

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.

Teaching:

- "Motion Planning and Path Planning", Robotics BSc (6th semester), 2021
- "Structured System and Product Development", Robotics BSc (2nd semester), 2020-2021
- "Robot Programming", Robotics BSc (1st semester), 2015-2020
- "Basic Electronics 1", Art and Technology, 2012
- "Basic Electronics 2", Art and Technology, 2012
- "Imperative Programming", Teaching Assistant, 2011-2012

Supervision:

2021:

- "Detection and Collection of Cigarette Butts with a Mobile Robot", Robotics MSc (P10-project)

2020:

- "Non-linear Model Predictive Control Based Motion Planning Among People", Control and Automation (P10-project)
- "Intelligent Person Following Robots in Dynamic Environments", Robotics MSc (P7-project)
- "Social Segway", Robotics BSc (P5-project)

2019:

- "BB-1, a guidance robot", Robotics BSc (P5-project)
- "Flexible Stair Climbing Algorithm for 18 DOF Hexapod", Robotics MSc (P7-project)
- "Fleet Management of Distributed Multi-Robot Systems for Autonomous Data Collection", Robotics MSc (P7-project)
- "Autonomous Wheelchair navigation in Pedestrian Environment", Control and Automation (P9-project, academic internship)
- "Agricultural Robot", Control and Automation (P10-project)
- "Fall Detection and Airbag deployment for Balancing Robots", Control and Automation (P8-project)
- "Control of Robot Manipulator on Balancing Ballbot", Control and Automation (P8-project)
- "Robot Leading People", Robotics (P6-project)
- "Cloud Robotics", Robotics (P6-project)

2018:

- "Sensor Suite Design for Kugle", Robotics (P5-project), Emne: Robot Integration.
- "Kugle - Modelling and Control of a Ball-Balancing Robot", Control and Automation (P10-project)

2016:

- "Design of a control system for a patient with very high level amputation", Robotics (P3-project), Topic: Manipulating the Surroundings.

2015:

- "Socially Assistive Robot", Robotics (P1-project), Topic: Fundamental Mobile Robotics.
- "Search Drones, Robotics", (P1-project), Topic: Technological Project Work.

2012:

- "Autonomous Road Striper", Control and Automation (P8-project), Topic: Multivariable Control Systems.
- "Waypoint Follower Through a Delayed Network", Control and Automation (P7-project), Topic: Networked Control Systems.

2011:

- "Optical Terrain Covering for an Autonomous Underwater Vehicle", Control and Automation (P9/10-project), Topic: Intelligent Autonomous Systems.
- "Line Tracking with a Skid Steering Vehicle", Control and Automation (P7-project), Topic: Networked Control Systems.

Projectproposer:

2017:

- "Subjective Experience of Interacting with a Social Robot at a Danish Airport", Engineering Psychology (P7-project).

2016:

- "KeeCo - Assistive Technology - Cooking with cognitive impairments", Industrial Design (P10-project).
- "DevIt - Flexbot - Social service robot under construction", Industrial Design (P10-project).

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.

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

and supervision, etc.

Started Assistant Professor teaching training in 2019. Participated in following courses:

- "Teaching at a PBL University"
- "Planning and Implementation of Group Instruction"
- "The use of IT and Media for Teaching"
- "The PBL Group - Collaboration, Process and Supervision"
- "Planning, Development and Quality Assurance of Study Programmes"
- "Research Integration"
- "Flipped Teaching with Podcasts"
- "How to Cope with a Student in Distress"

Additionally, I am being pedagogically supervised by Claus Monrad Spliid and Jan Dimon Bendtsen.

"PBL in Engineering and Science - Development of Supervisor Skills", 2011

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

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.

Total revision of the course "Structured System and Product Development".

Producing supporting material on Crust Crawler robot arms for laboratory exercises and project work.

Development of the teaching material on ROS for the course "Robot Programming"

Participation in the early stages of defining the Robotics B.Sc and M.Sc. educations.

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

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.

I believe that the classic blackboard teaching is a way of teaching that cannot be readily replaced by digital content alone. Though, I am certain that there is a great potential in the possibilities given by digitalisation. I am certain that the digital material can be used effectively together with the classic methods to increase the motivation among students and enhance the comprehension of the curriculum. I also believe that it is possible to attract new students because of the fresh and intriguing image that the teaching can get.

I am participating in a pilot projet in the section on developing a good, broad, multimodal teaching material for the laboratory exercises in the course "Robotic Control Systems". The material will be based on both classic and digital methods.

8. Any other information or comments.