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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Faculty of Engineering

Department of Civil and Environmental Engineering

PhD position - Ice conditions and ice loads on infrastructure in rivers IV-169/18

Description

During winter ice exert static and dynamic loads on structure in rivers, and of particular interest is loads during ice breakup when the ice cover is released and transported downstream. Current regulations use data from arctic ice drift from Canada and Siberia and describes crushing loads on structures assuming a sum of forces on the ice floe exceeding the crushing load against the structure. This may not be the case in common practise in small and steep rivers, but the current guidelines do not provide clear recommendations on how to handle such situations. The objective of this project is to find the criteria for estimating ice loads in small and steep rivers, and to provide the information needed to update the current guidelines for ice load computations on structures in steep rivers.

The project will involve field measurements of ice growth, breakup conditions and ice loads on structures, and assessment and modelling of the relationship between ice characteristics and loads on structures.

Qualifications

The candidate should have a degree in Civil or Mechanical Engineering, Applied Physics/Mathematics or similar. A background in hydraulic and structural engineering is preferable. The project will involve field measurements, and experiences with winter field work will be considered an advantage. The work will involve contact with industry and management in Norway and it is an advantage if the candidate can communicate in Scandinavian language.

The successful candidate should be enthusiastic and highly motivated and be willing to work both independently and with other researchers. The successful candidate must also fulfill the requirement for admission to a doctoral program:

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.

For further information

Professor Knut Alfredsen, Email: knut.alfredsen@ntnu.no, Professor Knut Vilhelm Høyland, Email: knut.hoyland@ntnu.no, Professor Leif Lia, Email: leif.lia@ntnu.no.

The position is of 3 years duration.

See <https://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. Applications with CV, grade transcripts and other enclosures should be submitted via this webpage at www.jobbnorge.no.

Mark the application with IV-169/18

Start-up date may be discussed, but tentatively September 2018.

Application deadline is 15.06.2018

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.

Jobbnorge-ID: 152143, Søknadsfrist: Avsluttet