Curriculum Vitae of Karl Henrik Johansson

Personal Data

Name	Karl Henrik Johansson
Work address	Dept of Automatic Control
	School of Electrical Engineering and Computer Science
	KTH Royal Institute of Technology
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Home address	Törnrosvägen 72
	SE–181 61 Lidingö, Sweden
Born	Växjö, Sweden, June 14, 1967
Citizenship	Swedish
Civil status	Married to Liselott Johansson; Sons, Kasper and Felix, born 1999 and 2002
Languages	Swedish, native; English, fluent; German, good

Degrees

Docent in Automatic Control, Royal Institute of Technology, Sweden, May 2002.

Doctor of Philosophy in Engineering (Automatic Control), Lund University, Sweden, November 1997. Advisors: Prof.'s Karl Johan Åström and Anders Rantzer.

Master of Science in Electrical Engineering, Lund University, January 1992. GPA 4.7 (5.0).

Academic Appointments

Director, Digital Futures, from 2020.

Distinguished Professor (*rådsprofessor*), Swedish Research Council, 2018–2027.

Distinguished Professor of Overseas Academician, Zhejiang University, China, from 2018.

Visiting Researcher, Department of Electrical Engineering and Computer Sciences, University of California at Berkeley, CA, August 2016–August 2017. Invited by Profs. Shankar Sastry and Claire Tomlin.

International Chair Adjunct Professor, Norwegian University of Science and Technology, Norway, 2016–2019.

Visiting Fellow, Institute of Advanced Study, Hong Kong University of Science and Technology, Hong Kong, May 2015–April 2016.

Qiushi Dinstinguished Adjunct Professor, Zhejiang University, China, February 2015–February 2018.

Visiting Professor, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, 2014–2017.

Director, Strategic Research Area ICT The Next Generation (TNG), 2013–2019 (Deputy Director 2010–2012).

Wallenberg Scholar, Knut and Alice Wallenberg Foundation, 2010–2027.

Director, ACCESS Linnaeus Centre, Royal Institute of Technology, 2009–2016 (Vice Director 2007–2008).

Chaired Professor of Networked Control, School of Electrical Engineering, Royal Institute of Technology, from February 2007.

Visiting Associate, Control and Dynamical Systems, California Institute of Technology, Pasadena, CA, August 2006–July 2007. Invited by Prof. Richard Murray.

Senior Researcher (*rådsforskare*), Swedish Research Council, 2006–2011.

Associate Professor (*universitetslektor*), Department of Signals, Sensors & Systems, Royal Institute of Technology, December 2002–January 2007.

Assistant Professor (*forskarassistent* and *vik. universitetslektor*), Department of Signals, Sensors & Systems, Royal Institute of Technology, January 1999–November 2002.

Visiting Research Fellow, Department of Electrical Engineering and Computer Sciences, University of California at Berkeley, CA, September 1998–August 2000. Invited by Prof. Shankar Sastry.

Assistant Professor (*vik. universitetslektor*), Department of Automatic Control, Lund University, December 1997–August 1998.

Research Assistant (*doktorand*), Department of Automatic Control, Lund University, June 1992–November 1997.

Teaching Assistant, Department of Mathematics, Lund University, September 1990–May 1992.

Teaching Assistant, Department of Physics, Lund University, September 1989–May 1990.

Other Major Appointments

President of the European Control Association (EUCA), 2022–2023

Member of the Editorial Board of Communications in Transportation Research, from 2021

Member of the Board of the Mistra Sustainable Accessibility and Mobility Services (SAMS) Research Program, from 2021

Member of the Review Panel of the Swiss National Science Foundation National Centres of Excellence Automation, from 2021

Member of the Advisory Board of Department of Automation, Tsinghua University, from 2020

Member of the International Federation of Automatic Control (IFAC) Council, 2020–2023

Member of the International Scientific Advisory Board of Eindhoven University of Technology, 2020–2024

Vice President of EUCA, 2020–2021

Chair of the IEEE Control Systems Society Fellow Nominations Committee, from 2019

Member of the Steering Committee of the IFAC Cyber-Physical Human Systems Conference, from 2019

Member of the Scientific Council for Natural and Engineering Sciences, Swedish Research Council, 2019–2021

Associate Editor of the ACM Transactions on the Internet of Things, from 2018

Chair of the IFAC Awards Committee, 2017–2020

Member of the IEEE Control Systems Magazine Outstanding Paper Award Committee, 2017

Member of the Advisory Board of LEAD, Graz University of Technology, Austria, from 2017

Chair of the External Advisory Committee for the Department of Information and Communication Engineering, DGIST, Korea, from 2016

Member of the Research Strategy Group of WASP (Wallenberg Autonomous Systems Program), Knut and Alice Wallenberg Foundation, from 2016

Member of the IEEE Transactions on Control of Network Systems Outstanding Paper Award Committee, 2016, 2018

Member of the European Research Council Consolidator Grant Panel on Systems and Communication Engineering, 2016, 2018

Elected member of the IEEE Control Systems Society Board of Governors, 2016–2018

Member of the EUCA Council, 2015–

Member of the Steering Board for the KTH Center for Resilient Critical Infrastructures (CERCES), from 2015

Member of the Scientific Advisory Board for the Delta-NTU Joint Laboratory, Singapore, from 2015

Member of the Steering Committee for the International Conference on Cyber-Physical Systems (part of the annual CPSWeek), from 2015

Senior Editor of the IEEE Transactions on Control of Network Systems, 2015–2019.

Member of the Board of Drive Sweden, the VINNOVA Strategic Innovation Program on Automated Transport Systems, 2015–2018

Senior Advisor to the VINNOVA Strategic Innovation Program INFRASweden2030, 2015–2016

Member of the Horisont 2020 LEIT-ICT Reference Group, from 2014

Chair of the IEEE Simon Ramo Medal Committee, 2017-2018. Past Chair, 2019. Member, 2013–2016

Associate Editor of the IEEE Transactions on Control of Network Systems, 2013–2015.

Associate Editor of the European Journal of Control, 2013-2020.

Chair of the Swedish Research Council Panel NT-14 Signals and Systems, 2013–2015

Member of the Board of the Tsinghua-KTH C-Campus, from 2013.

Member of the Swedish Research Council International Postdoc Panel, 2013–2015.

Member of the Advisory Board for the Polaris Center For Future Cities, University of Porto, Portugal, 2013–2015.

Member of the Steering Committee for the IEEE Conference on Cyber-Physical Systems, Networks, and Applications, from 2012.

Member of the Editorial Board of the journal Foundations and Trends in Systems and Control, from 2012.

Member of the Supervisory Board for the Strategic Cooperation between Ericsson and KTH, from 2012.

Member of the Editorial Board of the International Journal of Robust and Nonlinear Control, 2011–2013.

Member of the International Advisory Board for the DEWS Center of Excellence for Research, L'Aquila, Italy, 2011–2019.

Member of the Advisory Board for the Institute for Systems and Robotics, Porto, Portugal, from 2009.

Member of the IEEE Control Systems Society Board of Governors, 2009.

Member of the Board of the Innovative Centre for Embedded Systems, Royal Institute of Technology, 2008–2014.

Chair of the International Federation of Automatic Control (IFAC) Technical Committee on Networked Systems, 2008–2011. (Vice-chair, 2005–2008.)

Associate Editor of the IEEE Transactions on Automatic Control, 2008–2010.

Member of the Swedish Research Council Panel NT-14 Signals and Systems, 2008.

Member of the Editorial Board of the IET Control Theory and Applications (former IEE Control Theory and Applications), 2007–2012.

Head of the Networked Control Systems Chapter and Member of the Scientific Committee of the European Embedded Control Institute, SUPELEC, France, 2007–2010.

Member of the Steering Committee and of the Board of the International Curriculum Option of Doctoral Studies in Hybrid Control for Complex, Distributed and Heterogeneous Embedded Systems, from 2006.

Co-chair of European Robotics Research Network (EURON) Networked Automation Interest Group, 2005–2007.

Member of the Editorial Board of the International Journal of Automation and Control, from 2005.

Associate Editor for the IFAC journal Automatica, 2003–2006.

Honors and Awards

Supervisor for Best Student Paper Award at IFAC Workshop on Cyber-Physical & Human Systems, Beijing, China, 2020.

Supervisor for Best Presentation Award (Third Prize) at IEEE International Conference on Intelligent Transportation Systems, Rhodes, Greece, 2020.

Supervisor for Best Student Conference Paper Award, IEEE Sweden Joint VT-COM-IT Chapter, 2019.

Distinguished Professor Grant by the Swedish Research Council. Ten-year grant aimed *to create conditions for the most distinguished researchers to conduct long-term, innovative research with great potential to achieve scientific breakthroughs,* 2017. First such Distinguished Professor at KTH.

Fellow of the Royal Swedish Academy of Engineering Sciences, Division II Electrical Engineering, from 2017.

IEEE Distinguished Lecturer awarded by the IEEE Control Systems Society, 2017–2019.

Outstanding Paper Award Winner of the International Conference on Control, Automation, and Systems, Jeju, Korea, 2017

IEEE Transactions on Automation Science and Engineering Best Application Paper Award, 2015.

Guan Zhao-Zhi Award to supervised postdoc Junfeng Wu for joint paper at the Chinese Control Conference, Hangzhou, China, 2015.

Best Theory Paper Award of the World Congress on Intelligent Control and Automation, Shenyang, China, 2014.

Supervisor for Best Student Conference Paper Award, IEEE Sweden Joint VT-COM-IT Chapter, 2014.

Fellow of the IEEE for contributions to the applications of hybrid and networked systems, 2013.

