

Teaching portfolio

1. Teaching CV

My pedagogical experience stems from teaching activities and training at universities in Denmark (AAU), Norway (University of Oslo), Sweden (KTH, Royal Institute of Technology), and Germany (Hochschule für Musik Theater und Medien Hannover - HMTMH)

TEACHING AAU:

PhD course

Multimodal Interaction in Virtual Environments, 4 ECTS:

Spring 2011 Course with 20 PhD international students participating. Shared teaching and supervision with 2 colleagues.

Sound and Music Computing, master

7th semester:

Music Perception and Cognition, 5 ECTS. Autumn 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022. Course responsible. Designing course activities and lecturing in Cph (and Aalborg via video link 2015-2016).

8th semester

Embodied Interaction, 5 ECTS. Spring 2016, 2017, 2018, 2019, 2020, 2021, 2022. Also given for Medialogy Master. Shared structuring and designing course activities, and lecturing with colleague Cumhur Erkut.

Medialogy master

8th semester

Embodied Interaction, 5 ECTS. Spring 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022. Also given for SMC Master. Shared structuring and designing course activities, and lecturing with colleague Cumhur Erkut.

Interactive audio design, 3 ECTS: Spring 2009 Course responsible, and leading of study group.

Medialogy bachelor

2nd semester. UX: kvantitativ brugerevaluering, 5 ECTS: Spring 2022. Curriculum design, course responsible, lecturing and exercises.

3rd semester.

Visual perception, 1 ECTS: Autumn 2008, 2009, 2010 Course responsible, lecturing and exercises.

Design and analysis of experiments, 1 ECTS: Autumn 2008, 2009, 2010 Course responsible, lecturing and exercises.

Perception, 5 ECTS: Autumn 2011, 2012, 2013 Course responsible, and the majority of lecturing and exercises (in 2011 shared with two colleagues due to maternity leave).

Human Senses and Perception, 5 ECTS: Autumn 2015, 2016, 2017, 2018. Course responsible, designing activities and doing lectures and exercises.

Medialogy bachelor 4th semester.

Sound and Music Computing, 5 ECTS: Spring 2013, 2015 Course responsible, lecturing and exercises (shared with one colleague).

Design and Analysis of Experiments, Spring 2018, 2019, 2020, 2021, 2022 Lecturing and exercises (shared with one colleague).

Audio Processing, 5 ECTS: Spring 2016, 2017, 2018 Course responsible, lecturing and exercises (shared with one colleague).

Sound and Music Computing, 5 ECTS: Spring 2013, 2015 Course responsible, lecturing and exercises (shared with one colleague). **Audio Perception and Design**, 3 ECTS: Spring 2009, 2010, 2011 Course responsible, lecturing and exercises (partly shared with colleagues).

Master thesis supervision:

Sune Mushwenda: Enhancing Headphone Music Sound Quality (60 ECTS, Lang afgang), 2009.

Lone Juul Dransfeldt Christensen: Does Music Evoke Emotional Responses? (30 ECTS), 2010.

Alex Langberg: Increasing the Interaction in Nightclub Environments by Facilitating Social Media (30 ECTS), 2011.

Lars Schalkwijk: Alarm and Auditory-interface design: learnability of alarms and auditory feedback for random and meaningful alarm sounds investigated in a paired-associate paradigm (30 ECTS), 2017.

Thomas Wilmot: Guitar Playing and Nerve EMG (30 ECTS), 2018. Reuben Hunter-McHardy: Motorique - Control of Tempo and Frequency for Modular Synthesizers through Modulation of Rotational Motor Wheel Speed: Prototyping of a Eurorack Module for Investigation into Motor Speed as a Representation of Musical Tempo and Frequency. (30 ECTS), 2018. (Co-supervised). Antonio Stella: Tell Me What You See, an investigation on Visual Mental Imagery evoked by instrumental music. (30 ECTS), 2019

Sam Sernavski: Composing alarms for train stations: The considerations of the musical and the acoustical features in the auditory display design. (30 ECTS), 2019. Prithvi Kantan: A Musical Biofeedback System for Balance and Gait Rehabilitation in Hemiparetic Stroke Patients: Designing Intuitive, Relevant and Flexible Interaction Concepts for the

Clinical Environment (50 ECTS, Lang afgang) 2020.

