

Teaching portfolio

1. Teaching CV: A list of teaching and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD). Please state the teaching method used (e.g. lecture, class teaching, exercises, supervision, examination, coexamination, distance teaching, internet-based teaching and evaluation of teaching). Please also indicate the language of instruction.

Teaching — English Language Master's Courses 2021 **Scientific Communication**, Aalborg University (1 semester) One of three instructors that provide master's-level students with the fundamentals of scientific oral and written communication. Spring 2018 **Real-time Interaction and Performance**, Aalborg University (1 semester) Instructor of record for a master's-level course on topics in human-computer interaction and creative interfaces for musical expression. 2016–2017 **Music Perception and Cognition**, Aalborg University (2 semesters) Instructor of record and former teaching assistant in master's-level course on auditory streaming, perception of pitch, harmony, tempo and meter as well as computational and cognitive models of performance, motion and emotion. Spring 2014 **Multimedia Programming**, Aalborg University (1 semester) Teaching assistant in master's-level course on advanced programming techniques such as algorithm design applied to various problems in multimedia including audio and graphics processing, virtual reality and big data analysis. **Bachelor's Courses** 2020–Present **Artificial Intelligence Programming**, Aalborg University (3 semesters) Instructor of record in programming artificially intelligent agents for media technologies. 2017–Present **Human Senses and Perception**, Aalborg University (4 semesters) Instructor of record and former teaching assistant in the basics of human perception (vision, hearing, touch, vestibular), computational systems of perception, and how to apply this knowledge to the design of media technologies. 2019 **Technologies for Web and Social Media**, Aalborg University (1 semester) Partial instructor of record in technologies for web design and social media development including HTML5, CSS, JavaScript, jQuery and the MEAN stack. 2018–2020 **Creative Play – Applied Technology (semester theme)**, Aalborg University One of several instructors that provide first-semester students with introductions to the university's problem-based model of group learning, how to conduct research in media technology, and how to prepare for oral exams. 2017–2019 **Robot Programming**, Aalborg University (3 semesters) Teaching assistant in programming for robots using C++ and ROS. 2015–2019 **Introduction to Programming**, Aalborg University (6 semesters) Teaching assistant in basics of programming using Processing. 2014–2019 **Object-oriented Software Engineering**, Aalborg University (2 semesters) Teaching assistant in object-oriented programming practice using Java. **Guest Lecturing** Spring 2022 **Computational Thinking**, Aalborg University Guest lecturer for a one-day lecture on computational thinking as part of an undergraduate music course entitled Production and Performance, Aalborg, Denmark, February 9. 2021–Present **Music Recommendation Systems**, Aalborg University Guest lecturer for two, one-day lectures on music recommendation systems as part of an undergraduate music course entitled Music, Technology, and Culture, Aalborg, Denmark, February 19 and February 16. Spring 2021 **Computational Creativity in Music**, Aalborg University Guest lecturer for a one-day lecture on computational creativity in music as part of an undergraduate music course entitled Production and Performance, Aalborg, Denmark, March 15. Fall 2020, 2021, 2022 **Federated Learning for Computer Graphics**, Aalborg University Guest lecturer on a one-day lecture on federated learning for a master's-level course entitled Research in Vision, Graphics and Interactive Systems, Aalborg, Denmark. Spring 2019 **Applications of Music Information Retrieval for Music Therapy**, Aalborg University Guest lecturer of a one-day lecture and workshop for music therapists on using Matlab toolboxes for music information retrieval as part of a course entitled Ph.D. Course for Music Therapy Research, Aalborg, Denmark, April 1. **Supervision — Mixed English and Danish Language Master's Theses** 1. Laursen, Simon, Aalykke, Daniel, and Johansen, Mathias. "Identifying potential talents among job applicants, recruits, and on-boardees using machine learning on HR data." Master's thesis defended on June 16, 2022, Aalborg University. 2. Jensen, Tobias, Nedelev, Georgi, and Korbitt, Weronika. "Serious gaming and diagnosis of adolescent ADHD." Master's thesis defended on June 14, 2021, Aalborg University. 3. Kourtogiannis, Apostolos. "Simplifying analogue sensing and actuation in education." Master's thesis defended on June 22, 2018, Aalborg University. **Bachelor's Theses** 2019–2022 Supervisor of 12 bachelor projects in the Art and Technology degree program. Topics on art-based research in technology for use by artists, Aalborg University. Spring 2019 Supervisor of two bachelor projects in the Media Technology degree program. Topics on music technology applied to music therapy, Aalborg University. **Degree Program Media Technology** 2020–Present **Adaptive Media Systems**, Aalborg University (2 groups) Supervisor of master's-level semester projects related to semester courses in machine learning for media experiences, real-time computer graphics, mobile and wearable computing, and narratives in interactive systems. 2018–Present **Mediating Reality**, Aalborg University (3 groups) Supervisor of master's-level semester projects related to semester courses in algorithms, data structures, and software engineering for media technology, physical systems, and interactive narratives in digital culture. 2017–Present **Media Innovation**, Aalborg University (4 groups) Supervisor of master's-level projects on novel applications of interactive media systems with applications for industry. 2018–2022 **Designing from Both Sides of the Screen**, Aalborg University (8 groups) Supervisor of undergraduate-level semester projects related to first-semester courses in problem-based learning in science, technology and society, audio-visual sketching, and introduction to programming. 2018–2020 **Human-Computer Interaction**, Aalborg University (4 groups) Supervisor of undergraduate semester projects related to second-semester courses in interaction design, mathematics for multimedia applications and programming for interaction. Fall 2017 **Visual Computing – Human Perception**, Aalborg University (2 groups) Supervisor of undergraduate semester projects related to third-semester courses in image processing, human senses and perception, and complex software systems. 2014–2015 **Sound Computing and Sensor Technology**, Aalborg University (4 groups) Supervisor of undergraduate semester projects related to fourth-semester courses in human-computer interaction, audio processing and experimental

