

## **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-Skłodowska-Curie program offers an

### **Early Stage Researcher position (duration of 36 months)**

in the area of geology, geophysics and/or geotechnics in the frame of the project

#### ***How complete is the record of major earthquakes from submarine and lacustrine mass flow deposits, and which settings provide the most complete earthquake records? (ESR10)***

The Early Stage Researcher will be located and employed at the National Oceanography Centre (Southampton, UK). The candidate will be enrolled and become member of the graduate program at the University of Southampton (UK) as the purpose of the ESR project is research and training leading to the successful completion of a PhD degree.

### **Project Description**

Earthquakes and associated tsunamis pose exceptional risk to populations living near plate boundaries. Many studies aim to extend historical and instrumental earthquake records using subaqueous landslide run-out deposits that are inferred to have been triggered by earthquakes. This approach is perceived as an attractive, cost-effective method to obtain long-term earthquake records, and hence understand how seismic activity varies spatially as well as through time. ESR10 project aims to test this method and address three questions: **[1] Which settings provide the best records of earthquakes?** A comparison will be performed of well-dated landslide deposits with independently well-dated earthquake records in different lake, shallow and deep marine settings, using existing and new core datasets (e.g. Iberian margin, Mediterranean, Swiss lakes etc). Analysis of earthquake-record completeness in these different settings will determine which types of setting provide the most complete record of major earthquakes, and which earthquake types are needed. **[2] What are the complicating issues for detecting an earthquake-trigger from deposits?** Can deposits of earthquake-triggered landslides be discerned reliably from those triggered by other mechanisms? High resolution bathymetry, seismic and direct-monitoring data of recent, known earthquake and other-triggered landslides will be analysed from fjords in British Columbia to test this question. **[3] What are the geotechnical controls on earthquake-triggered slope instability?** A geotechnical characterisation will be performed on high resolution seismic data from a Canadian fjord prone to slope instability using a novel seismic inversion approach. Coupled with direct measurements of in-situ pore pressure variations recorded during earthquakes, this will feed into a slope stability model to determine when, where and how slopes may (or may not) fail during different earthquakes.

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. 6 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 Geology, Geophysics, Earth Sciences, Geoinformatics, Geotechnics or related fields;
- Basic knowledge in sedimentology, geophysics, geotechnics or related topics;
- Skills in visualizing numerical output (e.g. using MATLAB) and interpretation of seismic data would be helpful.

The position is limited to a term of up to 3 years and funded by the European Commission with a salary determined by the Marie Curie Actions/Horizon 2020 guidelines (For more information, please see: <http://ec.europa.eu/research/mariecurieactions/>).

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, ESR10 candidates must not have resided in the UK 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-ESR10** as a single pdf document (max. 2 MB) to Prof Dr Katrin Huhn ([khuhn@marum.de](mailto: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 **15<sup>th</sup> 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 mid 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.

For further enquiries please contact

Dr Mike Clare  
National Oceanography Centre,  
Southampton  
Room 674/04  
European Way, Southampton  
SO14 3Z  
UKH  
[m.clare@noc.ac.uk](mailto:m.clare@noc.ac.uk)