Co-author of paper listed on "Notable Computing Books and Articles of 2012", Association for Computing Machinery (ACM), 2012

Wallenberg Scholar, awarded by Knut and Alice Wallenberg Foundation (KAW), 2009. (Among first ten Wallenberg Scholars awarded in all scientific research domains with the purpose of supporting and stimulating some of the most successful researchers at Swedish universities.)

General Chairs' Recognition Award for Interactive Papers, IEEE Conference on Decision and Control, Shanghai, China, 2009.

Best Paper Award, IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS), Macau, China, 2009.

Supervisor for Best Student Paper Finalist, IEEE International Conference on Networking, Sensing and Control, London, UK, 2007.

Senior Researcher Position at the Swedish Research Council, 2005.

Future Research Leader awarded by the Swedish Foundation for Strategic Research, 2004. (17 grants awarded among over 400 applicants in all areas of engineering sciences, life sciences and medicine.)

Post-doctoral research award from the Swedish Foundation for International Cooperation in Research and Higher Education, 1998 and 1999.

Telefonaktiebolaget LM Ericsson's Foundation for Electrotechnical Research Young Researcher Award, Stockholm, Sweden, 1998 and 1999.

Young Author Prize from the International Federation of Automatic Control (IFAC) 1996. Awarded every third year at the IFAC World Congress to a researcher under the age of 35.

Scania AB Young Researcher Award, Södertälje, Sweden, 1996.

Peccei Award from International Institute of System Analysis, Laxenburg, Austria, 1993.

Research Areas

Networked control and autonomy; Hybrid and embedded control; Cyber-physical systems and security; Applications in transport, energy and autonomous systems

Research Projects and Leadership

Distinguished Professor Grant, Swedish Research Council, 2018-2027. PI.

ENSEMBLE, EU Horizon 2020, 2018-2020. Co-PI.

Control of network systems with signed dynamical interconnections, Australian Research Council, 2018-2022. Co-PI.

Platoon4Sweden, VINNOVA, 2018-2020. Co-PI.

Control under constrained information, Swedish Research Council, 2017-2020. PI.

SoPhy (Societal-Scale Cyber-Physical Transport Systems), Smart Systems Program, Swedish Foundation for Strategic Research, 2016-2021. PI.

Engineering the Interconnected Society: Information, Control, Interaction, Knut and Alice Wallenberg Foundation, 2016-2020. PI.

Advancing System Integration in Process Industry: Sensor Data Gathering, Wireless Networking, Supervisory Control, VINNOVA, 2015-2018. Co-PI.

WASP (Wallenberg AI Autonomous Systems and Software Program), Knut and Alice Wallenberg Foundation, 2015-2026. Co-PI.

PlatoonSim: Coordination heavy-duty vehicle platoons in traffic, VINNOVA, 2015-2017. Co-PI.

AEROWORKS, EU framework programme Horizon 2020, 2015-2017. Co-PI.

Collaborative manipulation with unmanned aerial vehicles, Swedish Foundation for Strategic Research, 2015-2017. PI.

Closing the loop over trusted networked systems, Swedish Research Council, Framework Grant for Strategic Research in Information and Communication Technology, 2015-2018. Co-PI.

SPARKS (Smart grid protection against cyber attacks), European Commission, FP7 Project, 2014-2017. Co-PI.

COMPANION (Cooperative mobility solution for supervised platooning), European Commission, FP7 Project, 2013-2016. Co-PI.

Network fundamentals: dynamics, optimization, control, Swedish Research Council, Framework Grant for Strategic Research in Information and Communication Technology, 2013–2016. PI.

Distributed cooperative estimation over complex spatial-temporal networks, National Natural Science Foundation, China, 2012–2016. Co-PI.

Predictive health analysis (*Sirona Hlsoanalys: utveckling av en dynamisk prediktionsmodell*), VINNOVA Forska&Vx, 2012–2013. Co-PI.

Distributed management of sensor and actor network systems for intelligent space monitoring, Sweden-Korea Research Cooperation Programme, STINT, 2011–2013. PI.

iQFleet: intelligent control of vehicles and platoons, VINNOVA, 2011–2014. Co-PI.

Stockholm Cooperative Driving (SCOOP), Team in the Grand Cooperative Driving Challenge, Vice-Chair of the Steering Board, 2010–2011.

ICT Labs Knowledge and Innovation Community, European Institute of Innovation and Technology, 2010–. Member of Management Group for the Swedish node. Head of Smart Energy Systems for the Swedish node.

The Next Generation (TNG), Strategic Research Area IT & Mobile Communication, 2010–. Deputy Director. Member of Management Group.

Energy Efficient and Flexible Wireless Communication for the Process Industry, Swedish Governmental Agency for Innovation Systems (VINNOVA), 2010–2012. PI. Leader of KTH node.

Wallenberg Scholar, Knut and Alice Wallenberg Foundation (KAW), 2010–2015. Extension granted, 2016–2021. PI.

VIKING (Vital Infrastructure, Networks, Information and Control Systems Management), STREP, European Commission, IST program, FP7, 2008-2011. Co-PI.

FeedNetBack (Feedback design for wireless networked systems), STREP, European Commission, IST program, FP7, 2008-2011. PI.

Networked Embedded Control Systems, VINNOVA, 2008-2010. PI.

Wireless control, Swedish Research Council, 2008–2010. PI.

Head of the Networked Control Systems Chapter and Member of the Scientific Committee of the European Embedded Control Institute, SUPELEC, France, 2007–.

Founding member of KTH ACCESS Linnaeus Centre, a research initiative on autonomic complex communication networks, signals and systems supported by Swedish Research Council, 2006–2016. Director from 2009, Vice Director 2007–2008.

Cooperative guard and search: flexible autonomous UGV systems (*Bevakning och spaning i samverkan: flexibla autonoma UGV-system* , Swedish Governmental Agency for Innovation Systems (VINNOVA) and Swedish Defence Materiel Administration (FMV), 2007–2009. PI. Leader of KTH node.

SOCRADES (Service-oriented cross-layer infrastructure for distributed smart embedded devices), Integrated Project, European Commission, Information Society Technologies, Frame Programme 6, 2006–2009. PI. Leader of KTH node.

Senior Researcher Position in Network Interconnected Sensing and Control at the Swedish Research Council, 2006–2011. PI.

NEC (Network-embedded control), Individual Grant for the Advancement of Research Leaders, Swedish Foundation for Strategic Research, 2005–2010. PI.

Network-aware control: flexible and robust control for uncertain distributed systems with complex dynamics, Swedish Research Council, 2005–2007. PI.

Vehicle control using preview information, Swedish Programme Council for Vehicle Research (Intelligent Vehicle Safety Systems), and SCANIA, 2005–2009. Co-PI. Leader of KTH node.

RUNES (Reconfigurable ubiquitous networked embedded systems), Integrated Project, European Commission, Information Society Technologies, Frame Programme 6, 2004–2008. PI. Member of Executive Committee. Workpackage Leader for Advanced Control. Leader of KTH node.

HYCON (Hybrid control: taming heterogeneity and complexity of networked embeddedsystems), Network of Excellence, European Commission, Information Society Technologies, Frame Programme 6, 2004–2008. PI. Member of Executive Committee. Workpackage Co-Leader for Networked Control. Leader of KTH node.

ARTIST2 (Embedded Systems Design), Network of Excellence, European Commission, Information Society Technologies, Frame Programme 6, 2004–2008. Member of KTH node.

EURO-NGI (Design and engineering of the next generation Internet), Network of Excellence, European Commission, Information Society Technologies, Frame Programme 6, 2004–2007. Member of KTH node.

RECSYS (Real-time embedded control of mobile systems with distributed sensing), European Commission, Information Society Technologies, Frame Programme 5, 2002–2005. Co-PI.

Electric energy management in heavy vehicles, Swedish Programme Council for Vehicle Research (*Programrdet fr fordonsforskning*) and SCANIA, 2003–2005. Co-PI.

Centre for Autonomous Systems, Swedish Strategic Research Foundation, 2002–2005. Member of Executive Committee.

Embedded control with distributed sensing and computing, Swedish Research Council, 2002–2004, PI.

Integrated coding and control, Swedish Research Council, 2003–2005, co-PI.

SRI (Towards a self-regulating Internet), Swedish Research Council and Swedish Centre for Internet, 2002–2004, 2005–2007, co-PI.

Travel Grants

Young Researchers' Travel Grant from the Royal Physiographic Society in Lund, 1993, 1995, 1996, and 1997.

Travel grants from Magnusson's Foundation, 1996, and Letterstedt's Foundation, 1996, both from the Royal Swedish Academy of Sciences.

Travel grant from Blanceflor Foundation, 1999.

Travel grant from US National Science Foundation, 2000.

Leadership Education

Supervisor Course (*Docentkurs*) organized by KTH Learning Lab, 2002

Training for Future Research Leaders arranged within the programme Individual Grant for the Advancement of Research Leaders organized by the Swedish Foundation for Strategic Research, 2005–2008

Future Academic Leaders (*Morgondagens Akademiska Ledare*), course organized by the universities in Stockholm and Uppsala, 2008–2009

Research Visits[1]

Young Scientists' Summer Program at the International Institute of Applied System Analysis (IIASA) in Laxenburg, Austria, June–August 1993. Advisor: Dr. Yuri Kaniovski.

Peccei scholar at IIASA, June–August 1994. Advisor: Dr. Yuri Kaniovski.

Centre for Process Systems Engineering, Imperial College, London, U.K., January–February 1997. Invited by Prof. Greyham Bryant.

Department of Engineering Mathematics, University of Bristol, U.K., December 1998. Invited by Dr. Mario di Bernardo.

