Pedagogical Training

Leadership program - Future Research Leaders 7, 10 modules of 2 days each, Swedish Foundation for Strategic Research, from 2021 to 2023.

Academic Teacher Training Course, 5 weeks, Uppsala University, Spring 2020.

Assessment, Grading, and Feedback, 1 week, Uppsala University, Spring 2020.

Supervision course: "Teaching and Assessing Academic Writing", 2 days, Uppsala University, Spring 2020.

Supervision of PhD Students, 3 weeks, Uppsala University, Spring 2019.

"Tenure Track 2.0" - Personal Development Program at Delft University of Technology, Fall 2016. The program was focused on career and academic leadership development, including coaching techniques and conflict handling. The program consisted of 5 days of sessions, plus 2 practice periods of 3 weeks, conducted over a period of 3-4 months. No certificate available.

Completed the Doctoral pedagogical course on "Basic Communication and Teaching", 3 ECTS, KTH Royal Institute of Technology, Spring 2012. Course completion certificate is available through my Ladok records.

Pedagogical Experience and Development Work

Associate Professor (25% teaching), Dept. of Information Technology, Uppsala University.

> 1DT114 – Data Security and Privacy (MSc, 5 ECTS), Spring 2025–present. Course co-developer, with Prof. Christian Rohner. Educational activities: interactive lectures, weekly group work and seminars, final examination as a course report.

> 1RT004 – Safety and Security in Control Systems (MSc, 5 ECTS). First given in Spring 2022– present. Course co-developer, with Prof. Alexander Medvedev. Educational activities: lectures, exercise sessions, continuous examination as 3 group assignments and a final oral examination, optional mini-project work.

> 1DT098 – Security and Privacy (MSc, 7.5 ECTS), Fall 2021–2023. Course co-developer, with Prof. Christian Rohner. Educational activities: interactive lectures, weekly group work and seminars, final examination as a course report.

> 1DT111 – An introduction to cybersecurity (online life-long learning, 2 ECTS), Fall 2021. Course co-developer with Dr. Kristiaan Pelckmans and Prof. Christian Rohner (Dept. of IT). Educational activities: flipped-classroom sessions, seminars, recorded lectures with study questions, final quiz examination in Studium.

Assistant Professor (50% teaching), Dept. of Electrical Engineering, Uppsala University.

> Cybersecurity: an academic perspective into recent application domains, open online course, Fall 2020. Course co-developer with Dr. Kristiaan Pelckmans and Prof. Christian Rohner (Dept. of IT). Educational activities: flipped-classroom sessions, seminars, recorded lectures with study questions, final quiz examination in Studium.

> Reinforcement Learning, open online course, Fall 2020. Course co-developer with Dr. Per Mattsson (Dept. of IT) and Dr. Ayca Özcelikkale (Dept. of EE). Educational activities: flipped-classroom sessions, recorded lectures with study questions and Jupyter Notebooks for pedagogical support, homework assignments.

> Cyber-Physical Security of Networked Control Systems (PhD, 3 ECTS, distance teach-

ing), Spring 2020. Course co-developer, co-responsible and co-lecturer, with Prof. Henrik Sandberg (KTH), leading 50% of the course. Educational activities: flipped-classroom sessions, recorded lectures with study questions for pedagogical support, peer-reviews of homework assignments.

Reinforcement Learning (PhD, 5 ECTS, distance teaching), Spring 2020. Course co-developer, co-responsible and co-lecturer, with Dr. Per Mattsson (Dept. of IT) and Dr. Ayca Özcelikkale (Dept. of EE), leading 33% of the course. Educational activities: flipped-classroom sessions, recorded lectures with study questions and Jupyter Notebooks for pedagogical support, peer-reviews of homework assignments.

1TE717 – Digital Technologies and Electronics (BSc, 10 ECTS), Spring 2018–present. Course responsible and lecturer, leading 100% of the course. Educational activities: interactive lectures with activating elements (e.g., Kahoot Quizzes), 3rd-party recorded lectures, student-led exercise tutorials, laboratory work, group project work. Supervision of laboratory and project work is partially delegated to Teaching Assistants, but coordinated by the course responsible.

1TE767 – Automatic Control for Electrical Engineers (BSc, 5 ECTS), Fall 2019–present. Course responsible and lecturer, leading 100% of the course. Educational activities: interactive lectures with activating elements (e.g., quizzes and open questions), student-led exercise tutorials, laboratory work. Supervision of laboratory work is delegated to Teaching Assistants, but coordinated by the course responsible.

