

## Teaching portfolio

### 1. Teaching CV: A list of any lecturing and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD) as well as any external examiner tasks.

**Supervision Overview** Since 2013, I have supervised more than 100 projects and internships on B.Sc.-level/1st cycle (1st to 6th semester) and (including internships) on M.Sc.-level/2nd cycle, and I have examined projects and courses across all semesters on the Medialogy study programme as well as contributed to study program revisions.) The following list is updated with current and historic supervision tasks dd.4OCT-2022. **SEMESTER 1:** 8 P0 projects (2013, 2014, 2015) 12 P1 projects (2013, 2014, 2015, 2016, 2017) **SEMESTER 2:** 11 P2 projects (2013, 2014, 2015, 2016, 2017) **SEMESTER 5:** 2 P5 projects (2014, 2017) **SEMESTER 6** (bachelor thesis semester): 17 P6 projects (2015, 2016, 2017, 2018, 2019, 2021, 2022) **SEMESTER 7** (1st-semester Second cycle): 19 P7 projects (2016, 2017, 2018, 2019, 2020, 2021, 2022)

**SEMESTER 8:** 8 P8 projects (2017, 2018, 2021, 2022) **SEMESTER 9** (Internships, study abroad): 26 individual students on internships or studies abroad: Selected relations: Bang&Olufsen, DR, Jammerbugt Municipality (2017), DIVRLabs (CzechRep.), James Cook Uni. (Singapore), Nordjyske Medier (2018), Bang&Olufsen 2020, Redmark (2020), SynergyXR. (2020), EggDesign (2020), Combine (2020), B&O (2021), Bedtime Games (2021,2022), Kanda (2022), AATE VT (2022), CompanYoung (2022)... etc. **SEMESTER 10:** 12 Master theses (2014, 2015, 2017, 2018, 2019,2020, 2021, 2022) **External**

**AAU supervision and moderation** Since 2012 I have provided supervision to a handful of Honour and Master students where projects were related to my research (naturally also before 2012 during my employment with NUST). These students have been enrolled at Namibia University of Science & Technology (NUST). I am an official examiner for Software Engineering at the M.Sc. level on the dept. of Comp. Sci at NUST (1 thesis in 2018 and 1 thesis planned for 2020). **Supervision approach and themes** (2012 - present): I have since 2012 provided supervision to students across all semesters enrolled in the Medialogy study program (Technical Faculty of IT and Design), Aalborg University. As is the pedagogical DNA of the institution, the projects (thus also supervision) are firmly rooted in the Problem-Based-Learning (PBL) approach. In short, the PBL approach takes its beginning point in exploring (for instance, by stating knowns from research) real and open-ended problems. In the approach to finding solutions to a problem, the student acquires a better understanding of the problem and trains his/her competencies by application in an experiential way. On Medialogy, the 'solution' is investigated and constructed using various technological prototypes, which again become entry points for better understanding the problem-space. In this way, students progress from investigating and stating existing technologies and research, design with respect to use contexts, develop in various technical environments, conduct both technical and user-environment situated evaluations and document in an iterative fashion. In these projects, my style of supervision is engaged, as I truly become interested in these projects. I always tell my students that I expect them to be top performers. I might adapt my expectations during a project to match the skills and ambitions of the students. My premise is, no one succeeds without someone having expectations of them. I meet my students on eye level, and the result is a free environment where subject matters are discussed. **Supervision on lower semesters - Medialogy** I have been engaged in (and enjoyed) supervising Medialogy first-year students since 2012. While the projects naturally enough, do not reach a high level of technical or research sophistication, I still find it rewarding as a supervisor. This early educational step for the students is fundamental; in many ways, and as a supervisor, I spend energy on instigating rich study culture and slowly deliberating modes of learning in pedagogical ways. In general, my supervision and the nature of these first cycle student projects can be grouped as student projects more indirectly related to my research (as teaching at AAU is research-based, and I consider supervision to be a vector from teaching). The reason these are more indirectly related to own research is the fact student projects on the 1st cycle are typically thematically aligned with more fixed learning objectives and, to a high degree, technically homogenous. These projects expect the students to follow a specific methodology by first identifying a 'problem' in a narrow problem space – often given as a semester theme, design and develop an interactive system using a predefined technology, evaluate such a system in the problem-space using a limited set of methods (such as usability methods) and document the entire process in longer reports. These projects do not extend my research but I draw heavily on it to exemplify points. Supervising these projects necessitates that I guide students (and their various individual differences) in groups through all steps of what is best classified as the Human-Centred Design approach and gently push them out of their comfort zone in all aspects of such a project. In comparison with second cycle projects, the expense of a more holistic understanding is the absence of technical and evaluative depth. One recent example of such a theme from the Medialogy programme is the theme of the second-semester project; 'quantified self', where all projects must find ways to capture user data and visualize it through a developed app (Java: Android Studio) supported by the programming course in graphical ways supported by the AVS course I teach.