Department of Computer and Systems Engineering, University of Naples "Federico II," Italy, April 2001. Invited by Prof. Francesco Garofalo.

ReTiS Lab, Scuola Superiore S. Anna, Pisa, Italy, June 2003. Invited by Dr. Luigi Palopoli.

Department of Electrical Engineering and Computer Science, UC Berkeley, CA, September 2003. Invited by Prof. Shankar Sastry.

Division of Control and Dynamical Systems, California Institute of Technology, Pasadena, CA, August 2006–July 2007. Invited by Prof. Richard Murray.

Department of Electrical Engineering and Computer Science, UC Berkeley, CA, October 2010. Invited by Prof. Shankar Sastry.

School of Electrical Engineering and Computer Science, University of Newcastle, Australia, December 2012. Invited by Dr. Daniel Quevedo.

School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, September 2014. Invited by Prof. Lihua Xie.

School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, March 2015. Invited by Prof. Lihua Xie.

Institute for Advanced Study and Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology, May–August 2015. Invited by Profs. Li Qiu and Ling Shi.

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[1]More than one week.

Keynote Speaker, Plenary Speaker, or Invited Lecturer

Dayawansa Memorial Lectures, Department of Mathematics and Statistics, Texas Tech University, USA, 2022

CAA International Conference on Vehicular Control and Intelligence (CVCI), Tianjin, China, 2021.

5th IEEE International Conference on Control and Fault-Tolerant Systems, Saint-Raphal, France, 2021

Signal Processing Symposium, Lodz, Poland, 2021

25th International Conference on Methods and Models in Automation and Robotics, Miedzyzdroje, Poland, 2021

World Artificial Intelligence Conference, Shanghai, China, 2021

Mediterranean Conference on Control and Automation Workshop on Modeling and Control Tools for Sustainable and Connected Mobility in Smart Cities, Bari, Italy, 2021

IEEE International Conference on Communications (ICC) Workshop on Time-Sensitive and Deterministic Networking, Montreal, Canada, 2021

Semiautonomous Seminar Series, EECS, UC Berkeley, 2021

C3.ai DTI and MIT Workhop on Data-Driven Decision-Making in Socio-Technical Systems, 2021

23rd Brazilian Conference on Automation (Congresso Brasileiro de Automtica), Brazil, 2020

2nd International Conference on Industrial Artificial Intelligence, Shenyang, Liaoning, China, 2020

Mathematical Challenges and Opportunities for Autonomous Vehicles, Institute for Pure and Applied Mathematics (IPAM), UCLA, USA, 2020

Cyber-Physical Systems Symposium, Indian Institute of Science, Bangalore, India, 2020

14th International Conference on Automatic Control and Soft Computing, Braganca, Portugal, 2020

54th *Regelungstechnisches Kolloquium*, Boppard, Germany, 2020

Max Planck Institute for Intelligent Systems, Stuttgart, Germany, 2020

IEEE CSS Distinguished Lecture, Lodz, Poland, 2019

oCPS Fall School on Multidisciplinary CPS Design, Eindhoven, the Netherlands, 2019

Department of Precision Instrument, Tsinghua University, Beijing, 2019

Conference on Intelligent Unmanned Swarm System Control Theory and Applications, Beijing, China, 2019

Wroclaw University of Science and Technology, Wroclaw, Poland, 2019

Signal Processing Symposium, Krakow, Poland, 2019

Sminaire d'Automatique du Plateau de Saclay, CentraleSuplec, Paris, France, 2019

Workshop on Connected and Automated Vehicles for Energy Efficiency and Environmental Impact, IFPEN, Paris, France, 2019

Workshop on Resilient Control of Infrastructure Networks, Politecnico di Torino, Italy, 2019

IEEE Conference on Control Technology and Applications, Hong Kong, 2019

IEEE International Conference on Control and Automation, Edinburgh, Scotland, 2019

Numerical Software Verification Workshop (co-located with International Conference on Computer-Aided Verification), New York City, NY, USA, 2019

IFAC Workshop on Control of Transportation Systems, Haifa, Israel, 2019

Forum on Robotics & Control Engineering, Online Seminar, University of South Florida, 2019

IAVSD Workshop on Dynamics of Road Vehicles, Ann Arbor, Michigan, USA, 2019

C2SMART Center, NYU, NY, USA, 2019

ETH Distinguished Seminar in Robotics, Systems and Control, Zurich, Switzerland, 2019

Institute for Pure and Applied Mathematics (IPAM) Workshop on Autonomous Vehicles, UCLA, USA, 2019

International Conference on the Internet of Things, Santa Barbara, CA, 2018

Brazilian Conference on Automatic Control, Joao Pessoa, Paraiba, Brazil, 2018

IFAC Symposium on Robust Control Design, Florianopolis, Brazil, 2018

Centre for System Intelligence and Efficiency EXQUISITUS Seminar, Nanyang Technological University, Singapore, 2018

Groningen Engineering and Technology Institute, University of Groningen, the Netherlands, 2018

ACM International Symposium on Mobile Ad Hoc Networking and Computing (Mobihoc), Los Angeles, USA, 2018

Harry Nicholson Distinguished Lecture in Control Engineering, University of Sheffield, 2018

Department of Electrical and Electronic Engineering, The University of Hong Kong, 2018

IAS Distinguished Lecture, Institute for Advanced Study, City University of Hong Kong, 2018

GIPSA-Lab, University Grenoble Alpes, France, 2018

Dagstuhl Seminar on The Logical Execution Time Paradigm: New Perspectives for Multicore Systems, Schloss Dagstuhl, Germany, 2018

IEEE CSS Distinguished Lecture, University of North Texas, Denton, USA, 2017

IEEE CSS Distinguished Lecture, University of Texas, Arlington, USA, 2017

IEEE CSS Distinguished Lecture, University of Texas, Dallas, USA, 2017

Colloquium of the Field of Expertise Information, Communication and Computing, TU Graz, Austria, 2017

Symposium on Dependable IoT in Adverse Environments, Graz, Austria, 2017

Silicon Valley Automotive Open Source, San Jose, USA, 2017

Chinese Control and Decision Conference, Chongqing, China, 2017

Pierce Laboratory Seminar Series, MIT, USA, 2017

Control Seminar Series, University of Michigan, Ann Arbor, 2017

Center for Control, Dynamical-Systems, and Computation, UC Santa Barbara, 2017

Decision and Control Lecture Series, Coordinated Science Laboratory, UIUC, 2017

Center for Cyber-Physical Systems and Internet of Things and Ming Hsieh Institute for Electrical Engineering Joint Seminar Series on Cyber-Physical Systems, University of Southern California, 2017

Hyundai Motor Group Research and Development Center, Korea, 2017

Institute of Transportation Studies Seminar, UC Berkeley, 2017

DREAMS Seminar, UC Berkeley, 2016

International Symposium on Networked Cyber-physical Systems, Munich, Germany, 2016

IEEE International Conference on Autonomic Computing, Würzburg, Germany, 2016

European Control Conference, Ålborg, Denmark, 2016

Reglermöte (Swedish Control Conference), Gothenburg, Sweden, 2016

Department of Engineering Cybernetics, Norwegian University of Science and Technology, Trondheim, 2016

International Conference on Control, Automation and Systems, Busan, Korea, 2015

NATO Advanced Study Institute on Energy Security, Antalya, Turkey, 2015

KAUST Conference on Human-Machine Networks and Intelligent Infrastructure, Saudi Arabia, 2015

International Summer School on Smart Cars, Graz, Austria, 2015

Department of Electronic Engineering, City University of Hong Kong, 2015

International Congress on Industrial Mathematics, Minisymposium on Cooperative Control and Multi-agent Systems, Beijing, China, 2015

Shandong University, China, 2015

Distinguished Lecture, Institute of Advanced Studies, Hong Kong University of Science and Technology, 2015

Department of Electrical and Electronic Engineering, The University of Hong Kong, 2015

Short course "Topics on cyber-physical control systems, " Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology, 2015

IEEE International Conference on Event-based Control, Communication, and Signal Processing, Krakow, Poland, 2015

EXQUISITUS Centre for E-City Seminar, Nanyang Technological University, Singapore, 2015

DGIST Global Innovation Festival, Daegu, Korea, 2014

IEEE Multi-Conference on Systems and Control (MSC), Antibes, France, 2014

33rd Chinese Control Conference, Nanjing, China, 2014

27th International Conference on Architecture of Computing Systems (ARCS), Luebeck, Germany, 2014

Department of Electrical, Electronic and Computer Engineering, Technical University Munich, Germany, 2014

Distinguished Speaker Series, Institute for Systems Research, University of Maryland, College Park, 2013

Nano-Tera/Artist Summer School on Embedded Systems, Aix-les-Bains, France, 2013

International Workshop on Smart City, Hangzhou, China, 2013

Workshop on Cooperative Estimation and Control over Networks, Chinese Academy of Sciences, Beijing, China, 2013

University of Padova Summer School of Information Engineering, Bressanone, Italy, 2013

Halmstad Colloquium, Halmstad, Sweden, 2013

Invited lecturer at Tutorial Session on "An Introduction to Event-Triggered and Self-Triggered Control" at IEEE CDC, Maui, HI, 2012

Invited Lecture at Workshop on Robust and Stochastic Control Methods for Sustainable Engineering at IEEE CDC, Maui, HI, 2012

Centre for Complex Dynamic Systems and Control, University of Newcastle, Australia, 2012

Workshop on Internet of Things, Nanyang Technological University, Singapore, 2012

EXQUISITUS Centre for E-City Seminar, Nanyang Technological University, IEEE Singapore Control Systems Chapter, Singapore, 2012

