Jobbnorge ID: 158964
Deadline: 11/1/2018
Website: http://www.ntnu.no
Scope: Fulltime
Duration: Temporary

The Department of Chemical Engineering has a vacancy for a

PhD position on Machine Learning applied to Process Systems Engineering

This is NTNU

At NTNU, creating knowledge for a better world is the vision that unites our 7 000 employees and 40 000 students.

We are looking for dedicated employees to join us.

Video: https://www.youtube.com/watch?v=clgKd1SwGLI

Job description

In the Department of Chemical Engineering there is an PhD position in the field of “Machine learning applied to process systems engineering”. The details of the research area has not been decided, and will also depend on the qualifications and interests of the applicants. The process systems group is strong in traditional process systems engineering based on physical models, but there are now several ongoing projects in the group that combines this expertise with machine learning. The goal is to develop tools that contribute towards a digital transformation of the process industries.

Some relevant topics for the PhD research work include

- Grey box digital twins (combining machine learning and physical models)
- Autonomous operation of process systems, including startup
- Modelling, operation and control of microbiological processes, including fermentation
- Optimization of integrated processes using grey-box-based surrogate models

Qualification requirements

The PhD-position's main objective is to qualify for work in research positions. The qualification requirement is completion of a master’s degree or second degree (equivalent to 120 credits) with a strong academic background in [subject area] or equivalent education with a grade of B or better in terms of NTNU’s grading scale. Applicants with no letter grades from previous studies must have an equally good academic foundation. Applicants who are unable to meet these criteria may be considered only if they can document that they are particularly suitable candidates for education leading to a PhD degree.

The appointment is to be made in accordance with the regulations in force concerning State Employees and Civil Servants and national guidelines for appointment as PhD.

Other qualifications

- The successful candidate should have a background in process systems engineering.
- Good written and oral English and Norwegian language skills

Personal characteristics

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal suitability, as well as motivation, in terms of the qualification requirements specified in the advertisement

We offer

- exciting and stimulating tasks in a strong international academic environment
- an open and inclusive work environment with dedicated colleagues
- favourable terms in the Norwegian Public Service Pension Fund
- employee benefits

Salary and conditions

PhD candidates are remunerated in code 1017, and are normally remunerated at gross from NOK 449 400 per annum before tax. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

The period of employment is 3 years with the possibility of until one year extension with 25% teaching duties. Appointment to a PhD position requires admission to the PhD programme in Chemical Engineering.

As a PhD candidate, you undertake to participate in an organized PhD programme during the employment period. A condition of appointment is that you are in fact qualified for admission to the PhD programme within three months.

Appointment takes place on the terms that apply to State employees at any time, and after the appointment you must assume that there may be changes in the area of work.

General information

Working at NTNU

A good work environment is characterized by diversity. We encourage qualified candidates to apply, regardless of their gender, functional capacity or cultural background. Under the Freedom of Information Act (Offentleglova), information about the applicant may be made public even if the applicant has requested not to have their name entered on the list of applicants.

Questions about the position can be directed to Sigurd Skogestad, e-mail sigurd.skogestad@ntnu.no

About the application:
Publications and other academic works that the applicant would like to be considered in the evaluation must accompany the application. Joint works will be considered. If it is difficult to identify the individual applicant's contribution to joint works, the applicant must include a brief description of his or her contribution.

Please submit your application electronically via jobbnorge.no with your CV, diplomas and certificates. Applicants invited for interview must include certified copies of transcripts and reference letters. Please refer to the application number NV-109/18 when applying.

Application deadline: 01.11.18

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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.

Department of Materials Science and Engineering

We are Norway's leading educational and research environment in materials engineering, materials chemistry and materials science. In collaboration with business and industry, we are a driving force for the development of innovative materials as well as new applications and manufacturing processes. Activities in our disciplines are vital for the green shift. The Department of Materials Science and Engineering is one of eight departments in the Faculty of Natural Sciences.

Additional information

Place of service:

Gløshaugen 7491 Trondheim (Trondheim Municipality)