



The European Training Network SLATE - Submarine landslides and Their impact on European continental margins' funded by the European Commission in the frame of the Marie-Sklodowska-Curie program brings together a consortium of scientists and experts from academia and industry from 7 European countries into a joint research and training program. SLATE utilises a broad range of scientific disciplines and methodologies encompassing marine geophysics, sedimentology, civil engineering, geotechnics, offshore technology, and tsunami research, to gain a better understanding of fundamental processes of submarine landslides ranging from pre-conditioning factors and triggers through to tsunami impacts on coastal regions. SLATE trains early career scientists to become highly qualified, interdisciplinary thinking, internationally visible and independent scientists while also addressing private sector needs. SLATE offers a newly

Early Stage Researcher position (full-time for the duration of 18 month)

in the area of **marine geosciences particularly geophysics and numerical modelling.**

The Early Stage Researcher will be located and employed at the MARUM at the Universitaet Bremen (Germany). The candidate will become a member of the graduate program at the MARUM and the Department of Geosciences at the Universitaet Bremen (Germany) as the purpose of the ESR project is research and training leading to the successful completion of a PhD degree.

Project Description

Submarine landslides are a global phenomenon. It has been shown in many studies that margin architecture, e.g. the presence of embedded mechanically weak layers with varying consolidation state, peak strength, coefficient of friction, and/or cohesion, plays a major role in localization of the failure plane and subsequent slope destabilization. In addition, many submarine landslides are triggered by tectonic loading, over-steepening and/or transient pore pressure fluctuations as an increase of pore pressure or respectively accumulation of gas/fluids at the base of a capture layer reduces the shear strength of the material.

The candidate will develop 3D slope model utilizing different numerical simulation techniques (e.g. FLAC3D, PFC3D and/or COMSOL Multiphysics). He/she will test the key role of margin architecture particularly the sensitivity of the slope with respect to: how do physical properties particularly permeability distribution and contrast control pressure localization, fluxes and timing of slope failure localization. Planned process simulations will enable a better understanding and re-assessment of the role of overpressure accumulation and pressure distribution on submarine landslide initiation. Aimed results will reveal deeper insight into trigger mechanisms and kinematics of submarine landslides not only in European waters but also on a global scale.

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 Geophysics, Physics, Geology, Earth Sciences, Geoinformatics, or related fields;
- Basic knowledge in numerical modelling techniques, geophysics, sedimentology, or related topics;
- Skills in scientific computing (in C++) and in visualizing numerical output (e.g. using MATLAB or GMT) would be helpful.

The Early Stage Researcher will be located and employed full-time as an Early Stage Researcher at the MARUM at the Universitaet Bremen (Germany). The position is limited to a term of up to 18 month and funded by the European Commission with a salary 100% TVL-13 linked to the German system.

The candidate will have access to the graduate program at the MARUM and the Department of Geosciences at the Universitaet Bremen (Germany) as well as the training activities in SLATE.

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, candidates must not have resided in Germany 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 under the reference number **A195/19** to

Prof Dr Katrin Huhn
MARUM, Universitaet Bremen
Leobener Straße 8
D-28359 Bremen

or by e-mail to 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 **8 August 2019** 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.

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. Applicants with a migration background are welcome in this mobility program. In addition to the scientific education, the research training group supports families.

For further enquiries please contact:

Prof Dr Katrin Huhn
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