Workshop on Event-Based Control and Optimization, Institute for Advanced Study, Technische Universitt Mnchen, Germany, 2012

Workshop on Cooperative Estimation and Control over Networks, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China, 2012

International Symposium on Innovative Mathematical Modelling, Tokyo, Japan, 2012

Invited lecturer at Tutorial Session on Resilient Control Systems, CPSWeek, Beijing, China, 2012

IPSN PhD Forum, ACM/IEEE International Conference on Information Processing in Sensor Networks, Beijing, China, 2012

Department of Automation, Tsinghua University, China, 2012

Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China, 2012

Department of Electrical Engineering, University of Notre Dame, USA, 2012

Workshop on Control Theory, Mathematisches Forschungsinstitut Oberwolfach, 2012

Invited Lecture at Workshop on Control Systems Security: Challenges and Directions at IEEE CDC, Orlando, FL, 2011

Workshop on Control of Computing Systems, Lund University, Sweden, 2011

Lecture Series on Directions in Systems and Control, ETH Zurich, Switzerland, 2011

IoT Industry Development Forum, Shanghai, China, 2011

The Future Connected Vehicles Workshop, IBC Euroforum, Gothenburg, Sweden, 2011

IEEE Swedish Communication Technologies Workshop, Stockholm, Sweden, 2011

CERES Open Day, Halmstad, Sweden, 2011

First EU-US Workshop on Networked Monitoring & Control and Cyber-Physical Systems, Brussels, Belgium, 2011

4th HYCON2 PhD School on Control of Networked and Large-Scale Systems, Trento, Italy, 2011

Universidad Nacional de Educacin a Distancia, Madrid, Spain, 2011

Workshop on Dynamics, Control and Pricing in Power Systems, Lund, Sweden, 2011

Ambient Systems Seminar, University of Kaiserslautern, Germany, 2011

Inaugural Session, Institute of Information and Communication Technologies, Electronics and Applied Mathematics, Universit catholique de Louvain, Belgium, 2010

Real-Time Embedded Sensor Systems Workshop, Aalto University, Helsinki, Finland, 2010

ECE Distinguished Seminar, Carnegie Mellon University, Pittsburgh, USA, 2010

Robotics and Embedded Systems Seminar, UC Berkeley, USA, 2010

FEUP, University of Porto, Porto, Portugal, 2010

2nd IFAC Workshop on Estimation and Control of Networked Systems, Annecy, France, 2010

Seoul National University, South Korea, 2010

Reglermöte (Swedish Control Conference), Lund, Sweden, 2010

International Workshop on Networked Control Systems Shenzhen, China, 2009

NESCOC Symposium on Recent Trends in Networked Systems and Cooperative Control, University of Stuttgart, Germany, 2009

1st FeedNetBack Workshop, Venice, Italy, 2009

PhD course on Distributed and Event-based Control, Linköping University, Sweden, 2009

Dutch Institute of Systems and Control Summerschool on Distributed Optimization in Control and Estimation, the Netherlands, 2009

Automationsdagarna (Swedish Automation Conference), Globen, Stockholm, Sweden, 2009

German PhD School on Control Theory of Digitally Networked Dynamical Systems, Dortmund, Germany, 2008

Unilever R&D, Port Sunlight, UK, 2008

Invited lecturer at Tutorial Session on Communication Challenges in Networked Control Systems, American Control Conference, Seattle, USA, 2008

Guest lecture in CDS 270-4: Estimation and Control over Wireless Sensor Networks, California Institute of Technology, Pasadena, USA, 2008

6th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks, Berlin, 2008

Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology, Hong Kong, 2008

Workshop on Graph Mining and Dynamics, Universit catholique de Louvain, Belgium, 2007

2nd HYCON Workshop, L'Aquila, Italy, 2007

15th IEEE Mediterranean Conference on Control and Automation (MED'07), Athens, Greece, 2007

PhD Course on Multisensorial Acquisition-Processing and Robotics Systems, Department of Electronics, University of Alcala, Spain, 2007

Control and Dynamical Systems, California Institute of Technology, Pasadena, USA, 2007

Department of Electrical Engineering, University of California, Los Angeles, USA, 2007

Center for Control, Dynamical Systems and Computation, University of California, Santa Barbara, USA, 2007

School of Electrical, Information and Electronic Engineering, Shanghai Jiatong University, China, 2006

Joint CTS–HYCON Workshop on Nonlinear and Hybrid Control, CNRS, Paris, France, 2006

7th Modelling and Verifying Parallel Processes (MOVEP) Summer School, Bordeaux, France, 2006

1st HYCON Workshop, Lund, Sweden, 2006

GRASP Seminar Series, University of Pennsylvania, USA, 2006

25th Benelux Meeting on Systems and Control, Heeze, The Netherlands, 2006

RECSYS Workshop on Networked Embedded Systems and Distributed Sensing, Lausanne, Switzerland, 2005

IMS Conference on Advanced Manufacturing, Leuven, Belgium, 2005

Mini-workshop on networked control systems, Institut National Polytechnique de Grenoble, France, 2005

HYCON PhD School on Hybrid Systems, Siena, Italy, 2005

Paris Graduate Control Theory School, Supélec, France, 2005

Department of Electrical Engineering, Linköping University, Sweden, 2005

Institute Mittag-Leffler, Sweden, 2004

Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China, 2004

International Workshop on Piecewise Smooth Dynamical Systems: Analysis, Numerics and Applications, University of Bristol, UK, 2004

Department of Automatic Control, Lund University, Sweden, 2004

Study Day of the Belgian Interuniversity Attraction Pole, Louvain-la-Neuve, Belgium, 2004

Center of Excellence DEWS, L'Aquila University, Italy, 2004

Automatic Control Lab, EPFL, Lausanne, Switzerland, 2003

Department of Electrical Engineering and Computer Science, UC Berkeley, USA, 2003

CIRA Summer School on Analysis and Control of Hybrid Systems in Bertinoro, Italy, 2003.

Scuola Superiore Sant'Anna, Pisa, Italy, 2003

Department of Automatic Control, Lund University, Sweden, 2002

Dipartimento di Informatica e Sistemistica, Universita' di Napoli Federico II, Naples, Italy, 2001

Automatic Control Laboratory, ETH, Zurich, Switzerland, 2000

United Technologies Research Center, East Hartford, USA, 2000

Automatic Control Lab, EPFL, Lausanne, Switzerland, 1999

Department of Signals, Sensors and Systems, KTH, Stockholm, Sweden, 1999

Department of Signals and Systems, Chalmers, Gothenburg, Sweden, 1998

Department of Engineering Mathematics, University of Bristol, UK, 1998

Department of Electrical Engineering, Linköping University, Sweden, 1998

Department of Electrical and Electronic Engineering, Imperial College, London, UK, 1997

Information Systems Lab, Stanford University, USA, 1997

Control Systems Centre, University of Manchester (UMIST), UK, 1997

Department of Applied Mathematics, University of Twente, the Netherlands, 1995

International Institute of Applied Systems Analysis (IIASA), Laxenburg, Austria, 1994

Selected Industrial Consultancy and Collaboration

Wireless automation and control: ABB Corporate Research, Sweden, from September 2006.

Congestion control and wireless communication: Ericsson, Sweden, from December 2003.

Look ahead control and control of auxiliary loads in heavy vehicles: Scania, Sweden, from September 2001.

Control of fuel cells: United Technologies Research Center, East Hartford, CT, USA, September–December 2000.

Development of laboratory experiments: Quanser Consulting, Hamilton, Canada, from April 2000.

Control of high voltage direct current link: ABB Power Systems AB, Ludvika, Sweden, April 1997–February 1999.

Heat exchanger diagnosis: Alfa Laval Thermal AB, Lund, Sweden, January–August 1998.

Modeling of juice packaging line: Tetra Pak Processing Systems AB, Lund, Sweden, June 1996–June 1998.

Initialization of multivariable controllers: ABB Industrial Systems AB, Västerås, Sweden, November 1993–February 1995.

Supervision

Postdocs

Jaehyun Yoo, 2016–, Ph.D. from Seoul National University

Jieqiang Wei, 2016–, Ph.D. from University of University of Groeningen

Takashi Tanaka, 2015–, Ph.D. from University of Illinois at Urbana-Champaign

Wei Chen, 2015–, Ph.D. from Hong Kong University of Science and Technology

Moritz Wiese, 2014–, Ph.D. from Technical University of Munich

Jungfeng Wu, 2014–, Ph.D. from Hong Kong UST (Guan Zhao-Zhi Award, 2015)

Adam Molin, 2014–, Ph.D. from Technical University of Munich

Marco Molinari, 2013–, Ph.D. from KTH

Bart Besselink, 2012–, Ph.D. from Technical University of Eindhoven

Tomonori Sadamoto, 2015–2016, Ph.D. from Tokyo Institute of Technology, currently researcher at Tokyo Institute of Technology

Alessandra Parisio, 2012–2015, Ph.D. from University of Sannio, currently lecturer at University of Manchester, UK

Weiguo Xia, 2014–2015, Ph.D. from University of University of Groeningen, currently assistant professor at Dalian University of Technology, China

Davide Liuzza, 2013–2015, Ph.D. from University of Naples Federico II, currently researcher with University of Naples, Federico II, Italy

Kun Liu, 2013–2015, Ph.D. from Tel Aviv University, currently assistant professor at Beijing Institute of Technology, China

Tao Yang, 2012–2014, Ph.D. from Washington State U, currently with Pacific Northwest National Laboratory

Ziyang Meng, 2012–2014, Ph.D. from Tsinghua University, Humboldt research fellow and Chinese 1000 Talent Plan grant, currently assistant professor at Tsinghua University

