DT2300 Sound in Interaction 7.5 credits

Ljud i interaktion

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 DT2300 valid from Autumn 2014

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Computer Science and Engineering

Specific prerequisites

Single course students: 60 university credits of which 30 university credits within Mathematics, Information Technology or Music Production. English B, or equivalent.

Language of instruction

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

Intended learning outcomes

After completing the course, you should be able to:

- critically read a scientific paper on sound and interaction, and extract useful information from it
- identify and describe the major principles for sound in interaction, including communication of information through sound, sound feedback in interaction, sonification of body movements
- identify, describe and analyze the control aspects in sound-based interactive applications
- evaluate the functioning of sound-based interactive applications
- use state-of-the-art free software tools and sensors (based on the Arduino board) for the design of new sound-based interactive applications
- propose efficient designs for new applications employing sound in interaction
- motivate, document and present the design, implementation, and evaluation of your new application.

Course contents

1. Basic principles of sound perception in interaction
2. Relationship between sound and movement
3. Sound as information carrier
4. The use of sound as feedback in control applications, including haptics
5. Data representation with sound, including interactive sonification
6. The used of sound in therapy applications, including applications for non-normal functioning people
7. Sound and interaction in everyday life
8. Sound models for interaction, including models for portable devices

Course literature

Särtryck beskrivande forskningen inom området som görs tillgängliga via kursens hemsida.

Examination

- INL1 - Assignments, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Assignments, 3.0 credits, grading scale: P, F
- PRO1 - Project, 3.0 credits, grading scale: A, B, C, D, E, FX, 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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

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.