

Master course (grp. 2): Robot - Software architectures for robot programming (ROB)

Om kurset

uddannelse Computer Science
Undervisningssprog English
Kursus starter 03-09-2013
Kursus slutter 19-11-2013

ECTS 7.5

Indhold Robotics programming is a fast-growing field which overlaps with several other areas of modern computing, especially mobile sensor-based applications and artificial intelligence. The course covers the basics of robot software and hardware architecture as well as algorithms and principles for sensor interpretation, control, planning and navigation. The practical project work will apply these techniques and theories using physical robots including Lego Mindstorms robots and possibly other platforms.

After completing the course, a student will

mål

- be familiar with typical robot hardware, sensor, software and communications infrastructure
- understand basic models of robot control ranging from fully autonomous to centralised control
- be able to apply algorithms for handling and arbitration among continuous sensor inputs
- be able to apply algorithms for navigation and route-finding
- understand the basic principles of vision processing
- be aware of current

forudsætninger Programming in a high-level language including standard algorithms and data structures (CSS, IGA or equivalent)

Kursusdage Tuesdays from 1.00 - 5.15 p.m. in the period from September 3 - November 19 2013.

kursusform Lectures and practical labs.

Eksamenstidspunkt January 2014.

Vurdering 30 min. individual oral exam based on a written assignment

The excellent performance:

- The student demonstrates solid knowledge, insight and overview of the subject area;
- demonstrates solid description, competent application, and critical reflection with respect to the command and application of theories and methods;
- demonstrates certainty, conceptual accuracy, and independent and clear organization with respect to structuring and communication.

The good performance:

Evaluering

- The student demonstrates knowledge of and insight into the subject area
- demonstrates clear description and relatively competent application with respect to the command and application of theories and methods;
- demonstrates clear presentation and organization with respect to structuring and communication.

The performance meeting the minimum requirements:

- The student demonstrates sufficient however limited knowledge of the subject area;
- demonstrates a sufficient account of command and application of theories and methods;
- demonstrates a sufficient, but uncertain presentation with regard to structuring and communication.

Aktivitetsansvarlig Mads Rosendahl (madsr@ruc.dk)

Kursussekretær Heidi Lundquist (heilu@ruc.dk)

Underviser Mads Rosendahl (madsr@ruc.dk)

Maja Hanne Kirkeby (majaht@ruc.dk)

STADS kandidat 1. modul

stamdata aktivitetskode : U23873

prøveform : mundtlig

bedømmelse : 7-trinsskala

censur : Ekstern censur