Takayuki Ishizaki, 2012, Ph.D. from Tokyo Institute of Technology, currently assistant professor at Tokyo Institute of Technology

Damiano Varagnolo, 2011–2013, Ph.D. from University of Padova, currently assistant professor at Luleå TU

Daniel Lehmann, 2011–2012, Ph.D. from University of Bochum, currently with STEAG Energy Services GmbH

Ubaldo Tiberi, 2011–2012, Ph.D. from University of L'Aquila, currently with Volvo Technology, Gothenburg, Sweden

James Weimer, 2010–2012, Ph.D. from Carnegie Mellon University, currently postdoc at U of Pennsylvania

Iman Shames, 2010–2012, Ph.D. from Australian National University, currently senior lecturer at U Melbourne

Guodong Shi, 2010–2014, Ph.D. from Chinese Academy of Sciences, currently Future Engineering Research Leadership Fellow and lecturer at ANU

Kin Cheong Sou, 2010–2012, Ph.D. from MIT, currently assistant professor at Chalmers U

Milos Stankovic, 2010–2012, Ph.D. from University of Illinois at Urbana-Champaign, currently research fellow at University of Belgrade

Yassine Ariba, 2010, Ph.D. from LAAS-CNRS, Toulouse, currently associate professor at ICAM and LAAS-CNRS, Toulouse

Phoebus Chen, 2009–2011, Ph.D. from UC Berkeley, currently at Tarana Wireless, Berkeley

Corentin Briat, 2009–2011, Ph.D. from Univeristy of Grenoble, currently postdoc at ETH Zurich

Dimos Dimarogonas, 2007–2009, Ph.D. from National Technical University of Athens, currently associate professor at KTH

Alexandre Seuret, 2007–2008, Ph.D. from Ecole Central, Lille, currently at Grenoble Institute of Technology and GIPSA-Lab CNRS, Grenoble

Maben Rabi, 2006–2009, Ph.D. from University of Maryland, currently assistant professor at Chalmers U

Emmanuel Witrant, 2006–2007, Ph.D. from University of Grenoble, currently associate professor Universit Joseph Fourier, Grenoble, France

Carlo Fischione, 2005–2007, Ph.D. from University of L'Aquila, currently associate professor at KTH

Henrik Jansson, 2005–2007, Ph.D. from KTH, currently at RaySearch Laboratories, Stockholm

Michael Rotkowitz, 2005–2006, Ph.D. from Stanford University, currently assistant professor at University of Maryland

Luigi Iannelli, 2003, Ph.D. from University of Naples, currently assistant professor at Universit degli Studi del Sannio, Benevento, Italy

Ph.D. students

Takuya Iwaki, Ph.D. student since 2016

Mladen Cicic, Ph.D. student since 2016

Yulong Gao, Ph.D. student since 2016

Dirk van Dooren, Ph.D. student since 2016

Jezdimir Milosevic, Ph.D. student since 2015 (co-supervisor)

Xinlei Yi, Ph.D. student since 2015

Emma Tegling, Ph.D. student since 2014 (co-supervisor)

Antonio Adaldo, Ph.D. student since 2014

Sebastian van de Hoef, Ph.D. student since 2013 (co-supervisor)

Kaveh Paridari, Ph.D. student since 2013 (co-supervisor)

Valerio Turri, Ph.D. student since 2012

Meng Guo, *Hybrid control of multi-robot systems under complex temporal tasks,*, Ph.D. Thesis, Jan 2016 (co-supervisor); currently postdoc at Duke University

Andre Teixeira, *Toward cyber-secure and resilient networked control systems*, Ph.D. Thesis, Nov 2014 (co-supervisor); currently assistant professor at Delft University of Technology

Jose Araujo, *Design, implementation and validation of resource-aware and resilient wireless networked control systems*, Ph.D. Thesis, Oct 2014; currently at Ericsson Research

Assad Alam, *Fuel-Efficient heavy-duty vehicle platooning*, Ph.D. Thesis, Jun 2014; currently at Scania

Kuo-Yun Liang, *Coordination and Routing for Fuel-Efficient Heavy-Duty Vehicle Platoon,* Lic. Thesis, Apr 2014; currently Ph.D. student at KTH

Chithrupa Ramesh, *State-based channel access for a network of control systems,* Ph.D. Thesis, Apr 2014; currently postdoc at ETH Zurich

Farhad Farokhi, *Decentralized control of networked systems: information asymmetries and limitations,* Ph.D. Thesis, Mar 2014; currently postdoc at University of Melbourne

Erik Henriksson, *Predictive control for wireless networked systems in process industry,*, Ph.D. Thesis, Mar 2014; currently at Scania, Sweden

Hkan Terelius, *Consensus algorithms in dynamical network systems,* Lic. Thesis, Nov 2013; currently Ph.D. student at KTH

Martin Andreasson, *Control of multi-agent systems with applications to distributed frequency control power systems,* Lic. Thesis, Mar 2013; currently Ph.D. student at KTH

Piergiuseppe Di Marco, *Modeling and design of wireless protocols for networked control applications,* Ph.D. Thesis, Jan 2013; currently at Ericsson Research

Magnus Lindh, *Communication-aware motion planning for mobile robots,* Ph.D. Thesis, Feb 2012; currently at Electrolux

Per Sahlholm, *Distributed road grade estimation for heavy duty vehicles,* Ph.D. Thesis, Mar 2011; currently at Scania, Sweden

Pan Gun Park, *Modeling, analysis, and design of wireless sensor network protocols,* Ph.D. Thesis, Jan 2011; currently assistant professor at Gyeongsang National University, Korea

Lei Bao, *Control over low-rate noisy channels,* Ph.D. Thesis, Jun 2009 (co-supervisor); currently at Ericsson, Gothenburg

Bjrn Johansson, *On distributed optimization in networked systems,* Ph.D. Thesis, Dec 2008 (co-supervisor); currently at Scania, Sweden

Krister Jacobsson, *Dynamic modeling of Internet congestion control,* Ph.D. Thesis, May 2008 (co-supervisor); currently at RaySearch, Sweden

Niels Mller, *Window-based congestion control: Modeling, analysis and design,* Ph.D. Thesis, Jan 2008; currently at Google, Sweden

Oscar Flrdh, *Modelling, analysis and experimentation of a simple feedback scheme for error correction control,* Lic. Thesis, Mar 2007; currently at Scania, Sweden

Alberto Speranzon, *Coordination, consensus and communication in multi-robot control systems,* Ph.D. Thesis, May 2006; currently at UTRC, East Hartford, USA

Niklas Pettersson, *Modeling and control of auxilary loads in heavy vehicles,* Lic. Thesis, Oct 2004; currently at Scania, Sweden

M.S. students

Supervisor or examiner for more than 100 M.S. students from 1998 till today.

Expert Assignments

Journal and Encyclopedia Services

Editorial Advisory Board of Transportation Research part C, from 2021.

Guest Editor for the special issue on "Smart city-networks" of IEEE Transactions on Control of Network Systems, 2021.

Associate Editor of the ACM Transactions on Internet of Things, from 2018.

Member of the Editorial Committee for Annual Review of Control, Robotics, and Autonomous Systems, from 2018.

Guest Editor for the special issue on "Dynamic Games in Cyber Security" of Dynamic Games and Applications, 2019.

Guest Editor for the special issue on "Cyberphysical Security in Networked Control Systems" of IEEE Control Systems Magazine, 2015.

Guest Editor for the special issue on "Control of Cyber-Physical Systems" of IEEE Transactions on Automatic Control, 2014.

Member of the Editorial Board of the IEEE Transactions on Control of Network Systems, from 2013. Senior Editor from 2015.

Member of the Editorial Board of the European Journal of Control, from 2013.

Member of the Editorial Board of the journal Foundations and Trends in Systems and Control, from 2012.

Member of the Editorial Board of International Journal of Robust and Nonlinear Control, 2011–2013.

Guest Editor for the special issue on "Wireless Sensor and Actuator Networks" of IEEE Transactions on Automatic Control, 2011.

Guest Editor for the special issue on "Progress in Networked Control Systems" of International Journal of Systems, Control and Communications, 2011.

Associate Editor of the IEEE Transactions on Automatic Control, 2008–2010.

Guest Editor for the special issue on "Industrial Control Over Wireless Networks" of International Journal of Robust and Nonlinear and Control, 2008.

Member of the Editorial Board of the IET Control Theory and Applications (former IEE Control Theory and Applications), 2007–2012.

Member of the Editorial Board of the International Journal of Automation and Control, from 2005.

Associate Editor for the IFAC journal Automatica, 2003–2006.

Topic-level editor for "Hybrid Control Systems" in the Encyclopedia of Life Support Systems published by UNESCO, 2000–2004.

Expert Reviewer for Funding Agencies and Universities

Expert reviewer for the Royal Netherlands Academy of Arts and Sciences, 2021

Expert reviewer for University of Texas Dallas, 2020

Expert reviewer for Purdue University, 2020

Expert reviewer for University of Michigan, Ann Arbor, 2020

Expert reviewer for Harvard University, 2020

Expert reviewer for Aalto University, 2020

Expert reviewer for Technical University of Delft, 2019

Expert reviewer for Hong Kong University of Science and Technology, 2019

Expert reviewer for Purdue University, 2019

Expert reviewer for University College Dublin, 2019

Expert reviewer for Carnegie Mellon University, 2019

Expert reviewer for the Irish Research Council, 2019

Expert reviewer for Lehigh University, 2019

Expert reviewer for the European Research Council, 2019

Expert reviewer for University of Groningen, 2019

Expert reviewer for Mälardalen University, 2019

Expert for Knut and Alice Wallenberg Foundation, 2018

Expert reviewer for University of Illinois at Urbana-Champaign, 2018

Expert reviewer for the Irish Research Council, 2018

Member of the European Research Council Consolidator Grant panel on Systems and Communication Engineering, 2018

Expert reviewer for University of Cyprus, 2018

Expert reviewer for Swiss National Science Foundation, 2018

Expert reviewer for University of Cyprus, 2017.