design. **Art and Technology** 2018–Present **Interaction Spaces in Art and Technology**, Aalborg University (9 groups) Supervisor of undergraduate semester projects related to fourth-semester courses in interactive technologies, aesthetics and interaction, digital representation and artistic and academic methodology. 2017–Present **Dynamic Art and Technology**, Aalborg University (13 groups) Supervisor of undergraduate semester projects related to third-semester courses in affective design, digital representation and programming for artists. **Music** Spring 2022 **Music, Technology, and Culture**, Aalborg University (3 groups) Supervisor of undergraduate semester projects related to fourth-semester courses in music, technology, and culture.

2. Study/programme administration and management: Experience in programme management and coordination. A list of study administration tasks, e.g. study board membership, chair of study board, semester or course coordinator, accreditation tasks, etc. Experience in planning teaching activities. Experience in programme development. Participating in committees and commissions etc. on education issues.

2020–Present **Art and Technology – Semester Coordinator**, Aalborg University (2 semesters) Organize and oversee all courses, department functions, and student activities for the fourth semester of the Art and Technology degree program.

3. Formal pedagogical training: A list of completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc. Written assessment from the course in university pedagogy for assistant professors. Participation in conferences on pedagogy and didactics. Please enclose any documentation of the above, such as course certificates, references, etc

2020–2021 **University's Pedagogy Program**, Aalborg University Participated in a training program for university-level problem-based learning teaching provided to all assistant professors. 2021 **Digital Transformation**, Aalborg University (1 semester) Selected to represent Media Technology in a cross faculty PBL project aimed at developing a digital solution for continued education at Aalborg University.

4. Other qualifications: Conference contributions and attendance, contributions to debates, scientific articles on pedagogical issues etc. Peer supervision, editorials, mentoring experience or other types of competence development activities.

Mentorship Spring 2018 **Mentor**, Women in Music Information Retrieval (WiMIR), International Society for Music information Retrieval. **Examinations** 2017–Present **Lead examiner**, Aalborg University (100+ students) Serve on assessment committees for undergraduate semester comprehensive oral exams in Art and Technology. 2014–Present **Lead examiner and internal censor**, Aalborg University (500+ students) Serve on assessment committees for undergraduate and master's-level semester comprehensive oral exams in Media Technology.

5. Pedagogical development and research: Development of new courses, teaching materials, teaching methods, examination types or other types of pedagogical development. Didactic and pedagogical research. Cooperation with external collaboration partners.

University's Pedagogy Program — Project Deliverable **Title:** "Problem of the Day: A Proposal for Engaging and Balanced Introductory Instruction in PBL" **Abstract:** Student learning at universities today relies increasingly on hands-on and experiential methods of instruction rather than traditional lecture formats alone. These newer approaches are also central to Aalborg University (AAU) and problem-based learning (PBL). However, such active and applied activities may come at the expense of important theoretical concepts and understanding which are not only crucial to the underlying problem in PBL but have been and remain integral to the instruction of students in higher education. This paper details a PBL-based proposal in which (1) a single 'problem of the day', rather than only a concept or topic, figures centrally in a given lecture – serving as the point of departure for the teaching and understanding of the lecture material, and (2) applied activities, consisting of discussion questions and task-based exercises (both analytical and programming) concerning this problem in (1), are integrated into the lecture so that theoretical and applied understanding occur together and with appropriate balance. This proposal is carried out in the form of a teaching experiment in 60% of the lectures for an introductory undergraduate course in artificial intelligence for Media Technology students at AAU. In the evaluation, student self-reported measures of engagement and agreement through questions pertaining to the lecture format, content, and applied activities are used in assessing the balance of theoretical and practical-oriented material. Further qualitative responses from students provide indications of positive and negative experiences with the course. Reflections on the process and relevance of the proposal to PBL are provided at the end.

6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.

University's Pedagogy Program — Evaluation "...it is clear that Brian is a very engaging and dedicated lecturer who is popular among the students. The students' active participation in his teaching sessions clearly demonstrates that he

manages to address the students' knowledge level and maintain their attention throughout the lectures." "...Brian's lectures have a good balance between theoretical concepts and their applications, and most of them [students] reported that their engagement in the lectures is above average or very high."

"We can therefore only give Brian our best recommendation. Any teaching environment or program will certainly benefit from Brian's methodological, systematic, and engaging teaching."

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogical development, plans for following up on student feedback/evaluations, etc. Personal reflections on your own pedagogical practice, including objectives, methods and implementation. This should include an analysis and a reasoned description of your pedagogical activities in relation to your pedagogical understanding and student learning. Thoughts on the teaching method at Aalborg University (which is largely based on group-organised project work and problem-based learning)

N/A

8. Any other information or comments.

N/A