Aron Seels: Music Perception and the Operative Subject : An analysis of works of music perception and cognition from music psychology and the proposal of a natural listening context for empirical research. (30 ECTS), 2021. Emmanouil Papageorgiou: Bard: Software Development for Algorithmic Composition. Making Music out of Chess Games in Real-Time. (30 ECTS) 2022.

Project supervision, Medialogy bachelor: 2nd semester 2021. 3rd semester 2008, 2009, 2010, 2012, 2016, 2021. 4th semester 2009, 2010, 2016, 2017, 2019, 2020, 2021. 6th semester 2016, 2017.

Project supervision, Medialogy master: 7th semester 2009, 2010 In total three groups (9 students), and one independent study. 8th semester 2009, 2010 Four groups (13 students) and two students doing independent studies. 9th semester 2009, 2010 Three students (one co-supervised).

Sound and Music Computing master: 7th semester. 2015, 2016, 2018, 2019, 2020, 2021, 2022. 8th semester 2016, 2017, 2019, 2020, 2021, 2022. 9th semester 2017.

TEACHING AT University of Oslo:

Spurious lectures on Musicology Master level (courses MUS4831 - Lydanalyse, MUS4320 - Musikkpsykologi; MUS4218 - Metodologisk emne: Kognitiv musikkvitenskap and more), 2013, 2014, 2015, 2016, 2017, 2018.

Recurrent lectures on Musicians' movements and Movement analysis in MUS2006- Music and body movements (earlier Musikk og Bevægelse) 2014, 2015, 2016, 2018.

External censor: Bjørnar Heggens Mellomsanselig Groove MUS4090, Master thesis in Musicology, University of Oslo 2011.

TEACHING AT KTH Royal Institute of Technology:

During my years at Department of Speech, Music, and Hearing, School of Computer Science and Communication 1997–2005, I participated in the teaching of a number of undergraduate courses and supervised two international students.

Musical Communication and Music Technology (2F1213). Spring 2003–2005. Together with colleagues A. Friberg and R. Bresin, I designed, planned the course (running for the first time in spring 2003) as well as held lectures and lab exercises. I've also been holding invited guest lectures in the course in 2010 and 2011

Supervision

Master thesis project: A. Wagner: Analysis of Drumbeats – Interaction between Drummer, Drumstick and Instrument. Supervision together with A. Askenfelt. Autumn 2005

Electro-project (2U1700). Supervision of student project (Spring 2003).

Internship of French engineering student: Summer 2002 Jean-Baptiste Julien worked on implementing a model of drummer's timing from measurement in an automatic drumming machine.

Sound Perception (2F1300). Lectures and lab exercises. Autumn 2002–2003.

Media Technology (2D1574). Lab exercises on midi. Autumn 2001–2003

Music Acoustics (2F1212). Lab exercises. Spring 1998–2001.

TEACHING AT HMTMH:

University for Music Drama and Media Hannover 2007–2008. Institute of Music

Physiology and Musicians' Medicine

Doktorandenseminar: Spurious seminars and demonstrations in the weekly seminar course for doctoral students, 2007–2008.

Handwunder – Anatomie, Physiologie, und Psychologie: (Wonders of the hand – Anatomy, Physiology, and Psychology: From nerve cell to Liszt Sonata). One lecture on Movement analysis in seminar course. Spring 2008.

Internship supervision: Supervision of psychology student doing internship. Feb– April 2008.

Sensomotorik des Musizierens: (Musicians' senso-motoric). Two lectures on Timing and Three Dimensional movement analysis of musicians' movement in seminar course. Spring 2007

2. Study administration

Coordination activities: Responsible for the organization, teaching coordination, and evaluation of courses and project work during the semester. The task involves scheduling, finding lecturers, and handling equipment requests. Semester coordinator of Medialogy bachelor: 3rd semester 2012 (shared) 2013 (shared), 2016, 2017, 2018, 2019; 4th semester 2010 (shared), 2011.