Expert reviewer for the European Research Council, 2017

Expert reviewer for the Irish Research Council, 2017

Expert reviewer for University of Washington, Seattle, WA, USA, 2017.

Expert reviewer for University of Michigan, Ann Arbor, MI, USA, 2017.

Expert reviewer for University of Illinois, Urbana-Champaign, IL, USA, 2017.

Expert reviewer for ETH, Zurich, Switzerland, 2016.

Expert reviewer for Massachusetts Institute of Technology, MA USA, 2016.

Expert at site review for Einstein Foundation, Berlin, Germany, 2016.

Member of the European Research Council Consolidator Grant panel on Systems and Communication Engineering, 2016

Expert reviewer for Lule University of Technology, Sweden, 2016.

Expert reviewer for Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China, 2015.

Expert reviewer for Carnegie Mellon University, USA, 2015.

Special Committee Member, University of Cyprus, 2015.

Expert reviewer for University of California, Berkeley, USA, 2015.

Expert reviewer for Ecole Polytechnique Federale de Lausanne, Switzerland, 2015.

Expert reviewer for University of California, Santa Barbara, USA, 2015.

Expert reviewer for Technical University of Munich, Germany, 2014.

Expert reviewer for Nanyang Technological University, Singapore, 2014.

Member of the Swedish Research Council's Evaluation Panel for International Postdocs, 2013–2015.

Expert reviewer for University of Waterloo, Canada, 2013.

Expert reviewer for Hong Kong University of Science and Technology, Hong Kong, 2013.

Expert reviewer for University of Groningen, the Netherlands, 2013.

Expert reviewer for Agence Nationale de la Recherche, France, 2013.

Chairman of the Teacher's Committee for Ragnar Thobaben's Docent evaluation at KTH, 2013.

Expert reviewer for George Nikolakopoulos' Docent evaluation at Lule University of Technology, Sweden, 2013.

Expert reviewer for the European Research Council Starting Grant, 2012, 2015

Expert reviewer for City University of Hong Kong, 2012

Expert reviewer for University of Cyprus, 2011.

Expert reviewer for University of Texas, Austin, 2011.

Expert reviewer for Carnegie Mellon University, 2011.

Expert reviewer for University of Pennsylvania, USA, 2010.

Expert reviewer for associate and assistant professor positions at Ume University, Sweden, 2010.

Expert reviewer for Johan Eker's Docent evaluation at Lund University, Sweden, 2010.

Expert reviewer for the Swedish Research Council (VR), 2010.

Expert reviewer for the Qatar National Research Fund, 2010.

Expert reviewer for the European Research Council Advanced Grant, 2009.

Expert reviewer for University of Padova, Italy, 2009.

Expert reviewer for Purdue University, USA, 2009.

Reviewer for the Research Council of Norway, 2009.

Expert reviewer for University of Cyprus, 2009.

Chairman of the Teacher's Committee for Frank Niklaus' Docent evaluation at KTH, 2008.

Expert reviewer for Vanderbilt University, USA, 2008.

Expert reviewer for Jacob Roll's Docent evaluation at Linkping University, Sweden, 2008.

Reviewer for the Vienna Science and Technology Fund (WWTF), 2008.

Member of the Swedish Research Council's Evaluation Panel on Signals and Systems, 2008.

Member of the International Panel for the evaluation of Research Units in Electrical Engineering and Computer Science for the Portuguese Scientific Research Council (FCT), 2007–2008.

Expert reviewer for University of Pennsylvania, USA, 2007.

Reviewer for the Swedish Foundation for International Cooperation in Research and Higher Education, 2007.

Expert reviewer for associate professor positions in automatic control and in mechatronics at Chalmers University, Sweden, 2006.

Reviewer for INRIA, France, 2006, 2009.

Reviewer for the Swedish Foundation for Strategic Research, 2005, 2010.

Expert reviewer for assistant professor position at Ume University, Sweden, 2004.

Reviewer for the Austrian Science Fund (FWF), 2004, 2010.

Reviewer for the Netherlands Organization for Scientific Research (NWO), 2004, 2006, 2007.

Reviewer for the Swedish Research Council, 2003.

Reviewer for the Italian Ministry for Education, University and Research (MIUR), 2002, 2004, 2005, 2009, 2012, 2014.

Opponent Services

External reviewer for the doctoral thesis of Alejandro I. Maass, University of Melbourne, Australia, Apr 2019.

Member of the committee for the doctoral thesis of Alejandro Ivan Morales Medina, Eindhoven University of Technology, The Netherlands, Jan 2019.

Member of the committee for the doctoral thesis of Erik Weitenberg, University of Groningen, The Netherlands, Jul 2018.

External reviewer for doctoral thesis of Dang Van Thu, Nanyang Technological University, Singapore, May 2018.

Member of the committee for the doctoral thesis of Andres Ladino, Institut National Polytechnique de Grenoble, France, Mar 2018.

External reviewer for the doctoral thesis of Alessandro Falsone, Politecnico di Milano, Italy, Oct 2017.

Member of the committee for the doctoral thesis of Victor Dolk, Eindhoven University of Technology, The Netherlands, Oct 2017.

Member of the committee for the doctoral thesis of Simachew Abebe Mengiste, KTH, Sep 2017.

External reviewer for the doctoral thesis of Ivo Herman, Czech Technical University, Czech Republic, Feb 2017.

Member of the committee for the doctoral thesis of Hans-Bernd Dürr, University of Stuttgart, Germany, Sep 2015.

Member of the committee for the doctoral thesis of Du Ho Kang, KTH, May 2014.

Member of the committee for the doctoral thesis of Adam Molin, Technical University of Munich, Germany, May 2014.

Member of the committee for the doctoral thesis of Peyman Mohajerin, ETH Zurich, 2014.

Member of the committee for the doctoral thesis of Rainer Blind, University of Stuttgart, Germany, Dec 2013.

External reviewer for the doctoral thesis of Mahmood Aamir, Aalto University, Finland, Oct 2013.

Member of the committee for the doctoral thesis of Joris Sijs, Eindhoven University of Technology, The Netherlands, Apr 2012.

Member of the committee for the doctoral thesis of Enrico Avventi, Department of Mathematics, Royal Institute of Technology, Sep 2011.

Member of the committee for the doctoral thesis of Daniel Grges, University of Kaiserslautern, Germany, Jul 2011.

Member of the ICO review committee for doctoral thesis of Mauro Franceschelli, University of Cagliari, Italy, Jun 2011.

Member of the PhD committee and the ICO review committee for doctoral theses of Alessandro Borri, Emmanuele Serra, and Ubaldo Tiberi, Department of Electrical and Information Engineering, L'Aquila University, Italy, Mar 2011.

External reviewer for doctoral thesis of Lin Jian Yong, Nanyang Technological University, Singapore, Dec 2010.

External reviewer for doctoral thesis of Nader Ghasemi, University of Melbourne, Australia, Nov 2010.

External reviewer for doctoral thesis of Iman Shames, Australian National University, Australia, Sep 2010.

Member of the committee for the doctoral thesis of Erik Hellstrm, Department of Electrical Engineering, Linköping University, May 2010.

External reviewer for doctoral thesis of Assaf Gurt, University of Melbourne, Australia, Nov 2009.

Member of the committee for the doctoral thesis of Wenjuan Jiang, LAGIS, Ecole Centrale de Lille, France, Jun 2009.

Member of the committee for the doctoral thesis of Lars Johannesson, Department of Signals and Systems, Chalmers University of Technology, Apr 2009.

Member of the committee for the doctoral thesis of Ling Shi, Control and Dynamical Systems, California Institute of Technology, USA, Aug 2008.

Member of the committee for the doctoral thesis of Marieke Posthumus-Cloosterman, Department of Mechanical Engineering, Eindhoven University of Technology, The Netherlands, Jun 2008.

Faculty opponent for the doctoral thesis of Anders Fröberg, Department of Electrical Engineering, Linköping University, May 2008.

Member of the committee for the doctoral thesis of Andreas Wernrud, Department of Automatic Control, Lund University, Feb 2008.

Member of the committee for the doctoral theses of Alessandro Alessio, Stefano di Cairano and Alessandro Formaglio, Department of Information Engineering, University of Siena, Italy, Jan 2008.

Member of the committee for the doctoral thesis of Julien Hendrickx, Department of Mathematical Engineering, Universit catholique de Louvain, Belgium, Dec 2007.

Member of the ICO review committee for the doctoral thesis of Lautentiu Hetel, Centre de Recherche en Automatique de Nancy, France, Nov 2007.

Member of the ICO review committee for the doctoral thesis of Alessandro D'Innocenzo's, Department of Electrical Engineering and Computer Science, University of L'Aquila, Italy, Feb 2007

Member of the committee for the doctoral thesis of Henrik Lundqvists, Department of Signals, Sensors and Systems, Royal Institute of Technology, Nov 2005.

Member of the committee for the doctoral thesis of Mikael Ekman, Department of Systems and Control, Uppsala University, Oct 2005.

Member of the committee for the doctoral thesis of Emmanuel Witrant, Laboratoire d'Automatique, Institut National Polytechnique de Grenoble, France, Sep 2005.

