not have resided in Italy for more than 12 months in the 3 years immediately prior to recruitment. In addition, the mobility role of the EU pinpoints that the Early Stage Researcher shall at the time of recruitment by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.

Applications should be submitted electronically under the reference number SLATE-ESR3 / ISMAR-002-2017-BO as a single pdf document (max. 2 MB) to Prof Dr Katrin Huhn (khuhn@marum.de). Documents should include a letter of motivation, a CV, the applicant’s research and technical background as they relate to the position, as well as two reference letters. As the positions should be filled as the nearest possible date, the deadline for the application is 15th May 2017 or until the positions are filled.

After the successful passing of the written applications, shortlisted candidates will be invited to an interview which will take place at the MARUM, Universitaet Bremen, Germany. Please make sure you are available from the middle June to the first week of July 2017.

The EU commission aims at increasing the number of women in science and therefore explicitly encourages applications from female candidates. In the case of equal personal aptitudes and qualification, priority will be given to disabled persons. In addition to the scientific education, the research training group supports families.

Further enquiries can be addressed to:

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