

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 and humanities, medicine, teacher education, to architecture. Cross-disciplinary cooperation results in innovative breakthroughs and creative solutions with far-reaching social and economic impact.

**Faculty of Engineering Science and Technology
Department of Production and Quality Engineering**

SAFETY AND RELIABILITY OF COMPLEX SYSTEMS (ASSOCIATE PROFESSOR) (IVT - 45/15)

The Onsager fellowship programme - 12 tenure-track positions available at NTNU

"The Onsager Fellowship programme at NTNU is designed to attract the most talented scholars with an established reputation for high quality research and a commitment to learning and teaching at university level. NTNU is now announcing 12 tenure-track positions."

Qualification requirements

The successful candidates must have a strong academic record, an active research programme, an academic standing that demonstrates an internationally competitive research profile, and internationally recognized potential to make a future impact. Moreover, the ideal applicant should have an exceptional publication record with significant first/senior authorships. Applicants must also have spent significant time in research institutions outside Norway.

The successful applicants are expected to build up their own independent groups and interact with other groups in their department as well as internationally. The position will include a start-up package, mentorship and support for applying for additional funds. We expect that the candidate will be able to secure substantial additional funding (such as ERC starting grants or similar).

Applicants must hold a PhD and will primarily be evaluated on the basis of their documented international scholarly achievements. The PhD should have been awarded no more than 5-6 years prior to the application deadline.

Teaching qualifications are not mandatory, but documented teaching qualifications and experience will be considered an advantage. Outreach qualifications of applicants, including the ability to attract external funding, will also be taken into account and considered an advantage.

Following the application deadline, a shortlist of applicants will be drawn up, and all applicants will be informed whether they are placed on the shortlist. Shortlisted applicants will be reviewed by an external academic committee. The top candidates will be invited for a campus visit.

The NTNU tenure-track programme

The tenure-track associate professor's duties will primarily include research, including obligations with regard to publication/scientific communication and research-based teaching with associated examination obligations. To a limited extent, the position may also include other duties.

In the NTNU tenure-track programme, associate professors are subject to two types of review during the tenure-track period:

- a mid-career assessment after 3-4 years
- a final tenure assessment after no more than 6 years

The overall purpose of the review system is to ensure and maintain the high academic standards of the university's senior faculty staff. To help meet these standards, the associate professor is offered a mentor.

During the employment period as a tenure-track associate professor, the appointee must participate in the formal pedagogical training programme to qualify for a permanent position.

The appointee's performance will be evaluated after no more than 6 years of employment and, if the 'final appraisal' is positive, s/he will be employed as a full-time professor.

Information - Department of Production and Quality Engineering.

The Onsager Fellowship holder will be employed as an associate professor and be administratively connected to the Department of Production and Quality Engineering, Faculty of Engineering Science and Technology, Norwegian University of Science and Technology (NTNU). The Department has currently 11 professors, 7 associate professors, 5 adjunct professors, 2 Senior Lecturers, and 35 PhD candidates and 4 Postdoctoral fellows.

The department covers the four research areas (i) manufacturing systems (including machine tools, computer-aided manufacturing, manufacturing processes, robotics and automation, layer manufacturing and intelligent systems), (ii) production management (including manufacturing logistics, supply chain management, ICT systems for production management, lean manufacturing and manufacturing strategy), (iii) reliability, availability, maintenance and safety (RAMS), and (iv) project and quality management (including project management and quality engineering, process improvement and benchmarking).

Description of the specific position

This Onsager Fellowship focuses on the theoretical basis for quantitative safety and reliability analyses of complex technological systems. The area embraces stochastic modeling of systems with sensors and programmable electronics, safety and reliability assessment in a life cycle perspective, and utilization of information from sensors to optimize maintenance and availability.

The applicant must have thorough competence in probabilistic modeling and analysis. It is preferable that the applicant has competence with electronic and programmable electronic technologies and some of their application areas.

The successful applicant for this position must hold a PhD and must be able to document scientific contributions of high quality in one or more of the subject areas. The Onsager Fellowship holder will be an active member of the RAMS group and work in concert with the other group members to reach the group's ambitious goals.

The evaluation will be based on the applicant's scientific quality, teaching ability, innovation, international network, and ability to attract external funding.

The candidate will be re-evaluated after approximately four years. If the candidate passes this evaluation, the position will be extended for an additional period of two to three years. If the candidate, during this period, has met NTNU's expectations, the candidate will be promoted to a full professorship.

Academic staff who are employed without having a formal pedagogical qualification in university-level teaching and are unable to document equivalent qualifications, are required to successfully complete recognized course that gives a pedagogical qualifications in university-level teaching within two years of taking the appointment. The University offers such courses.

The applicants that have been short-listed will be invited for interviews and a demonstration of their pedagogical ability, usually in the form of a trial lecture.

The Professor is to be jointly responsible for disciplinary matters together with other academic staff in the Department. The Professor is required to participate in teaching activities in accordance with the relevant curriculum and assist in further developing the teaching programme, including continuing education. The Professor is to supervise master students and doctoral candidates in his/her discipline. The Professor must agree to participate in administrative work.

The Professor is obliged to follow the regulations that concern changes and developments within the discipline and/or the organizational changes concerning activities at the University.

The appointment is to be made in accordance with the regulations in force concerning State Employees and Civil Servants.

NTNU would like to increase the percentage of female scientists in academic positions, and its policy is outlined in its equal opportunities plan. The following initiatives are relevant here: Start package for women in male-dominated fields. Qualification scholarships and mentor program for women in academic positions.

The position adheres to the Norwegian Government's policy of balanced ethnicity, age and gender. Persons with immigrant background are encouraged to apply.

The position as associate professor is remunerated according to wage levels 57 to 77 on the Norwegian State salary scale, with gross salary from NOK 482 500 to NOK 710 100 per annum. There will be a 2 % deduction to The Norwegian Public Service Pension Fund from gross salary.

Further information can be obtained from the Head of Department Jørn Vatn, email jorn.vatn@ntnu.no, or Professor Marvin Rausand, email: marvin.rausand@ntnu.no.

Applicants are asked to give an account of their pedagogical qualifications according to prepared guidelines ("Documentation of an applicant's pedagogical qualifications") which can be obtained from the following address on internet: <http://www.ntnu.edu/vacancies/pedagogical-qualifications>

The following documents must be enclosed with the application:

- Certified copies of certificates, testimonials and a list of academic work.
- Academic work - published or unpublished - that has relevance to the evaluation of the applicant's qualifications by the evaluation committee (not more than 10 such submissions).
- A description of all the academic work that the applicant feels is most significant and that he/she feels the evaluation committee should pay particular attention to.
- A list of all publications with bibliographical references.

Joint work will be evaluated. If it is difficult to identify the contributions from individuals in a joint piece of work, applicants are to enclose a short descriptive summary of what he/she did in this connection.

Applicants are asked to submit the application in English with regards to the evaluation process.

Applications are to be submitted via the link on this page. The file number for the position (**IVT-45/15**) is to be clearly stated on the application.

Application deadline: 25.05.2015

Jobbnoorge ID: 112049, Deadline: The application deadline has passed