**Supervision on higher semesters - Medialogy**

In later years, most of my supervision has been unfolding on the bachelor thesis semester of the first cycle of Medialogy (6<sup>th</sup> semester) or across all second cycle semesters. The reason for this is most likely that the number of external projects I have been engaged with has risen drastically, and the fact that most upper semester student projects are, in broad terms, related to my research.

Although management of a high number of external collaborations requires resources I am a firm believer in the investment, and I am a very visible (in our environment) proponent for external collaboration because I identify the relevance of real problems and real partners to be strong drivers of student competency development because it can: a: increase the amount of 'real' challenges (company collaboration, technical innovation, etc.) for students, b: increase the employability of our students to the world around and c: increase personal research output.

Many of these projects I have supervised have departed from themes such as healthcare, computational thinking, interaction design, indigenous knowledge, and intangible cultural heritage combined with a range of different technologies such as XR, mobile applications, robotics, and internet-based applications.

To list some recent examples, I currently supervise four projects on MED7 (examination JAN 2020).

Two of them are VR projects on the intangible cultural heritage of the San in Namibia, and one project is using a mobile-based system for enhancing reading experiences for pupils from Peoples Primary School in the blighted area of Windhoek, Namibia. The fourth is a project with Senhjerneskadecenter Nord (neuro center SCN), where a group of students have been following a Participatory Design methodology and co-designed a personalized reminder system with a resident suffering from severe memory loss and who is a permanent resident of the center.

All of these projects (evaluated in-situ) are strategized for publication in 2020 and from a pedagogical and rights perspective the responsible students are naturally part of this process.

In addition to these examples, I was asked before Christmas 2019 by Bang&Olufsen UX, to establish a thesis (and potential internship) on a project, which will be focused on the creation of a virtual-reality testing environment for confidential and prototyped speaker systems as a way to investigate user interactions in advance of manufactured systems.

The project seeks to investigate UX by using implicit evaluation data (such as data logging) from virtual interaction as a mixed-method approach paired with more explicit data (the more qualitative observation of virtual interaction) to inform novel systems prior to production. The thesis contract will be written at the end of January.

Managing the collaborations and supervising students on such projects is highly rewarding as it allows me to benchmark student knowledge in employee- and educational contexts (such as other universities) and extend my research with partners, who are recognized and challenging me to provide relevant and up-to-date supervision as well as indicate research directions.

This diversity of projects and nearness of upper semester projects to my research agenda challenges me a lot, as I have to jump from one topic to another, but these projects also bring me an extra dose of motivation as I can supervise on topics I am already familiar with and interested in.

This means that I often get students who are interested in these projects/my research, which again has enabled many groups to extend my research to 'our research' by becoming part of it. This is visible as I have several joint publications (journals and papers) with students from both AAU and NUST (here often in co-supervisory roles). While this is beneficial towards my individual publishing activities, it also highly extends the resources 'normally' allocated for supervision as I spend a lot of energy on these projects. But I find it very rewarding to supervise students writing their first 'real' paper and experience how they become motivated and extend their learning further.

Until now, I have as a primary supervisor, co-authored (4 papers and 3 journal articles) 7 peer-reviewed publications with students.