1TE683 – Logic and Automatic Control (BSc, 5 ECTS), Spring 2018–2019. Course responsible and lecturer, leading 100% of the course. Educational activities: interactive lectures with activating elements (e.g., quizzes and open questions), student-led exercise tutorials, laboratory work. Supervision of laboratory work is delegated to Teaching Assistants, but coordinated by the course responsible.

Reading group on "Machine Learning" (PhD). Co-founder and organizer with Dr. Ayca Özcelikkale.

Reading group on "Network and Cyber-Physical Systems Security" (PhD). Co-organizer with Prof. Thiemo Voigt and Prof. Christian Rohner.

Assistant Professor (50% teaching), Faculty of Technology, Policy and Management, Delft University of Technology, The Netherlands.

SEN1631 – Fundamentals of Data Analytics (MSc, 5 ECTS), Spring 2017. Course creator, course responsible and lecturer, leading 100% of the course. Educational activities: classical lectures with minor activating elements (e.g., short questions), teacher-led exercise tutorials, project work. Supervision of project work is done by the course responsible.

TB341IB – I&C Risk and Control (BSc, 5 ECTS), Spring 2017. Co-Lecturer, leading 15% of the course. Educational activities: classical lectures with minor activating elements (e.g., short questions).

TB242IA – Intelligent Data Analysis (BSc, 5 ECTS), Fall 2015–Fall 2016. Course responsible and lecturer, leading 100% of the course. Educational activities: classical lectures with minor activating elements (e.g., short questions), teacher-led exercise tutorials, project work. Supervision of project work is done by the course responsible.

CS4035 – Cyber Data Analytics (MSc, 5 ECTS), Spring 2016. Course co-developer and co-lecturer, leading 50% of the course. Educational activities: classical lectures with minor activating elements (e.g., short questions), teacher-led exercise tutorials, homework assignents.

SPM4450 – Fundamentals of Data Analytics (MSc, 5 ECTS), Spring 2016. Co-lecturer, leading 25% of the course. Educational activities: classical lectures with minor activating elements (e.g., short questions).

Guest lecturer at KTH Royal Institute of Technology, Stockholm, Sweden.

– "Cyber-Physical Security of Networked Control Systems" (PhD, 3 ECTS), Fall 2016. Course co-developer and co-lecturer, leading 33% of the course.

Teaching Assistant, Department of Automatic Control, KTH Royal Institute of Technology, October 2010 to November 2013. Responsible for leading tutorial sessions and supervision of laboratory work.

– EL1000/EL1120 – Basic Control, Fall 2013
– EL111X – Bachelor Project, Spring 2013
– EL2520 – Control Theory and Practice, Spring 2012
– EL2520 – Control Theory and Practice, Spring 2011
– EL111X – Bachelor Project, Spring 2011
– EL1000/EL1120 – Basic Control, Fall 2010

Organizer of the reading group on "Secure and Reconfigurable Multiagent and Networked Control Systems", January to May 2011

Pedagogical Leadership

Teacher Representative in the Board of the Master's Programme in Computer and Information Engineering, Fall 2019–Spring 2021.

Supervision Experience

Postdocs

Javad Parsa, *Secure Federated Learning*, Uppsala University, 2024–present, (main supervisor).

Jingwei Dong, *Model-based Anomaly Detection*, Uppsala University, 2024–present, (main supervisor).

Alain Govaert, *Resilience and Security in Dynamic Networks*, Uppsala University, 2023–present, (main supervisor).

Ruslan Seifullaev, *Secure Networked Control*, Uppsala University, 2023–present, (main supervisor).

Daniel Arnström, *Security Certificates for Control Systems*, Uppsala University, 2023–present, (main supervisor).

Mohamed Abdalmoaty, *Privacy and Security in Control Systems*, Uppsala University, 2022-2023, (co-supervisor).

Arunava Naha, *Statistical Change Detection*, Uppsala University, 2019–2022 (co-supervisor).

Abbas Arghavani, *Covert wireless communications*, Uppsala University, 2020–2021 (co-supervisor).

Doctoral students

David Vävinggren, *Adversarial Statistical Learning*, Uppsala University, 2024–present (co-supervisor).

Xinyu Wei, *Adverse Interactions in Distributed Voltage Control*, Uppsala University, 2024–present (main supervisor).

