

Norwegian University of Science and Technology (NTNU)

Faculty of Information Technology, Mathematics and Electrical Engineering
Department of Engineering Cybernetics

PhD research fellowship position – Control and Instrumentation of Aquaculture Systems

NTNU Department of Engineering Cybernetics (www.itk.ntnu.no/english), in collaboration with SINTEF and the Centre for research-based innovation in aquaculture technology (www.sintef.no/Projectweb/CREATE), has an exciting PhD research scholarship opportunity in the field of control and instrumentation of aquaculture systems for a motivated and outstanding graduate.

The research involves the study of how control engineering principles can be applied to improve the efficiency and sustainability of aquaculture production systems. Large scale sea-based production systems for Atlantic salmon will be the focal point of this project. Several research topics are possible, ranging from the study of specialised instrumentation and sensors for observing key features of such production systems (key words: sensor technology, embedded computers, machine vision, underwater communication, telemetry) to mathematical modelling, simulation and control of farming processes (key words: dynamic modelling, systems biology, estimation, optimization and model-based control).

The project is suitable for those with a background in disciplines such as control engineering, industrial electronics, instrumentation and embedded systems, and preferably with additional experience or interest in aquaculture engineering and marine biology. Selection of research focus may to some extent depend on the candidate's qualifications and experience within the mentioned topics. The candidate will reside at the Department of Engineering Cybernetics in Trondheim while being closely integrated with the CREATE centre and its scientific staff. The duration of the project is three years, with possibilities for an additional year as a teaching assistant if feasible.

The successful applicant will be a graduate with outstanding academic skills in one or more of the relevant disciplines and will be able to demonstrate the knowledge and motivation required to undertake a multidisciplinary-based PhD study. NTNU's PhD-regulations require a Master degree or equivalent with at least 5 years of studies and an average grade of A or B within a scale from A to E for passing grades (A best). Candidates from universities outside Norway are kindly requested to send a Diploma Supplement or similar documentation, 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/policies/rec_qual/recognition/diploma_en.html.

The position requires spoken and written fluency in the English language. Foreign students should document their English skills by a TOEFL test (600 or higher). Moreover, the candidate must qualify for admittance as a PhD student at NTNU. See page

<http://www.ntnu.edu/studies/phtk> and <http://www.ime.ntnu.no/english/research/phd> for information about PhD education at NTNU.

The position is placed in salary code 1017, which currently corresponds to a yearly gross income of NOK 391 100 (pay scale level 48). From this 2 % will be deducted for mandatory membership in the National Pension Fund.

The appointment will be made in accordance with current regulations with supplementary rules for research fellowship appointments in universities and polytechnics. Applicants must agree to participate in organized doctoral study programs within the period of the appointment. The successful applicant must agree to the conditions laid down for public employees.

Candidates will be required to enroll in a PhD program within the period of employment, and must sign a contract regulating the period of employment.

For further information about the PhD scholarship, please contact Associate Professor Jo Arve Alfredsen, e-mail: Jo.Arve.Alfredsen@itk.ntnu.no.

According to Norwegian policies, the government workforce should, as closely as possible, reflect the diversity of the population at large. It is therefore a goal of NTNU, as a government institution, to have a workforce which is balanced with respect to age and gender, and to recruit persons of immigrant background. NTNU also wishes to increase the number of women on its workforce, and women are specifically encouraged to apply.

The application must include information about education, exams and earlier experience. Certified copies of certificates and diplomas must be enclosed. Relevant scientific works should be submitted. Joint works will be taken into account. In cases where it is difficult to determine the applicant's contribution, a short note of explanation should be supplied.

Applications are to be submitted electronically through www.jobbnorge.no . Preferably, we want the attachments in one file.

Applications should be marked: IME 034-2011.

Applications deadline: 20.09.2011.