



Postdoctoral Research Positions in Geohazards / Engineering Geology / Geotechnical Engineering – 2017 CALL

The State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (SKLGP), Chengdu University of Technology, Chengdu, Sichuan, China, is seeking **five full-time Postdoctoral Research Fellows** to join the laboratory research groups on engineering geology, remote sensing, rock and soil mechanics. The posts are fixed-term for 12 months, with possibility of renewal up to three years, starting from **1st March 2018** or as soon as possible thereafter.

We are looking for the following research profiles:

- Profile No. 1: Numerical simulations of landslides and debris flows.

The ideal candidate should have strong programming skills with application in the fields of numerical modelling in soil mechanics and/or hydrology. The candidate is expected to have a sound knowledge of at least some programming languages (e.g. Python, R, Mathematica, Matlab, C#, Visual Basic, Java), to be able to operate comfortably on existing numerical codes and constitutive models, and to develop new advanced codes for the purposes of the research. The candidate should have a good background in engineering geology and/or geotechnical engineering, with a good knowledge of hydrological processes and hydro-mechanical coupled processes, with specific reference to landslides and related geohazards.

- Profile No. 2: Experimental soil and rock mechanics.

The ideal candidate should have a sound theoretical knowledge of soil and/or rock mechanics, and research experience, in particular, in different kinds of standard and advanced laboratory testing. The successful candidate is expected to understand the failure mechanism and dynamic process of different types of mass movements, to be able to work with constitutive models, and to be able to plan, execute, and interpret the appropriate types of laboratory tests. Experience in developing non-standard, advanced tests, also through the modification of existing devices and the design and construction of new devices constitutes an asset. Understanding of field testing and familiarity with numerical modelling complete the profile.

- Profile No. 3: Airborne and spaceborne monitoring for landslide early recognition and warning.

The ideal candidate should have a strong expertise in remote sensing techniques, particularly in data processing and interpretation of InSAR, GBSAR, LiDAR, and/or UAV imagery for landslide early recognition, warning, and monitoring purposes. In addition, the candidate should have a sound knowledge of landslide processes and be proficient in GIS-based applications and mapping.

- Profile No. 4: Sedimentology, and paleo-seismic and environmental events reconstruction.

The ideal candidate is an engineering geologist with sound knowledge of quaternary sedimentology. The successful candidate, in particular, is expected to bring a strong contribution to an upcoming project on



the dating and reconstruction of the environmental effects of paleo-seismic events in Sichuan, such as large landslides, landslide dams, changes of sediment erosion, transport and deposition.

- Profile No. 5: Landslide risk assessment.

The ideal candidate is expected to have a sound knowledge of landslide hazard and risk assessment, with particular regard to data mining methods and spatial analysis. The successful candidate should be able to carry out landslide assessments at different research scales and to develop new statistical and/or physically based methods. The candidate should be an advanced user of ArcGIS or QGIS, as well as of statistical software (R, Mathematica, Matlab etc.)

General requirements

The candidates should hold (or be near the completion of) a relevant PhD/DPhil, along with appropriate experience. Researchers whose expertise matches more than one profile are especially encouraged to apply. Researchers currently working in fields outside engineering geology and soil mechanics, or with experience in the industry, but with strong skills in one of the required research focuses, are equally encouraged to apply. Please note that the working language is English. Hence, proficiency in English language is expected. The candidates are also expected to have very good communication and scientific writing skills, independent thinking and creativity.

Other information

The research fellows will be recruited at the professor grade, with an annual salary of 180,000 RMB before taxes. The accommodation cost will be covered by SKLGP. The local living cost is 36,000RMB on average. The SKLGP will provide assistance for Visa and other administrative procedures, prior to and upon arrival. A supervisor will be assigned to each fellow. The SKLGP will organize introductory seminars and activities to integrate the fellows into the existing research teams of the laboratory, which already hosts postdoctoral researchers, visiting students and visiting professors from various continents.

Informal inquires on the advertised posts may be addressed to: Prof. Xuanmei Fan, fxm_cdut@qq.com.

To apply for the post, you are required to provide a covering letter, including a brief statement of your research interests, specifying for which profile you are applying and describing how your past experience and future plans fit with the advertised position, a detailed CV and list of publications, and contact information for two references. If you have obtained your PhD within the last three years, as well as if you have not obtained your PhD yet, one reference must be that of your PhD supervisor. The applications must be sent via email to Ms. Li Liyan at sklgp_cdut@126.com.

Review of candidates will begin on **1st October 2017**. Applications will be accepted until the positions are filled.



The SKLGP

The **State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (SKLGP)**, **Chengdu University of Technology**, located in Chengdu, Sichuan Province, Southwest China, is a world-class institute and **China's only national-level laboratory focusing on geohazard prevention, engineering geology and geotechnology**. SKLGP has very advanced instruments and equipment with a total value of about **1.2 billion RMB**, which could fully support all kinds of geohazard and geotechnical research, including on-site and laboratory tests, monitoring, geotechnical parameter tests, physical and numerical modelling systems, GIS and RS analysis systems etc. In the past five years, the SKLGP has been in charge of 810 international, national and provincial research projects, receiving research grants of 6.6 billion RMB in total. Through the implementation of the research projects, excellent results have been achieved: 3 first prizes and 2 second prizes of **National Science and Technology Progress Award**, **1 prize of China International Science and Technology Cooperation Award**, **1 prize of Gold Medal of National Patent Achievement**. SKLGP has 78 regular staff, 31 of whom are professors with the average age of only 41 years old. This young but talented team has published more than 50 monographs and 1326 papers, including a number of papers on high-ranking international ISI journals, such as Nature Geosciences. The research results have been presented in more than 60 conferences, including 35 keynote speeches and invited presentations. Through leading in international projects and organization of a series of international conferences, the foundation of the International Research Association on Large Landslides (iRALL), and the organization of international post-graduate students training courses (LARAM-ASIA, iRALL school), the SKLGP has played an important role in the international collaboration between China and other countries. We have established long-term and stable academic relationship with universities and research institutions from more than 20 countries. For general information about SKLGP, please visit www.sklgp.com.