

**NTNU - knowledge for a better world**

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

**Faculty of Natural Sciences**

## Do you want to be part of an innovative subsea research team?

The Norwegian oil and gas industry is in the forefront with respect to subsea field developments, but new and innovative solutions are still required to meet current and future challenges. To accelerate the level of innovations within subsea production and processing, SUBPRO - a new centre for research-based innovation, was established at NTNU in 2015. The centre is supported by the Research Council of Norway and several major international oil companies and subsea system suppliers.

SUBPRO is currently hiring three new PhD candidates / Postdoctoral fellows for a period of three years, within the following possible areas:

- **Project A: Optimizing Condition Monitoring for Dynamic Health and Risk Management (PhD)**  
This project will focus on how to decide on monitoring needs and how to exploit condition monitoring for both health and risk management of subsea systems. The applicants must have an MSc (or equivalent) within fields related to reliability theory, applied mathematics (statistics and probability), mechanical engineering, cybernetics (signal processing, diagnosis) or computer science (discrete event simulation, optimisation). Contact: Professor Anne Barros, e-mail: [anne.barros@ntnu.no](mailto:anne.barros@ntnu.no)
- **Project B: Process Control Algorithms for Subsea Separation (PhD)**  
The aim of this project is to develop and test control algorithms for subsea separators. The applicants must have an MSc (or equivalent) within engineering cybernetics, chemical engineering, petroleum engineering, mechanical engineering, physics and mathematics, subsea technology or similar engineering fields. Contact: Associate Professor Christian Holden, e-mail: [christian.holden@ntnu.no](mailto:christian.holden@ntnu.no)
- **Project C: Subsea Dehydration Using a Membrane Process (PhD)**  
The main focus of the candidate's work is to experimentally verify and optimize membrane properties. The applicants must have an MSc (or equivalent) within chemical engineering, organic chemistry or materials science and a background in membrane, absorption or dehydration. A record of laboratory experience is required. Contact: Associate Professor Liyuan Deng, e-mail: [liyuan.deng@ntnu.no](mailto:liyuan.deng@ntnu.no)
- **Project D: Enhanced Virtual Flow Metering (PhD)**  
The objective of this PhD is to study existing Virtual Flow Metering solutions and suggest improvements. The applicants must have an MSc (or equivalent) within chemical / petroleum engineering with some background in optimization and control, or control systems engineering with exposure to process control applications. Basic knowledge of multiphase flow modelling is of advantage. Contact: Associate Professor Johannes Jäschke, e-mail: [johannes.jaschke@ntnu.no](mailto:johannes.jaschke@ntnu.no)
- **Project E: Influence of Production and EOR Chemicals on Produced Water Quality (PhD / Postdoc)**  
The objective in this project is to provide knowledge of how injected chemicals influence the treatment and quality of produced water. The applicants must have an MSc (or equivalent) / PhD within chemical engineering, chemistry or physics. Interfacial and colloid chemical phenomena as well as chemical engineering are core research in this project and experimental training in these fields is highly advantageous. Contact: Professor Gisle Øye, e-mail: [gisle.oye@ntnu.no](mailto:gisle.oye@ntnu.no)

For more information about SUBPRO and detail description of the positions, please visit our web site: [www.ntnu.edu/subpro](http://www.ntnu.edu/subpro) or contact coordinator Gro Mogseth at [gro.mogseth@ntnu.no](mailto:gro.mogseth@ntnu.no)

### General Qualifications

Industrial experience from the oil and gas or process industry will be considered an advantage.

Applicants who are finalizing their Master degree during the spring of 2017 are also encouraged to apply.

The regulations for PhD programmes at NTNU state that a Master degree or equivalent with at least 5 years of studies and an average grade of A or B within a scale of A-E for passing grades (A best) for the two last years of the MSc is required, and C or higher of the BSc. Candidates from universities outside Norway are kindly requested to send a Diploma Supplement or a similar document, which describes in detail the study and grade system and the rights for further studies associated with the obtained degree: [http://ec.europa.eu/education/tools/diploma-supplement\\_en.htm](http://ec.europa.eu/education/tools/diploma-supplement_en.htm)

The positions require spoken and written fluency in the English language.

### Terms of employment

The appointment of the candidates will be made according to Norwegian guidelines for universities and university colleges and to the general regulations regarding university employees. The positions are remunerated according to the Norwegian State salary scale. There is a 2% deduction for superannuation contribution. Applicants for the PhD positions must agree to participate in organized doctoral study programs within the period of the appointment and have to be qualified for the PhD study.

### The application

The applicants should submit an application letter (incl. information about which project (A-E) the applicant would like to work on), a CV, certified copies

of certificates of education, publications and other scientific works (if any), certified copies of documentation on English language proficiency, and contact details for two reference persons.

Applications must be submitted electronically through this page.

**Applications submitted elsewhere will not be considered.**

The reference number for the positions is: NT- 97/15

**Application deadline: 2017-01-31**

Jobbnorge-ID: 132024, Søknadsfrist: Søknadsfristen er gått ut