Ville K. Mattsson, *Secure Control Systems*, Uppsala University, 2024–present (main supervisor).

Alessandro Varalda, *Closing the loop in Real-Time Cyber-Neural Systems*, Uppsala University, 2023–present (co-supervisor).

Lovisa Eriksson, *Safety and Security in Machine Learning*, Uppsala University, 2023–present (main supervisor).

Usama Zafar, *Secure Federated Machine Learning at Scale*, Uppsala University, 2023–present (co-supervisor).

Zhenlu Sun, *Data-driven vulnerability analysis*, Uppsala University, 2022–present (co-supervisor).

Sanja Karilanova , *Data Processing with Spiking Neural Networks for E-Skin Applications*, Uppsala University, 2021–present (co-supervisor).

Anh Tung Nguyen, *Secure Large-Scale Control Systems*, Uppsala University, 2021–present (main supervisor).

Fatih Emre Tosun, *Secure Control Systems in Medical Applications*, Uppsala University, 2019–2025 (main supervisor).

Sribalaji C. Anand, *Secure and Resilient Control Systems*, Uppsala University, 2019–2024 (main supervisor).

Saba Chockalingam, *Secure Our Safety: Building Cyber Security for Flood Management*, Faculty of Technology, Policy, and Management, TU Delft, 2015–2020 (daily co-supervisor with Dr. Wolter Pieters). Graduated in December 2020.

Kaikai Pan, *Cyber Security of Intelligent Power Grids: Vulnerability and Impact Assessment Frameworks*, Faculty of Electrical Engineering, Mathematics, and Computer Science, TU Delft, 2015–2017 (daily supervisor until Aug 2018, thereafter assistant supervisor).

Laura Fichtner, *Cybersecurity as a Contested Concept and its Consequences*, Faculty of Technology, Policy, and Management, TU Delft, 2015–2017 (daily co-supervisor).

Farzam Fanitabasi, *Distributed Data Analysis Using Fog Computing in Internet of Things*, Faculty of Technology, Policy, and Management, TU Delft, 2016-2017 (daily supervisor).

Mingxiao Ma, *Cyber-Secure Voltage Control for Smart Distribution Systems*, Faculty of Electrical Engineering, Mathematics, and Computer Science, TU Delft, 2016-2017, (daily supervisor).

MSc students
In total, I have successfully supervised and reviewed 20+ MSc students, from which resulted three conference papers.

List of Acquired Pedagogical Grants

Cybersecurity: an academic perspective into recent application domains, open online course, Faculty of Science and Technology, Uppsala University, 2020 (co-applicant).

Reinforcement Learning, open online course, Faculty of Science and Technology, Uppsala University, 2020 (co-applicant).

Reinforcement Learning, PhD course. Faculty-common courses at postgraduate level, Faculty of Science and Technology, Uppsala University, 2020 (co-applicant). SEK 100 000. The grant is awarded for the development and delivery of postgraduate courses.

FACE-IT: Fostering Awareness on program Contents in higher Education using IT tools. Innovation project, Erasmus+, EU, 2019–2021 (co-applicant). EUR 166 500.

Knowledge Ladders. Project grants for pedagogic development, PUMA, Uppsala University, 2019–2020 (co-applicant). SEK 100 000.

Changes in Ambition, Motivation and Performance in University Students. Didactic projects, Faculty of Science and Technology, Uppsala University, 2019–2021, (co-applicant). SEK 1 200 000.

Pedagogical Publications

A. M. H. Teixeira, K. Staffas, S. Knorn, A. Guerra, D. Varagnolo. "Computer-aided curriculum analysis and design:existing challenges and open research directions". IEEE/ASEE Frontiers in Engineering Education, Uppsala, Sweden, 2020.

K. Staffas, S. Knorn, A. Guerra, D. Varagnolo, and **A. M. H. Teixeira**. "Using different taxonomies to formulate learning outcomes to innovate engineering curriculum towards PBL: perspectives from engineering educators". 8th Int. Research Symp. on PBL, Aalborg, Denmark, 2020.

E. Fjällström, K. Atta, S. Knorn, F. Sandin, G. Sas, K. Staffas, **A. M. H. Teixeira**, and D. Varagnolo. "Creating a quantitative basis for course and program development in higher education - a report from field tests". In Proc. 7th Development Conf. for Swedish Engineering Education, Luleå, Sweden, 2019.