DT2350 Human Perception for Information Technology 6.0 credits

Mänsklig perception för informationsteknik

Course syllabus for DT2350 valid from Autumn 13, edition 5.

Intended learning outcomes

The course gives the students fundamental theoretical and practical knowledge of human perception with particular focus on information technology.

The main focus is on human perception and its functioning, and how it should be taken into account in information technology applications.

After completing the course, you should be able to:

- identify and describe the major principles of human perception, including vision, motion, color, sound, and speech
- conduct and document fundamental experiments for the measurement of perception in different modalities
- identify, describe and analyze the possible perceptual strengths and pitfalls in the design of interfaces for human-machine interaction
- propose and motivate efficient designs for new applications/devices in which human perception plays a fundamental role.

Course main content

- Introduction to the physiology of perception
- Ecological approach to perception
- Introduction to the main methods for perception measurement
- Introduction to vision, including perception of objects and scenes
- Motion perception
- Color perception
- Sound, the Auditory System, and Pitch Perception
- Speech Perception
- Introduction to the fields of multisensory processing, and sensory substitution

Eligibility

Single course students: 90 university credits including 45 university credits in Mathematics and/or Information Technology and the courses DD1337 Programming and DH1620 Human-Computer Interaction, Introductory Course or equivalent.

Literature

Selected chapters from:


Suggested reading:

Off-prints completing the material presented in the course book, as well as off-prints describing research on multisensory processing and sensory substitution will be made available through the course page.

**Examination**

- INL1 - Assignments, 2.5 credits, grade scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 1.5 credits, grade scale: P, F
- PRO1 - Project, 2.0 credits, grade scale: A, B, C, D, E, FX, F

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