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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 Science and Technology
Department of Hydraulic and Environmental Engineering*

PhD position in HydroCen WP1.1 - within the project "Upgrading of hydropower plants to pumped storage plants" (IVT - 127/16)

The Department of Hydraulic and Environmental Engineering is announcing a PhD research fellowship position, affiliated to the Hydraulic Engineering group, for a period of appointment of three years. The position is devoted to research in the field of hydropower and the design of hydraulic structures.

The work will be conducted as a part of the Norwegian Centre for Hydropower Technology (HydroCen), which is a Centre for Environment-friendly Energy Research (FME) established by The Research Council of Norway. Its main objective is to enable the Norwegian hydropower sector to meet complex challenges and exploit new opportunities through innovative technological solutions. The research areas include hydropower structures, turbine and generator, market and services and environmental design. The Norwegian University of Science and Technology (NTNU) is the host institution and is the main research partner together with SINTEF Energy Research and the Norwegian Institute for Nature Research (NINA). HydroCen include almost 60 national and international partners from industry, R&D institutes and universities. If there is qualified applicants for another position, there might be another position for a PhD Candidate for 4 years with 25 % duties.

The project "Upgrading of hydropower plants to pumped storage plants" will specifically address challenging issues within hydraulic engineering and hydropower design for upgrading of existing hydropower plants to pumped storage plants. Upgrading of existing hydropower plants is challenging. The new hydraulic situation may require upgrading or reconstruction of the surge tanks, sand traps, tunnel systems, and power stations. The main scope is to develop hydraulic design concepts and technology to facilitate upgrading of existing hydropower plants to pumped storage plants. The work will involve mapping of which components in existing hydropower tunnel system that limit the possibility for upgrading to pumped storage plants. The outcome of the work shall be solutions for reconstruction and new design of these components. The work will be carried out with a combination of numerical modelling, physical modelling and field measurements from the tunnel system in existing hydropower plants.

Motivated, creative and open-minded candidates with the ability to work both independently as well as in a team are encouraged to apply for the position. A prerequisite for the PhD-position is a Master degree in hydraulic, civil, or mechanical engineering. Background in numerical modelling, physical modelling and field measurements is desirable. Research experience and publications on relevant tasks is an advantage, as well as a background from design and operation of hydropower systems. The position requires spoken and written fluency in the English language.

For further information, please contact: Adjunct Associate Professor Kaspar Vereide, NTNU, kaspar.veraide@ntnu.no, +4792698109.

Conditions of appointment

The period of appointment is three years. Position as PhD candidate at NTNU are remunerated in code 1017, and are normally remunerated at gross NOK 432 300 per year before tax.

There will be 2% deduction to the Norwegian Public Service Pension Fund from gross wage. The engagement is to be made in accordance with the regulations in force concerning State Employees and Civil Servants. The position adheres to the Norwegian Government's policy of balanced ethnicity, age and gender. Women are encouraged to apply. 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. Applications should be submitted electronically via this page. Application deadline: 12.12.16

Jobbnorge-ID: 131258, Søknadsfrist: Avsluttet