External reviewer for the licentiate thesis of Mattias Åsbogård, Department of Applied Mechanics, Chalmers University of Technology, May 2005.

Member of the committee for the doctoral thesis of Martin Sanfridsson, Department of Machine Design, Royal Institute of Technology, Jun 2004.

Member of the committee for the doctoral thesis of Iliev Boyko, Center for Applied Autonomous Sensor Systems, Örebro University, Feb 2004.

Member of the committee for the doctoral thesis of Fredrik Bruzelius, Department of Signals and Systems, Chalmers University of Technology, Feb 2004.

Member of the committee for the doctoral thesis of Philipp Althaus, Department of Numerical Analysis and Computer Science, Royal Institute of Technology, Nov 2003.

External expert for the doctoral thesis of Sedghi Babak, Automatic Control Laboratory, EPFL, Lausanne, Switzerland, Sep 2003.

Member of the committee for the doctoral thesis of George Jörngren, Department of Signals, Sensors & Systems, Royal Institute of Technology, Jun 2003.

Member of the committee for the doctoral thesis of Petter Ögren, Department of Mathematics, Royal Institute of Technology, Jun 2003.

Member of the committee for the doctoral thesis of Marcus Rubensson, Department of Signals and Systems, Chalmers University of Technology, May 2003.

Member of the committee for the doctoral thesis of Anton Cervin, Department of Automatic Control, Lund University, Apr 2003.

External reviewer for the doctoral thesis of Katrina Lau, University of Newcastle, Australia, Nov 2002.

Member of the committee for the doctoral thesis of Frank Niklaus, Department of Signals, Sensors & Systems, Royal Institute of Technology, Oct 2002.

External reviewer for the licentiate thesis of Jonas Persson, Electric Power Systems, Department of Electrical Engineering, Royal Institute of Technology, Mar 2002.

External reviewer for the licentiate thesis of Jacob Roll, Division of Automatic Control and Communication Systems, Linköping University, Sep 2001.

Other Services to Funding Agencies

Member of the Swedish Horizon 2020 Reference Group on ICT, 2014–.

Member of the VINNOVA strategic committee on embedded systems, 2006–2007.

Member of the European Commission initiative on the agile wireless plant, 2005–2006.

Conference Services: Leadership

General Co-Chair, European Control Conference, Stockholm, Sweden, 2024

Program Co-Chair, IEEE Conference on Decision and Control, Singapore, 2023

Associate Editor at Large for European Control Conference, Rotterdam, the Netherlands, 2021

Technical Associate Editor on the International Program Committee of IFAC World Congress, Berlin, Germany, 2020.

International Programme Committee Chair for the European Control Conference, Naples, Italy, 2019.

Program Vice-Chair for Tutorial Sessions, IEEE Conference on Decision and Control, Nice, France, 2019

Technical Associate Editor on the International Program Committee of IFAC World Congress, Toulouse, France, 2017.

Regional Chair, IEEE International Conference on Control & Automation, Ohrid, Macedonia, 2017.

Special Session Chair, IEEE International Conference on Automation Science and Engineering (CASE), Gothenburg, Sweden, 2015.

Technical Associate Editor for the area Networked Systems, IFAC World Congress, Cape Town, South Africa, 2014.

Associate Editor at Large for IEEE Conference on Decision and Control, Florence, Italy, 2013.

General Chair of the ACM Workshop on Embedded Systems for Energy-Efficiency in Buildings (BuildSys), Rome, Italy, 2013.

Co-Chair of the International Programme Committee for the European Control Conference, Zurich, Switzerland, 2013.

Technical Editor for the area Networked Systems, IFAC World Congress, Milan, Italy, 2011.

General Chair of the ACM/IEEE Cyber-Physical Systems Week (CPSWEEK), which brings together the five conferences CPSC, HSCC, IPSN, LCTES, RTAS and several workshops, Stockholm, Sweden, 2010.

General Co-Chair and International Programme Committee Co-Chair for the ACM International Conference on Hybrid Systems: Computation and Control (HSCC), Stockholm, Sweden, 2010.

International Programme Committee Co-Chair for the IFAC Workshop on Estimation and Control of Networked Systems (NECSYS), Venice, Italy, 2009.

International Programme Committee Co-Chair for IEEE International Conference on Automation Science and Engineering (CASE), Washington DC, USA, 2008.

Congress Technical Associate Editor for Networked Systems at the IFAC World Congress, Seoul, Korea, 2008.

Co-Chair of the Programme Committee for Swedish Conference in Automatic Control (*Reglermötet*), Stockholm, 2006.

Chair of the Programme Committee for the Swedish Workshop on Autonomous Robotics, Stockholm, 2005.

Conference Services: Programme Committees and Other Committees

Member of the International Programme Committee for the IFAC Symposium on Control in Transportation Systems, Lille, France, 2021.

Member of the International Programme Committee for the IFAC Conference on Analysis and Design of Hybrid Systems, Brussels, Belgium, 2021.

Member of the Senior International Program Committee for European Control Conference, Saint Petersburg, Russia, 2020

Member of the Steering Committee of the IFAC Conference on Cyber-Physical adn Human Systems, from 2019

Member of the Program Committee for IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), Chicago, USA, 2019

Member of the Steering Committee of the DATE Workshop on Autonomous Systems Design, Firence, Italy, from 2018

Member of the Technical Program Committee for IEEE International Conference on Intelligent Transportation Systems, Maui, Hawaii, 2018.

Member of the Program Committee for IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), Groningen, the Netherlands, 2018

Member of the International Programme Committee for the IFAC Conference on Analysis and Design of Hybrid Systems, Oxford, UK, 2018

Member of the International Programme Committee for the International Workshop on Hybrid Systems: Computation and Control (HSCC), Porto, Portugal, 2018

Member of the International Program Committee for the IFAC Symposium on Control in Transportation Systems, Genova, Italy, 2018

Member of the Program Committee for the SIAM Conference on Control and Its Applications, Pittsburgh, PA, USA, 2017

Member of the Technical Program Committee for IEEE Conference on Decision and Control, Las Vegas, NV, USA, 2016

Member of the Technical Program Committee for the Conference on Decision and Game Theory for Security, New York University, NY, USA, 2016

Member of the Program Committee for IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), Tokyo, Japan, 2016

Member of the Program Committee for IEEE Conference on Control Applications, Buenos Aires, Argentina, 2016

Member of the Technical Program Committee for IEEE Conference on Decision and Control, Osaka, Japan, 2015

Member of the Best Student Paper Award Committee, IEEE Conference on Decision and Control, Osaka, Japan, 2015

Member of the Program Committee for IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys), University of Pennsylvania, USA, 2015

Member of the Program Committee of the IEEE International Conference on Autonomous Robot Systems and Competitions, Vila Real, Portugal, 2015

Member of the Program Committee for ACM International Conference on Future Energy Systems, Bangalore, India, 2015

Member of the Program Committee for the IFAC Conference on Analysis and Design of Hybrid Systems (ADHS), Atlanta, GA, USA, 2015

Member of the Program Committee for the SIAM Conference on Control and Its Applications, Paris, France, 2015

Member of the International Program Committee for European Control Conference, Linz, Austria, 2015

Member of the Technical Program Committee for IEEE Conference on Decision and Control, Los Angeles, CA, USA, 2014

Member of the International Program Committee for European Control Conference, Strasbourg, France, 2014

Member of the Programme Committee for the IEEE/ACM/EDAA Conference DATE, Dresden, Germany, 2014.

Member of the Technical Program Committee for the IEEE GLOBECOM Selected Areas in Communications Symposium on Social Networks, Atlanta, Georgia, USA, 2013.

Member of the Steering Committee for the IEEE Conference on Cyber-Physical Systems, Networks, and Applications, 2013–.

Member of the International Programme Committee for the IFAC Workshop on Estimation and Control of Networked Systems (NECSYS), Koblenz, Germany, 2013.

Member of the Technical Programme Committee for the IEEE INFOCOM Workshop on Communications and Control for Smart Energy Systems, Turin, Italy, 2013.

Member of the Technical Program Committee for the Robotics: Science and Systems Conference, Berlin, Germany, 2013.

Member of the International Programme Committee for the ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN), Philadelphia, PA, USA, 2013.

Member of the International Programme Committee for the ACM International Conference on High Confidence Networked Systems (HiCoNS), Philadelphia, PA, USA, 2013.

Member of the International Programme Committee for the ACM Workshop on Embedded Sensing Systems For Energy-Efficiency In Buildings (BuildSys), Toronto, Canada, 2012.

Member of the International Programme Committee for the IEEE International Conference on Systems and Computer Science (ICSCS), Lille, France, 2012.

Member of the International Programme Committee for the IFAC Workshop on Estimation and Control of Networked Systems (NECSYS), Santa Barbara, CA, USA, 2012.

Member of the International Programme Committee for the International Conference on High Confidence Networked Systems (HiCoNS), Beijing, China, 2012.

Member of the International Programme Committee for the IEEE INFOCOM Workshop on Smart Grid Systems and Green Networking, Orlando, FL, USA, 2012.

Member of the International Programme Committee for the ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN), Beijing, China, 2012.

Member of the International Programme Committee for the IFAC Conference on Analysis and Design of Hybrid Systems (ADHS), Eindhoven, the Netherlands, 2012.

Member of the Selection Committee for IEEE Conference on Decision and Control and European Control Conference Best Student Award, Orlando, USA, 2011.

Member of the International Programme Committee for IEEE Conference on Decision and Control and European Control Conference (CDC and ECC), Orlando, FL, USA, 2011.

Member of the International Programme Committee for the International Conference on Informatics in Control, Automation and Robotics, Noordwijkerhout, The Netherlands, 2011.

