

General module information

Title: Embodied Interaction

Type: course module

Language of instruction: English

ECTS points: 5 ECTS

Period: 1 February 2016 — 30 June 2016

Placement

2nd semester, M.Sc. in Sound and Music Computing

Module coordinator

Copenhagen: Cumhur Erkut and Sofia Dahl (coordinators)

Academic content and relationships to other modules/semesters

The formal study plan description of the module can be found here (page 37):

http://www.sict.aau.dk/digitalAssets/101/101068_91429_msc-medialogi-2014.pdf

The course presents the emerging theory of embodied interaction interleaved with practical implementations of intelligent systems, where the participants work on open-source, community-supported interactive audio-visual coding platforms, such as [Processing](#) and [openFrameworks](#).

The focus of the theoretical part is on embodied mind and cognition, intelligent agents, and movement as design material. These will be centered around emerging literature (e.g., Proc. Intl. Workshop on Movement and Computing: <http://moco.ircam.fr>).

Objectives and learning goals**Knowledge**

- Must have knowledge about standard methods and techniques in embodied interaction
- Must be able to understand and describe movement as a design material.
- Must be able to understand the bodily skills needed for technological development,

decision making, steering and path finding

- Must be able to understand what movement qualities are and how they are extracted from movement tracking data.

Skills

- Must be able to apply methods and techniques to real world scenarios (e.g., games, robots, public installations, etc.).

Competences

- Must be able to analyse a problem, design a solution and translate it into an intelligent embodied system.
- Must be able to analyse, compare, and assess the potential of different methods and techniques in order to make the proper design choices
- Must be able to synthesize results and concepts in a professional way equivalent to practices in Embodied Interaction

Extent and expected work load

The total workload is 5 ECTS. The course is organized as 8 lectures with exercises, a two-day workshop, and individual project work. It is broken down as preparation for sessions, lectures, exercises for sessions, literature review, and programming for an individual project, all 1 ECTS.

Pre-requisites for participation

The prerequisites for the course module are the mandatory courses on previous semesters of the M.Sc. program in Sound and Music Computing.

The prerequisites for participation are listed in the study plan:

http://www.sict.aau.dk/digitalAssets/101/101049_10209_medialogi--aalborg--esbjerg-og-k--benhavn--2010.pdf

Examination

As part of the course, each student is required to complete an individual 2 ECTS project (%50 literature review and %50 programming), in which contents covered in the course is applied to an implementation of embodied interaction with relevance to Medialogy. The oral exam will be based on this project and submitted short report, plus the theory covered in the lectures. In the project, the student must implement and report a movement-based application, like interactive movement visualization or sonification, choreographic computing, or whole-body interaction, with a clear perspective on movement, embodiment, and interaction. The student must demonstrate that

he/she understands the involved theory, concepts and methods.

Failure to meet these criteria will lead to an automatic failed grade. The exam will be an individual 20 minutes (everything included) oral exam. It will be based on the project (report and practice) and the contents of the lectures (theory). The student will present the project to the examiner who will ask questions about the project and the general curriculum. The student must prepare a demonstration of the embodied interaction application and a set of slides for presenting the project and the background theory. The source code used in the project must be available at the exam.

To attend the exam, the report, code, and presentation must be uploaded in moodle before the specified deadline. Failure to comply with the requirements specified here will result in a failed grade. The grade will depend on the quality of the project, the presentation, and the ability of the student to answer questions in relation to the project and the course contents in relation to both theory and practice.