Curricula design activities: At Aalborg University I have participated in several committees for revisions of the Medialogy studyplan. In particular, I have formulated the course descriptions (specifying knowledge and skills requirements) for Human Senses and Perception (and earlier Perception) on 3rd sem., Design and analysis of experiments (4th sem), and UX: kvantitativ brugerevaluering (2nd sem). For the Sound and Music Computing master I have formulated and revised the course descriptions for Music Perception and Cognition.

Course design activities: In addition to designing the courses I have been responsible for I have also designed cross-course workshops with the purpose of enhancing active and motivating student learning on the 3rd and 4th semesters of the Medialogy bachelor program at AAU.

At KTH, I co-designed and organized the engineering course "Music Communication and Music Technology".

3. University pedagogy qualifications

At AAU

University Teacher Education for Assistant Professors: Pedagogical qualification program, Aalborg University. 7 ECTS in the period Oct 2009 - Feb 2011, including participation in numerous workshops, work on personal teaching portfolio and feedback from pedagogical supervisors on ability to plan, perform, and evaluate own teaching. The training program was completed by a written evaluation of my teaching merits from Associate professors Tom Børsen and Luis Bruni.

Introduction to Problem Based Learning - The AAU Way: Course on the Aalborg PBL model Spring 2009.

At KTH:

University pedagogy: KTH Learning Lab. 2 credits (corresponding to about 3 ECTS) Spring 2002.

4. Other qualifications

Participation in Aalborg University Teaching days.

Publications related to pedagogy and course teaching:

Erkut, C. & Dahl, S. (2017). Embodied Interaction through Movement in a Course Work. In *Proceedings of the 4th International Workshop on Movement and Computing*. Association for Computing Machinery.

5. Teaching activity development and teaching materials

Development of new education: Member of core group initiating and designing the new master of Sound and Music Computing. We designed the study plan and put together the document that was considered and reviewed by the Danish national accreditation board.

Teaching materials:

For the course on perception on Medialogy bachelor third semester, I have gradually built up a question bank of online question and quizzes designed to provide formative assessment of students throughout the course. All topics are supported by recorded videos.

For Design and Analysis of Experiments, I have written and released an online interactive book consisting of Jupyter Notebooks https://github.com/sofiadah/Design_and_Analysis_of_Experiments For UX: kvantitativ brugerevaluering I have written and released an online interactive book consisting of Jupyter Notebooks

https://github.com/sofiadah/Quantitative_UX

For all courses I am continuously authoring and updating lecture notes and exercise materials (e.g. in statistics, audio processing, embodied interaction and others).

6. Teaching awards you may have received or been nominated for

Nominated teacher of the year 2020

7. Personal reflections and initiatives

Teaching and student supervision are exciting, challenging, and rewarding activities. In my opinion, the sharing of knowledge is an important part of being a researcher, and therefore something I want to take active part in.

My own relation to the students can be described as casual but sincere. As a teacher, I take the task seriously and make an effort to explain the topic plainly, often by integrating practical demonstrations in the lectures. My aim is to engage the students in activities that will help them absorb and reflect on the material throughout the course, for instance using discussion groups and pyramids, short exercises, online quizzes, and peer-reviewing of assignments.

During my time at Aalborg University Copenhagen I have initiated, designed, and organized several cross-course workshops where students combine practical, creative work over a few days with the attendance of lectures with more theoretical content.

8. Any other information or comments

2021 students comments on the course Music Perception and Cognition from the study boards yearly evaluation:

"The quality of the teaching is undoubtedly the highest amongst all the courses. The teacher is very knowledgeable and knows how to convey information in interesting ways. Eventually I felt disconnected from some topics, but I was mostly very engaged."

"I felt that this course was very well organised and the structure of the classes was well executed and it made it easier to follow the content."

"Very well organized material. The classes were very coherent with the syllabus and learning objectives."