

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.

Post Doctoral Position in Cyber-Trustworthy Connected Medical Devices

The Norwegian University of Science and Technology (NTNU, <https://www.ntnu.edu>) invites applications for one post-doctoral position in information security. The position is affiliated with the Department of Information Security and Communication Technology (IIK, <http://www.ntnu.edu/iik>) at the Faculty of Information Technology and Electrical Engineering (IE, <http://www.ntnu.no/ie>). The position will be located in Gjøvik and affiliated with NTNUs Center for Cyber and Information Security (CCIS, www.ccis.no) with a duration of 2 years.

The Department of Information Security and Communication Technology

The Department of Information Security and Communication Technology has 33 permanent scientific staff members, and in total approximately 80 employees. 50 persons work at NTNUs campus in Gjøvik and 30 at NTNUs campus in Trondheim. IIK carries out internationally competitive research organized in seven cross-disciplinary labs covering the academic areas of Internet of Things (IoT), Applied Cryptology, Intelligent Transport Systems, Quantifiable Performance and Dependability of Communication Systems, Biometry, Digital Forensics, and Information Security. The department provides teaching in BSc in IT Operations and Information Security, MSc programs in Communication technology and Information Security, and PhD programs in Telematics and Information Security. The department hosts and operates NTNUs Center for Cyber and Information Security, a public-private partnership with 26 members.

Work Description

The work involves researching mechanisms for detecting cyber-attacks against medical devices, by leveraging attack detection techniques, appropriately adapted to environments of low processing capacity. This includes developing a simulation and testing engine to simulate cyber attacks tailored to specific medical devices; engineering guidelines to ensure forensic-readiness-by-design for medical devices; a digital forensic readiness framework; and the necessary tools for its implementation for medical devices in a digital healthcare ecosystem. The project calls for close interaction with partners in the healthcare domain. Such partners can be Healthcare Organizations or Medical Device Manufacturers. Possible such partners are those in the CyberCARE consortium; these will be asked to contribute to the project by providing requirements, specs and/or data. Additional/alternative Norway-based partners will also be identified and invited to join the project.

Qualifications required for the announced position

We seek candidates that are team players, motivated and able to engage in interdisciplinary collaboration, have good communication and networking skills, are proactive and forthcoming, and able to work independently if needed.

The successful candidate will have the following qualifications:

- Ph.D. in Information Security, Computer Sciences or related area;
- Track record in interdisciplinary research in information security;
- Excellent knowledge of contemporary intrusion detection and attack detection technology; of simulation techniques, methods and platforms; and of forensic technology and tools.
- Familiarity with health care environments and/or medical devices.
- Written and oral fluency in Scandinavian language and/or English.

Language requirements

Applicants who do not master a Scandinavian language must provide evidence of good English language skills, written and spoken. The following tests can be used as such documentation: TOEFL, IELTS or Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE).

Minimum scores are:

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

General terms of employment

The Department of Information Security and Communication Technology wants to attract outstanding and creative candidates who can contribute to our ongoing research activities. The university is committed to a policy of equal opportunity in employment practices. We believe that diversity is important to achieve a good, inclusive working environment. We encourage all qualified candidates to apply, regardless of the gender, disability or cultural background.

All candidates must be able to secure a residency and work permit in Norway. The appointment is subject to the conditions in effect at any time for employees in the public sector and assessments regarding the legislations regulating export control and knowledge transfer.

Salary conditions

The Post Doctor position is in code 1352 Research fellow, salary grade range from 57 in the Norwegian State salary scale, gross NOK 490.900

per year, depending on qualifications. A deduction of 2% is made as a statutory contribution to the Norwegian Public Service Pension Fund. The national labour force must reflect the composition of the population to the greatest possible extent. NTNU wants to increase the proportion of women in its scientific posts.

Living and working in Gjøvik

Information can be found via the following links:

- Living in the county of Oppland: <http://www.gonorway.no/norway/counties/oppland/>
- Map of NTNU in Gjøvik: <https://www.ntnu.edu/gjovik/how-to-get-here>
- About Campus Gjøvik: <http://www.ntnu.edu/gjovik>

To apply

Applications will be processed through the university on-line application system (<http://www.ntnu.edu/vacancies>) which will direct you to www.jobbnorge.no. Candidates must submit the following documents in electronic form:

- A cover letter (1 page) explaining your motivation and how your skills and experience relate to the research focuses of the position applied for
- A draft research proposal outlining a possible approach for the position applied for (1 page).
- CV with a list of publications.
- Relevant transcripts of grades, diplomas, and certificates
- A description of the PhD work (1 page)
- Two letters of reference, preferably from academic supervisor(s)

All this must be sent electronically via www.jobbnorge.no with information about education and relevant experience (all in one combined PDF file). **Mark the application IE-133/18**. Incomplete applications will be rejected.

For further information, please contact Prof. Sokratis K. Katsikas (sokratis.katsikas@ntnu.no).

Deadline for applications: 31.07.2018

Under Section 25 of the Freedom of Information Act, information about the applicant may be made public even if the applicant has requested not to have his or her name entered on the list of applicants.

Jobbnorge-ID: 154366, Søknadsfrist: Søknadsfristen er gått ut