

EMMA TEGLING

emma.tegling@control.lth.se

www.tegling.se

[Google Scholar profile](#)

Department of Automatic Control
Lund University
Box 118
SE 221 00 Lund
SWEDEN

Née Sjödin

Academic Appointments

Lund University, Faculty of Engineering, Lund, Sweden
Department of Automatic Control

Senior Lecturer

Wallenberg AI, Autonomous Systems and Software Program (WASP) professorship

Jan 2021 –

on parental leave Feb - Oct 2021

Massachusetts Institute of Technology, Cambridge, MA
Institute for Data, Systems, and Society (IDSS)

Postdoctoral Research Fellow

Swedish Research Council International Postdoc Grant
Host: Prof. Ali Jadbabaie, Co-host: Prof. Munther Dahleh

Aug 2019 – Dec 2020

Education

Ph.D. in Electrical Engineering

Sep 2014 – Jan 2019

KTH Royal Institute of Technology, Stockholm, Sweden
Division of Decision and Control Systems

Thesis title: *Fundamental limitations of distributed feedback control in large-scale networks*

Advisor: Prof. Henrik Sandberg, Co-advisor: Prof. Karl H. Johansson

M.Sc. in Engineering Physics

Aug 2008* – Jun 2013

KTH Royal Institute of Technology, Stockholm, Sweden

B.Sc. in Engineering Physics, 2011

*2008-2009: exchange studies at Berlin Institute of Technology, Berlin, Germany

Industry experience

Ericsson, Stockholm, Sweden

Aug 2013 – Sep 2014

Business analyst, Ericsson Strategic Programs Practice

Performed analyses for long-term corporate strategy, particularly for business verticals, including smart grid and transportation. Supported implementation of sales incentives for global sales force.

Scandinavian Risk Solutions, Stockholm, Sweden

Aug 2009 – Feb 2013

Consultant, part-time

Performed analyses in information security and business intelligence projects.

ABB, Västerås, Sweden

Jan - Aug 2012

Sustainable Talent Program

Participated in competitive talent program, which included leadership training.

Intern, FACTS (Flexible AC Transmission Systems)

Developed dimensioning tool for grid-scale battery-based energy storage system.

Extended international research visits

University of Newcastle, Newcastle, NSW, Australia

2019

Hosts: Richard H. Middleton, Maria Seron. Sponsored by the University of Newcastle. 4 weeks.

UC Santa Barbara, Santa Barbara, CA

2015, 2017

Advisor: Bassam Bamieh. Sponsored by KTH, ACCESS Linnaeus Centre. 4 months.

Johns Hopkins University, Baltimore, MD

2013

Advisor: Dennice F. Gayme. Sponsored by the Johns Hopkins University. 6 months.

California Institute of Technology, Pasadena, CA

2011

Advisors: Steven Low, Dennice F. Gayme. Sponsored by Caltech SURF program. 10 weeks.

Teaching and supervision

Doctoral student supervision

Taouba Jouini: (as co-supervisor, main supervisor: Anders Rantzer). Aug 2020 - ongoing
Synchronization and inverse optimality in nonlinear control and power systems (exp. grad Jan 2022).

Jonas Hansson: (as main supervisor, co-supervisor: Anders Rantzer). Aug 2020 - ongoing
Robustness of large-scale non-normal network systems.

David Ohlin: (as main supervisor, co-supervisor: Anders Rantzer). Aug 2021 - ongoing.
Project TBD.

Fethi Bencherki: (as co-supervisor, main supervisor: Anders Rantzer). Aug 2021 - ongoing.
Project TBD.

Teaching in first and second cycle (as teaching assistant)

Hacking the Future: The Fall of COVID (second cycle, project course), MIT, Fall 2020.

Automatic Control, General Course (first cycle), KTH, 4 rounds 2015 - 2018.

Automatic Control, General Course (second cycle, project course) KTH, 2 rounds 2015- 2016.

Grants, awards and fellowships

Research grants

WASP (Wallenberg AI Autonomous Systems and Software Program), NEST (Novelty, Excellence, Synergy and Team) grant, as co-PI, project total 20 MSEK, 2022 - 2026.

ELLIIT (Excellence Center at Linköping – Lund in Information Technology), project grant, 5 MSEK (as co-PI, project total 10 MSEK), 2021 - 2025.

Swedish Research Council, International Postdoc Grant, 3 MSEK. 2019 - 2022.

Fellowships and awards

Foundation Blanceflor Boncompagni Ludovisi, née Bildt postdoc stipend, 80 kSEK, 2019, 2020

Sweden-America Foundation postdoctoral fellowship, 225 kSEK, 2019

Cambridge Philosophical Society Isaac Newton Bursary, Travel and accommodation, 2019

Xylem award for best M.Sc. Thesis in EE, MechE, or Ind.E, 40 kSEK, KTH, 2013

Travel awards: Wallenberg foundation 2017, Lindstrand foundation 2017

Professional service

Society leadership

Secretary, European Control Association (EUCA). 2022 - ongoing

Chair of Chapter Activities, IEEE Control Systems Society (CSS), Member activities board. 2022 - ongoing

Member of Technical Program Council

IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), 2022

25th International Symposium on Mathematical Theory of Networks and Systems (MTNS), 2022

IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm) 2020

Technical reviewer

Certificate of outstanding service as a Reviewer, IEEE Control Systems Letters, 2018.

Journals: IEEE Transactions on Automatic Control, IEEE Transactions on Control of Network Systems, IEEE Control Systems Letters, IEEE Transactions on Power Systems, IEEE Transactions on Smart Grids, Automatica, Systems & Control Letters, Chaos, IET Control Theory and Applications.

Conferences: IEEE Conference on Decision and Control, American Control Conference, European Control Conference, IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), IEEE Conference on Control Technology and Applications, IFAC Symposium on Nonlinear Control Systems (NOLCOS).

Event organization

Chair, Paths from research to impact: A year of collaborative research on COVID-19, MIT, April 2021
(Upcoming) Publicity Chair, European Control Conference, Stockholm 2024

Other leadership and organization

Founder and organizer, KTH EE Female Ph.D. Student Network (2015 – 2017)

Talks and seminars

Invited research seminars

2021

Hybrid Control Systems (HyConSys) Group seminar series, LMU Munich, Germany

2019

Dept. of Electrical Engineering, University of Wisconsin, Madison, WI.

School of Electrical Engineering and Computing, Newcastle, NSW, Australia.

Gipsa-lab seminar series, CNRS Grenoble, France.

Laboratory for Computational Sensing and Robotics (LCSR) seminar, Johns Hopkins University, MD.

Laboratory for Information and Decision Systems (LIDS), MIT, MA.

2018

Dept. of Electrical and Electronic Engineering, Hong Kong University, Hong Kong.

Dept. of Automatic Control, Lund University, Sweden.

2017

Dept. of Electrical and Electronic Engineering, University of Melbourne, VIC, Australia.

CCDC (Center for Control, Dynamical Systems and Computation) seminar, University of California Santa Barbara, CA.

Center for Systems and Control seminar, University of Southern California, CA.

2016

Dept. of Electrical and Computer Engineering, Tufts University, MA.

Invited conference presentations

2021

CoNDyNet2 Conference: *Complexity in Power Grids – From Science to Practice*, Potsdam Institute for Climate Impact Research, Potsdam, Germany.

2020

Special session on COVID 19, *IEEE Conf. on Decision and Control*, Korea/Online,

Satellite workshop on Complexity in Energy Systems, *Conference on Complex Systems (CCS)*, Online.

Publications

[Link to Google Scholar profile](#)