### **Teaching Overview**

**NUST: Future and Emerging Technologies: 3D graphics and UNITY game mechanics (2011).**

I developed a full Lecture series (+ examination) in 3D modeling and programming in UNITY for a class of Softw. Eng. honor students at Namibia University of Science and Technology.

**AAU - Audio-Visual Sketching (from 2012 - present).**

1st. Semester Medialogy.

The course offers the students practical skills and theoretical knowledge on a variety of topics essential to media technological production. From sketching user experiences, graphic design 101, 3D modeling, texturing, rigging in, and general use of 3D software programs to traditional animation techniques and movie narratives, framing, and production. The course enables students to produce graphical products as a forerunner to virtual reality games/experiences or illustration of group work (for instance by teaching graphic facilitation) and design processes.

In 2019 I revised the course on all aspects (software change, examination, modes of instruction, types of assignment and lecture content).

**AAU - Ethnographically Informed Design (from 2017 - present).**

6th. Semester Medialogy.

The course is positioned on the interplay between informing the design of interactive systems and ethnography. The course provides students with a view on computing systems through a lens of social constructivism -methods from (video+) ethnography - grounded theory and practical tools for analyzing field data and with a particular focus on nonverbal cues. Much of the course is inspired by my research field related to constructing ICT with indigenous people in Namibia, where fieldwork and empirical work for many reasons is qualitative. The students familiarize themselves with literature, methods, analysis, implications of data, design, reflections on empirical work, which is documented in individual student papers. This paper hand-in serves as another synthesis-reflection loop for the students who at the end of the course are introduced to peer-reviewing in practice. It is, to me, a motivating course to teach as I can engage heavily with students on quite complex topics as well as showcase a more systematic and less 'spontaneous' approach to grounding design in real data.

### **Independent lectures (worth mentioning)**

1 full-day workshop on PBL provided as assistance to the staff and management of Comp.Sci and Informatics at NUST. This activity was in support of a faculty-wide curriculum change.

2 lectures given to B.Sc students at Techno-Anthropology (Dept. Phil. and Learning) about Participatory Design in indigenous contexts.

1 lecture given for staff and honor students at Dept.Comp.Sci. at Namibia University of Science and Technology about cross-cultural interactive system design.

1 lecture given to B.Sc. students at LUCA Design School in Belgium about designing for diversity in a relationship with healthcare technologies and design methodologies. This activity was part of an Erasmus agreement with staff at Luca School of Arts (BE).

## **2. Study administration: A list of any study administration tasks, e.g. study board membership, head of studies or semester or course coordinator, accreditation, etc.**

### **Semester Coordination:**

Since the Spring of 2016, I have been coordinating 6th Semester Medialogy. This role constitutes planning of supervision, exams, teaching while arranging and conducting meetings with students, ensuring the quality of teaching, carry out supervision, ensuring that academically younger supervisors are supported adequately, assess study environment, and ensure tracking of student project progress (for instance, through status seminars). Besides the more formal elements of coordination, I always host workshops on literature search and criticality (together with the AAU Library staff), after graduation and host an informal graduation event for the students.

### **Other administrative tasks (worth mentioning):**

In 2017 I was a participant in the (successful) accreditation panel for Medialogy.

Spring 2018 (planned to be re-initiated in 2020): I have been participating in preliminary work of formulating a revision for the B.Sc.level on the Medialogy study programme.

Spring 2018: appointed AAU Career VIP for Medialogy school of ICT and AAU Career.

This position, which I voluntarily accepted in addition to my contractual appointment requires me to plan activities with AAU Careers regarding employability for Medialogy master students.

Conceptually, I work with two levels; 'AAU in the industry' and 'Industry at AAU'.

'AAU in the industry' relates to the transfer process from learner to worker, where I coordinate and set sail on a range of activities. These activities are placed on 7th, 8th and 10th semesters and span from person-profile evaluations, cv writing to hands-on job application writing, job-matching, professional network building, and competency profiling. One larger task is to address the interdisciplinary qualities students tacitly acquire while studying.

Since 2019 I have published a profile brochure of Medialogy graduates in a larger industrial network I have created to enable a better interface among ICT companies and graduates.

'Industry at AAU' means my gaze is fixed on the benefits of industry collaboration in a more pedagogical view, where companies commit teaching to second cycle students (lastly Nov. 2019, where staff from Grundfos-IoT gave a full-day workshop on SCRUM to our 7th-semester students). This example of several others was initiated to enable companies to assess student competencies (in future matters such as recruiting and internships) and to address misconceptions students often have about industry required competencies as well as reflecting their skills in what is a common business in the industry. I have, for some years, organized and invited graduates to present their industrial trajectories as inspiration to enrolled students (called Alumni Talks).

In spring of 2018, I presented together with AAU Careers our approaches for the representatives situated in the pro-dean's council on education (tech DRU) and in 2019 I provided best practice input to the dean's advisory board at Faculty of Engineering, and lastly, the progress was presented to the executive board at AAU. I coordinate a funded three-year Erasmus+ bidirectional staff mobility program with NUST where one objective (among others) is to develop and share best teaching practice as well as mutually develop a pedagogical exchange program for second cycle students (submitted JAN 2020).

## **3. University pedagogy qualifications: A list of any completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc.**

In 2019 I was awarded 'utmost satisfactory' as assessment for completing the 10 ECTS AAU adjunct pedagogical (AP) course mandatory for the Assistant Professor position and for senior teaching positions at AAU. I am certified to level C1 in English as medium for instruction at HEI according to the Common European Reference for Languages. Selected pedagogical workshops (minimum 2 days): WS: Enhancing feedback and facilitating student reflections in groups. W: Design ICT mediated learning activities underpinned by 'activities' and 'resources' in Moodle WS4: Lecturing

## **4. Other qualifications: Conference attendance, editorials, presentations, etc. relating to education, 'University Teaching Day', etc.**

Participant in AAU teaching Day Institutional member ASLERD (Association for Smart Learning Ecosystem and Regional Development)

## **5. Teaching activity development and teaching materials: A list of any contributions to the development of new modules, teaching materials, study programmes, e-learning, collaboration with external business partners, etc.**

Developed the course 'ethnographically Informed Design' 6th. semester Medialogy. Developed the course 'Audio-Visual Sketching' 1st. semester Medialogy. Developed a course for Softw.Eng. Honors at Namibia University of Science & Technology. I always prioritize collaboration with external partners (universities, companies, and institutions), the following

is a selection of these. Bang&Olufsen, Danmarks Radio, Aalborg Zoo, SenHjerneSkadeCenter Nord (center for citizens with acquired cognitive impairments), Neuro center Østerskoven, Sofiendalskolen (public school), Red Cross Center Løgstør (care home for the elderly), VisitAalborg, BetterWorldFashion, Grundfos, Goethe Institute Windhoek and many more. At least half of all supervised second cycle student projects are in some form a collaboration with external partners. Recent M.Sc. thesis supervision: "Developing teaching material for physical computing to enhance digital literacy of Danish 4th-grade students" with Danmarks Radio (2018); "Crash! An Evaluation of Collision Prevention Mechanisms in an Immersive MultiplayerRoom-scale Virtual Reality Experience" with DIVR Labs, Czech Rep. (2019); "Developing a Virtual Reality laboratory as early prototype speaker design and user experience environment" with Bang&Olufsen (spring 2020).

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

No awards and no complaints

## **7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogic development, plans for following up on feedback/evaluations from students, etc.**

In 2019 I changed the Audio Visual Sketching course into following a flipped-classroom approach. In general, I try to experiment with other ways of enabling learning such as peer-feedback, to provide more online content and to bring in various experts to enlarge the perspectives on subjects (such as Erasmus agreement with LUCA + Dementia Lab, Erasmus+ with NUST or with companies). In 2019 I initiated a Special Issue looking at educational technologies from indigenous perspectives. Rodil, K., Winschiers-Theophilus, H., I. Asino, T., & Zaman, T. (red.) (2019). Special issue on: Indigenous Knowledge and Practices contributing to new approaches in learning/educational technologies: Preface. ID&A Interaction design & architecture(s), 41, 5-6. [0].

## **8. Any other information or comments.**