The Norwegian University of Science and Technology (NTNU) in Trondheim represents academic eminence in technology and the natural sciences as well as in other academic disciplines ranging from the social sciences, the arts, medicine, teacher education, architecture to fine art. Cross-disciplinary cooperation results in innovative breakthroughs and creative solutions with far-reaching social and economic impact.

Faculty of Engineering Science and Technology, and Faculty of Information Technology, Mathematics and Electrical Engineering Centre for Autonomous Marine Operations and Systems

PhD research fellowships and Post. Doc. positions at the Centre for Autonomous Marine Operations and Systems (AMOS)

The Departments of Marine Technology and Engineering Cybernetics at NTNU together with leading international research partners and Norwegian companies were awarded a Centre of Excellence (CoE) by the Norwegian Research Council for the period 2013 to 2022. Researchers at AMOS will work between the department disciplines to create a world-leading center for autonomous marine operations and control systems. AMOS will contribute with fundamental and interdisciplinary knowledge in marine hydrodynamics, ocean constructions and control theory. The research results will be used to develop intelligent ships and ocean structures, autonomous unmanned vehicles (under water, on the surface and in air) and robots for high-precision and safety-critical operations in extreme environments. This is necessary in order to meet challenges related to environmental and climate, safe maritime transport, mapping and surveillance of large ocean and coastal regions, offshore renewable energy, fisheries and aquaculture as well as deep-sea and Arctic oil and gas exploration.

Several PhD and Post. Doc. positions in the following research areas are available:

- **Project 1:** Optimization and fault-tolerant control of offshore renewable energy. Contact person: Professor T. I. Fossen, E-mail: Thor.Fossen@itk.ntnu.no
- **Project 2:** Intelligent offshore aquaculture structures: Professor M. Greco, E-mail: Marilena.Greco@ntnu.no
- **Project 3:** Autonomous unmanned vehicle systems. Contact person: Professor T. A. Johansen, E-mail: Tor.Arne.Johansen@itk.ntnu.no
- **Project 4:** Autonomous underwater robotics for mapping, monitoring and Intervention. Contact person: Professor K. Y. Pettersen, E-mail: Kristin.Y.Pettersen@itk.ntnu.no
- **Project 5:** Autonomous aerial systems for marine and arctic monitoring and data collection. Contact person: Professor T. I. Fossen, E-mail: Thor.Fossen@itk.ntnu.no
- **Project 6:** Autonomous marine operations in extreme seas, violent water-structure interactions, deep waters and Arctic. Contact person: Professor A. J. Sørensen, E-mail: Asgeir.Sorensen@ntnu.no

We seek highly motivated students and researchers with an MSc or PhD degree in Marine Technology, Engineering Cybernetics, Control Systems, Aeronautics & Astronautics, Electrical Engineering, Industrial Mathematics or other relevant disciplines. Prospective candidates should document expertise in one or more of the following fields: autonomous systems, control systems, flight control, sensor fusion, intelligent systems, machine vision, sensory systems, hydrodynamics, marine structures, or renewable energy systems. Applications from master’s students graduating by the end of June 2013 are also accepted.

For more information, please contact:
- Professor Asgeir J. Sørensen, Director. Phone: +47 91897357, E-mail: Asgeir.Sorensen@ntnu.no
- Professor Thor I. Fossen, Co-director. Phone: +47 91897361, E-mail: Thor.Fossen@itk.ntnu.no

Excellent English skills, written and spoken, are required. Applicants from Non-English-speaking countries outside Europe must present an official language test report. The acceptable tests are TOEFL, IELTS, and Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE). Minimum scores are:

- **TOEFL:** 600 / writing 4.5 (paper-based test), 92 / writing 22 (internet-based test)
- **IELTS:** 6.5, with no section lower than 5.5 (only Academic IELTS test accepted)
- **CAE/CPE:** grade B or A.

PhD candidates must fulfill the formal requirements to be accepted as a PhD candidate at NTNU and must agree to participate in organized doctoral study programs within the period of the appointment. Personal qualifications and strong motivation for PhD studies will be taken into account. The successful applicants must agree to the conditions laid down for public employees. A contract will be drawn up regarding the period of appointment and work-related duties.

Award holders at NTNU are normally appointed for three years. An extra year is offered to candidates that agree to have a 25% assistant load, primarily linked to teaching.

For PhD candidates, the appointment will be at code 1017. PhD candidates are normally remunerated at wage level 50, gross NOK 416 300 before tax.
The Post Doc. positions will be at code 1352. Post. Docs. are normally remunerated at wage level 57, gross NOK 468 100 before tax.

There will be a 2% deduction to the Norwegian Public Service Pension Fund from gross salary.

The appointment will be made in accordance with current regulations with supplementary rules in force giving guidelines for scholarship appointments in universities and university colleges.

The position adheres to the Norwegian Government’s policy of balanced ethnicity, age and gender. It is an objective to increase the number of females in scientific positions. Female applicants are therefore encouraged to apply.

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The application should contain information of educational background and prior training, exams, and work experience. Certified copies of academic diplomas and transcripts, English language test scores and documents must be attached. Applicants from universities outside Norway are kindly requested to send a diploma supplement or a similar document, which describes in detail the study and grading system and the rights for further studies associated with the obtained degree:


See http://www.ntnu.no/ivt/phd and http://www.ntnu.no/ime/phd for more information.

The research area of interest should be clearly specified, and a brief outline of possible research topics may be included. Publications and any other work, which the applicant wishes to be taken into account, should be enclosed. Joint works will be considered provided that a short summary outlining the applicant's contributions is attached.

Applicants should also indicate whether they would agree to have a 25% assistant load.

Incomplete applications will not be taken into consideration.

Applications, including CV, diplomas, grade transcripts and other enclosures, should be submitted electronically through this page.

**Application deadline: January 28, 2013**