FDT3304 Topics in Social Robotics 3.0 credits

Ämnen inom social robotik

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for FDT3304 valid from Spring 2023

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Students must have been admitted to a PhD programme.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

- Analyze, discuss and evaluate research papers on the design, development, and evaluation of robots that can interact with humans in social and collaborative ways.

- Demonstrate critical thinking and the ability to contribute to discussions and debates on the latest trends and approaches in social robotics.

- Enhance the ability to present and communicate research ideas and findings to a diverse audience, both in person and through online channels.

- Identify and evaluate ethical and sustainable considerations in the development and use of social robots, including issues related to privacy, security, autonomy, and environmental impact.

Course contents

This course covers a broad range of topics related to social robotics, including at least 1 paper from ethics and sustainability and at least 9 from areas such as robot perception, behavior generation, natural language processing, human-robot interaction, affective and cognitive sciences for social robots, social robots software architectures and hardware design, robot applications in education, entertainment, and gaming, robots that can adapt to different users, robots to assist the elderly and persons with disabilities. The content will be drawn from various sources such as the international conference on social robotics, the ACM/IEEE international conference on Human-Robot Interaction, Robotics: Science and Systems, as well as international journals on the same topics. By the end of the course, students will have a comprehensive understanding of the latest trends and approaches in social robotics.

Examination

- EXA1 - Examination, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Assessment in this course is based on active participation, including a minimum of 10 seminar discussions where the student contributes with questions and topics of discussion, as well as one presentation at the seminars. Each student also is responsible for co-designing a set of quiz questions that are used to create a final quiz exam that has to be taken by all. By actively engaging with the course materials, students will demonstrate their understanding of the latest research and trends in social robotics and be well-prepared to contribute to ongoing discussions in the field.

Other requirements for final grade

Each student will have to discuss at least one paper related to each of the topics listed in the course contents, including ethics and sustainability.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.