NTNU

Kunnskap for en bedre verden

Jobbnorge-ID: 149832
Søknadsfrist: Avsluttet
Nettside:
Omfang:
Varighet:

PhD position - An innovative landslide assessment framework using the Internet of Things (IoT) (IV-118/18)

Description
Climate change induced landslide risks require immediate knowledge needs that will support a thorough transition towards a climate-aware, sustainable, growing and prosperous society. The knowledge needs should address both the increased threat imposed by landslides due to the changing climate and the corresponding societal response. Such integrated approach is important, as the eventual effects of climate change will not depend only on the changes in the climate, but also on the ability of the society to adapt to these changes.

Accordingly, the topic of the PhD study will contribute to the development of a Geohazards Assessment Framework (GAF) focused on mitigating risks related to shallow landslides and debris flow on a catchment scale using the environmental Internet of Things (IoT). The PhD study will investigate challenging aspects related to statistical leaning methods in landslide models: sequential updating of uncertainties with a large number of dependent observations from IoT sensory networks (e.g., rainfall and moisture measurements), spatially and temporally variable observations and model parameters, and computationally demanding prediction models (e.g., landslide models). Uncertainties in spatially variable soil properties will be modelled by a geostatistical scheme based on the data from an instrumented slope and literature.

This PhD is supported by KlimaDigital project and the strategic initiative by the Department of Civil and Environmental Engineering at NTNU. KlimaDigital project is led by SINTEF Building and Infrastructure. KlimaDigital project aim to mitigate societal threats imposed by geohazards in a changing climate with a novel geohazards assessment framework supported by the environmental IoT. KlimaDigital will allow it to explore fully the innovative potential of digitalization in geohazards assessment and the PhD position has an essential role to play in this. The work will be performed in close cooperation with NTNU, SINTEF and with the public and industrial sponsors of KlimaDigital.

Qualifications
Preferably, the applicant should hold a Master’s degree in geotechnical or geological engineering with experience from statistical or probabilistic modelling. Applicants with alternative master’s degree may be considered if relevant knowledge is documented, for instance in geoscience in combination with probabilistics, instrumentation, geomatics, hydrology or meteorology. Programming skills are an advantage.

The successful candidate should be enthusiastic, highly motivated and be willing to work independently and in a team. Ability to cooperate with the KlimaDigital project partners is essential. In the application the candidate is encouraged to present his or hers motivation for this particular PhD study and briefly sketch how he or she expect, intend or hope to contribute to KlimaDigital project.

The successful candidate must fulfil the requirement for admission to the doctoral program at the Faculty of Engineering, NTNU. The working languages will be Norwegian and/or English. All applicants must be able to communicate fluently in English (spoken and written). Candidates from universities outside Scandinavia and English speaking countries are kindly requested to document English language proficiency (TOEFL, IELTS, Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE)).

Conditions
PhD Candidates are remunerated in code 1017, and are normally remunerated at gross NOK 436 900 before tax. There will be a 2 % deduction to the Norwegian Public Service Pension Fund from gross wage.

Engagement as a PhD Candidate is done in accordance with “Regulation concerning terms and conditions of employment for the posts of post-doctoral research fellow, research fellow, research assistant and resident”, given by the Ministry of Education and Research of 19.07.2010. The goal of the positions is to obtain a PhD degree. Applicants will engage in an organized PhD training program, and appointment requires approval of the applicants plan for a PhD study within three months from the date of commencement.

The position is of 3 years duration. Working address is at NTNU in Trondheim.

For further information about the position, please contact Prof. Vikas Thakur, NTNU, Trondheim. Email: Vikas.Thakur@ntnu.no or the leader of KlimaDigital project Dr. Ivan Depina from SINTEF Building and Infrastructure Email: Ivan.Depina@sintef.no.

See http://www.ntnu.edu/iv/doctoral-programme for more information.

The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants. The positions adhere to the Norwegian Government's policy of balanced ethnicity, age and gender. Women are encouraged to apply.

The application
The application must contain information of educational background and work experience. Certified copies of transcripts and reference letters should be enclosed. Contact information for two references (including email addresses and telephone number) is wanted. Applications with CV, grade transcripts and other enclosures should be submitted via this webpage at www.jobbnorge.no.

Mark the application with IV-118/18.

Start-up date preferably 1st. September 2018

Application deadline is **30 April 2018**

According to the new Freedom of Information Act, information concerning the applicant may be made public even if the applicant has requested not to be included in the list of applicants.

Tilleggsinformasjon

Arbeidssted: