

## Undervisningsportfolio

**1. Undervisnings-CV: Oversigt over undervisnings- og vejledningsopgaver med angivelse af fagområder, omfang, undervisningsniveau (bachelor, kandidat, efter-/videreuddannelse, ph.d.). Type af undervisningsform angives, f.eks. forelæsning, holdundervisning, øvelse, vejledning, eksamination, censur, fjernundervisning, internetbaseret undervisning og evaluering af undervisning. Undervisningssprog angives.**

I give lectures to Biomedical engineering students during their Master's program and to the students of Robotics during their Bachelor's and Master's education. I also regularly supervise student groups at different semesters in these programs. I have participated as an organizer and teacher in several Ph.D. courses offered by the Health science and technology department.

Human Bionics, Robotics masters (ROB8), coordinator and teacher

Rehabilitation technology, Biomedical engineering masters (ST8), teacher (2 lectures)

Robots in the health care system, Robotics masters (ROB8), teacher (2 lectures)

Robotics sensing, Robotics bachelor (ROB4), teacher (3 lectures)

Robot dynamics, biomechanics and biological actuators, Robotics bachelor (ROB3), teacher (3 lectures)

Fundamentals of EEG, Ph.D. course, one of the organizers and lecturers

Advances in the neural control of movements, Ph.D. course, one of the organizers and lecturers

Neuromechanics of human movements, Ph.D. course, one of the organizers and lecturers

**2. Administration og ledelse af uddannelse: Erfaring med uddannelsesledelse og –koordinering. Oversigt over studieadministrative opgaver, eksempelvis medlem af studienævn, studieleder, semesterkoordinator, fagkoordinator, akkreditering m.v. Erfaringer med planlægning af uddannelsesafvikling. Erfaring med udvikling af uddannelser. Deltagelse i udvalg, kommissioner m.m. vedr. uddannelse.**

For several years, I have been the semester coordinator for the 3rd-semester Robotics bachelor. I actively participate in the development of the curricula for bachelor's and master's programs in Robotics education.

**3. Formel pædagogisk uddannelse: Oversigt over gennemførte universitetspædagogiske kursusforløb, PBL-kurser, workshops, udviklingsprojekter, kollegial supervision o.l. Udtalelse fra universitetspædagogikum. Deltagelse i konferencer om pædagogik og didaktik. Dokumentation i form af kursusbeviser, udtalelser m.m. vedlægges.**

I have extensive experience in teaching activities and supervision. Right after obtaining my bachelor's diploma, I have been working as a Research and Teaching Assistant at the Faculty of Technical Sciences, University of Novi Sad, where I have been responsible for organizing practical exercises. During my Ph.D. education, I have given several lectures and was involved in the co-supervision of student groups together with my then Ph.D. supervisor (Prof. Dejan Popovic). While I was working at the Institute of Neurorehabilitation Systems, I co-supervised several Ph.D. students. Since 2017, I am actively involved in teaching and supervising biomedical engineering and robotics students.

**4. Andre kvalifikationer: Bidrag til konferencer, debatindlæg, videnskabelige artikler om pædagogiske emner m.v. Kollegasupervision, redaktørarbejde, erfaring som mentor og anden kompetenceudvikling.**

Not applicable.

**5. Pædagogisk udvikling og forskning: Udvikling af nye kurser, undervisningsmateriale, undervisnings- og eksamensformer eller andet udviklingsarbejde. Didaktisk og pædagogisk forskning. Samarbejde med eksterne samarbejdspartnere.**

I actively participate in the planning and organization of curricula in Robotics education for bachelor's and master's degrees. When I arrived at HST to start working as an Associate Professor, this was still a relatively young education. The program has been already up and running, but we wanted to ensure that the curricula are continuously adapted and evolved based on the student feedback to improve the overall quality and student satisfaction. In that period, we conducted fine-tuning of course materials to minimize overlap and introduce the missing points to address the student and project needs. Finally, a larger modification of the bachelor's program has been discussed and agreed upon by all departments involved in education, and the bachelor's program is now running according to this plan. One of the major

interventions was to concentrate the content related to health robotics in a single semester (ROB5).

I am the coordinator and main lecturer in the course Human Bionics, which is running in the 8th semester of the robotics master's education. The course learning goals have been defined before I have taken the coordination, but the actual content (lectures) and the structure of the course have been planned from scratch. The course teaches the students about some advanced aspects of health robotics and comprises a general lecture to introduce a topic, which is then followed by practical demonstrations from our own projects (hence, research-driven education). In the second part of the course, we have several external lectures presenting fundamental concepts from the human motor control and computational neuroscience, and then I show the students how those topics can be translated into robotics (series named "From humans to robots").

## **6. Udtalelser om undervisningskompetencer fra foresatte og kolleger.**

### **Undervisningsevalueringer og eventuelle udmærkelser for undervisningsvaretagelse.**

Not applicable.

## **7. Evt. personlige refleksioner og initiativer: Personlige overvejelser knyttet til undervisning og vejledning, ønsker til og planer for pædagogisk videreudvikling, planer for opfølgning på undervisningsevalueringer m.v. Refleksioner over eget pædagogiske arbejde, dets målsætninger, metoder og gennemførelse. I refleksionen analyseres og motiveres dine pædagogiske aktiviteter i forhold til din pædagogiske forståelse og de studerendes læring. Tanker om undervisningsformen på Aalborg Universitet, der har et stort indhold af gruppeorganiseret projektarbejde og problembaseret læring (PBL).**

The wish to teach was one of the motivating factors for me to stay in academia, and I still enjoy it. Initially, the inspiration came from my own experience with both negative and positive teaching styles that I encountered during my own student days. At that time, my colleagues and I particularly appreciated the teachers that radiated enthusiasm about the topics they lectured and who knew how to explain the material so that we could understand and integrate it with the knowledge and experience we had at that particular point in our education. These are still the main principles that I follow in my approach to teaching today. I strive to present the material in an interesting, motivating, and yet clear manner. I try to engage the students and I particularly enjoy when the lectures are interactive, hence I encourage students to ask questions and discuss actively during the lecture.

The problem-based learning was a radically new concept for me when I just arrived in Aalborg to get my Ph.D. degree. I have finished my basic education following the classical approach, with a lot of theory and less practice. Integrating the concepts of PBL was therefore a process that took some time, but now I have acquired extensive experience in applying the model and I fully appreciate its advantages. I enjoy discussing and advocating the model with my colleagues from other universities. In my supervision work, I promote and facilitate student ownership of the project, organization of the work, creation of a positive working environment, peer learning, setting of ambitious yet realistic goals, etc.

## **8. Andet.**

Not applicable.