

NORDSECMOB

Master's programme in Security and Mobile Computing

Duration: 2 years

Course description:

The mobile computing and communications industry provides the user with tools that make data and communication available anywhere and anytime. This programme is about the technologies and techniques needed to allow the user to benefit from these pervasive technologies in a secure and safe manner. New mobile devices extend mobile communication with powerful computing, enabling new services in new markets. The NordSecMob-curriculum covers a broad range of engineering and theoretical topics giving the students a solid understanding of fundamental mobile computing technologies and an opportunity to choose their own focus areas. The subject areas include key architectural and management issues in future online services such as mobility, quality of service, security, charging and business models, as well as tools for safe software development and formal and mathematical validation and analysis.

Special attention is paid to the information security, which is a critical requirement when developing and deploying services on public networks. Students are required to both study current technologies and emergent topics in the research community and to apply the knowledge in practical implementation projects. The five universities jointly offering this programme are Aalto University, School of Science and Technology, Finland (Aalto), The Royal Institute of Technology, Sweden (KTH), The Norwegian University of Science and Technology, Norway (NTNU), The Technical University of Denmark (DTU) and University of Tartu, Estonia (UT).

With regards to mobility, a joint curriculum is defined involving two of the universities, a 'home' university and a 'host' university. The two-year programme includes three semesters of courses followed by a fourth semester (Masters thesis) under joint supervision and evaluation by the home and host university. The student takes courses focusing on advanced topics in a selected area of specialization: Technical Information Security and Network services, Communications Systems Design, Information Security, Reliable Software Systems and Mathematical Foundations of Cryptography. The first autumn term is spent at one of the three home universities: Aalto, KTH or NTNU. The students specializing in Reliable Software Systems move from the home university to DTU for the first spring semester and second autumn. The students specializing in Mathematical Foundations of Cryptography move to UT for the first spring and second autumn, too. The students with other specialization tracks move after their first year of studies to other host universities Aalto, KTH or NTNU for the second autumn semester.

The language of instruction is English. Upon completion students will receive a Master of Science-degree from each of the two universities in which they spent a part of their study (double degree). Admission criteria: a high quality Bachelor's degree in Computer Science of information technology or equivalent studies and good knowledge of English.

Website: <http://nordsecmob.tkk.fi/>

Partners:

AALTO UNIVERSITY FOUNDATION, Finland (Co-ordinating Institution)
TECHNICAL UNIVERSITY OF DENMARK, Denmark
UNIVERSITY OF TARTU, Estonia
NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY, Norway
ROYAL INSTITUTE OF TECHNOLOGY, Sweden

Contact:

Coordinator Eija Kujanpää
Aalto University
School of Science and Technology
street Konemiehentie 2 , P.O.BOX 15400,
00076 AALTO, Finland
eija.kujanpaa@tkk.fi

Maximum grant:

550 800 € (30 000 € consortium + 520 800 € scholarships), 2011
502 800 € (30 000 € consortium + 472 800 € scholarships), 2012
464 400 € (30 000 € consortium + 434 400 € scholarships), 2013