Member of the International Programme Committee for the Workshop on the Foundations of Dependable and Secure Cyber-Physical Systems, part of the Cyber-Physical Systems Week, Chicago, IL, USA, 2011.

Member of the International Programme Committee for the Mediterranean Conference on Control and Automation, Corfu, Greece, 2011.

Member of the Selection Committee for IEEE Conference on Decision and Control Best Student Award, Atlanta, USA, 2010.

Member of the Programme Committee for the Workshop on Secure Control Systems (SCS), Stockholm, Sweden, 2010.

Member of the International Programme Committee for the Virtual Control Conference, 2010.

Member of the International Programme Committee for IEEE Conference on Decision and Control, Shanghai, China, 2009.

Member of the International Programme Committee for the IFAC Workshop on Time Delay Systems, Sinaia, Romania, 2009.

Member of the International Programme Committee for the IEEE International Conference on Control Applications (CCA), Saint Petersburg, Russia, 2009.

Member of the International Programme Committee for the International Conference on Control and Automation, Christchurch, New Zealand, 2009.

Member of the International Programme Committee for the International Workshop on Hybrid Systems: Computation and Control (HSCC), San Francisco, USA, 2009.

Member of the International Technical Program Committee of the International Conference on Robot Communication and Coordination (ROBOCOMM), Odense, Denmark, 2009.

Member of the International Advisory Committee for the International Conference on Automation Technology, Tainan, Taiwan, 2009.

Member of the International Programme Committee for Robotics: Science and Systems Conference, Zurich, Switzerland, 2008.

Member of the International Programme Committee for the IEEE International Conference on Control Applications (CCA), San Antonio, USA, 2008.

Member of the Programme Committee for "Software architectures and principles for networked embedded systems" at the Design, Automation & Test in Europe (DATE) Conference, Munich, Germany, 2008.

Member of the International Programme Committee for the International Workshop on Hybrid Systems: Computation and Control (HSCC), St Louis, USA, 2008.

Member of the International Technical Program Committee of the International Conference on Robot Communication and Coordination (ROBOCOMM), Athens, Greece, 2007.

Member of the International Programme Committee for the IFIP/IEEE International Workshop on Feedback Control Implementation and Design in Computing Systems and Networks (FeBID), Munich, Germany, 2007.

Member of the International Programme Committee for the International Workshop on Hybrid Systems: Computation and Control (HSCC), Pisa, Italy, 2007.

Member of the International Programme Committee for the Conference on Mobile Robots and Competitions, Paderne, Portugal, 2007.

Member of the International Programme Committee for Robotics: Science and Systems Conference, Philadelphia, Pennsylvania, USA, 2006.

Member of the International Programme Committee for the CTS-HYCON Workshop on Nonlinear and Hybrid Control, Paris, France, 2006.

Member of the International Programme Committee for the International Workshop on Hybrid Systems: Computation and Control (HSCC), Santa Barbara, CA, 2006.

Member of the International Programme Committee for the IEEE International Conference on Robotics and Automation, Barcelona, Spain, 2005.

Member of the Programme Committee for the Swedish National Real-Time Association (SNART) conference Real-Time in Sweden (RTiS), Vsters, Sweden, 2003.

Member of the International Programme Committee for IEEE Conference on Decision and Control, Las Vegas, NV, 2002.

Conference Services: Invited and Tutorial Sessions

Organized five COVID-19 Focus Sessions on Modelling, Testing, Data & Forecasting, Estimation & Mitigation, and Vaccines at the IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, 2020, together with Prof. Philip E. Pare, U. Purdue, USA, Prof. Henrik Sandberg, Prof. Carolyn L. Beck, UIUC, USA, Prof. Ji Liu, Stony Brook University, USA,), Prof. Maria Elena Valcher, U. Padova, Italy, Prof. Fabrizio Dabbene, CNR-IEIIT, Italy.

Organized invited sessions "Event-triggered control" and "Event-triggered control: learning and optimization" at the IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, 2020, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, Prof. Sandra Hirche, TU Munich, Germany, and Prof. Cameron Nowzar, George Mason University, USA.

Organized invited session "Cyber-physical system security: resilience" at the IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, 2020, together with Dr. Paul Griffioen, Carnegie Mellon University, USA, Prof. Bruno Sinopoli, Washington University, USA, and Prof. Yilin Mo, Tsinghua University, PR China.

Organized workshop "Time-sensitive control and networking in cyber-physical systems" at the IFAC World Congress, Berlin, Germany, 2020, together with Dr. Mohammad H. (Vahid) Mamduhi, KTH, and Prof. John Baras, University of Maryland, USA.

Organized open invited track "'Control for next generation wireless networks" at the IFAC World Congress, Berlin, Germany, 2020, together with Mr. Dominik Baumann, Max Planck Institute for Intelligent Systems, Germany, Dr. Konstantinos Gatsis, University of Pennsylvania, USA, and Dr. Sebastian Trimpe, Max Planck Institute for Intelligent Systems, Germany.

Organized open invited track "Event-triggered and self-triggered control" at the IFAC World Congress, Berlin, Germany, 2020, together with Prof. Cameron Nowzari, George Mason University, USA, and Prof. Maurice Heemels, TU Eindhoven, the Netherlands.

Organized invited sessions "Security in cyber-physical aystems (Part I)" and "Security in cyber-physical aystems (Part II)" at the IEEE Conference on Decision and Control, Nice, France, 2019, together with Dr. Xiaoqiang Ren, KTH, Prof. Yilin Mo, Tsinghua U, PR China, and Prof. Bruno Sinopoli, U Washington, USA.

Organized invited sessions "Event-triggered control based on Lyapunov methods," "Event-triggered and self-triggered control for distributed systems," and "Event-triggered and self-triggered control based on optimization methods" at the IEEE Conference on Decision and Control, Nice, France, 2019, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized invited sessions "Resilient Control of Cyber-Physical Systems" at the IEEE Conference on Decision and Control, Miami Beach, FL, USA, 2018, together with Dr. Seyed Mehran Dibaji and Prof. Anuradha M. Annaswamy, MIT, USA, and Dr. Mohammad Pirani, KTH.

Organized invited sessions "Event-triggered control for linear systems," "Event-triggered control over communication networks," and "Event-triggered control: Robust and learning-based schemes" at the IEEE Conference on Decision and Control, Miami Beach, FL, USA, 2018, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized industry session "Cyber-secure industrial control systems" at the IEEE Conference on Control Technology and Applications, Copenhagen, Denmark, 2018, together with Prof. Henrik Sandberg, KTH.

Organized invited session "Cybersecurity of systems" at the International Symposium on Mathematical Theory of Networks and Systems, Hong Kong, 2018, together with Dr. Michelle Chong, KTH, and Prof. Margreta Kuijper, University of Melbourne, Australia.

Organized invited sessions "Decentralized and distributed event-triggered control", "Event-triggered and self-triggered control I", and "Event-triggered and self-triggered control II" at the IEEE Conference on Decision and Control, Melbourne, Australia, 2017, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized invited session "Control and optimization for emerging power networks" at the IEEE Conference on Decision and Control, Melbourne, Australia, 2017, together with Prof. Tao Yang, University of North Texas, TX, USA, and Prof. Na Li, Harvard University, MA, USA.

Organized invited track "Event-triggered and self-triggered control" at the IFAC World Congress, Toulouse, France, 2017, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized invited sessions "Event-triggered and self-triggered control for linear systems", "Event-triggered and self-triggered control for multi-agent and networked systems", and "Event-triggered and self-triggered control based on unreliable and quantized information" at the IEEE Conference on Decision and Control, Las Vegas, NV, USA, 2016, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized invited sessions "Event-triggered and self-triggered control and estimation", "Event-triggered control based on unreliable and quantized information", and "Event-triggered control of networked systems" at the IEEE Conference on Decision and Control, Osaka, Japan, 2015, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized invited sessions "Event-triggered and self-triggered control" and "Output-based Event-triggered Control" at the IEEE Conference on Decision and Control, Los Angeles, CA, USA, 2014, together with Prof. Maurice Heemels, TU Eindhoven, the Netherlands, and Prof. Sandra Hirche, TU Munich, Germany.

Organized workshop "Extremum seeking, Lie bracket approximations and applications" at the IEEE Conference on Decision and Control, Los Angeles, CA, USA, 2014, together with Mr. Hans-Bernd Dürr, Dr. Christian Ebenbauer, Prof. Miroslav Krstic, Dr. Alexander Scheinker, and Dr. Milos S. Stankovic.

Organized invited session "Control of energy efficient buildings: novel control strategies and experimental evaluations" at the IFAC World Congress, Cape Town, South Africa, 2014, together with Dr. Alessandra Parisio and Dr. Damiano Varagnolo.

Organized invited session "Event-triggered and self-triggered control" at the IEEE Conference on Decision and Control, Florence, Italy, 2013, together with Prof. Sandra Hirche, TU Munich, Germany, and Prof. Maurice Heemels, TU Eindhoven, the Netherlands.

Organized invited sessions "Networked event-based control" and "Optimal event-based control" at the IEEE Conference on Decision and Control, Maui, HI, USA, 2012, together with Prof. Sandra Hirche, TU Munich, Germany, and Prof. Maurice Heemels, TU Eindhoven, the Netherlands.

Organized invited session "Network structure identification" at the IEEE Conference on Decision and Control, Maui, HI, USA, 2012, together with Dr. Damiano Varagnolo, KTH, Sweden.

Organized invited session "Networked systems: Sensing, scheduling, estimation, and control over networks" at the IEEE Conference on Decision and Control, Maui, HI, USA, 2012, together with Dr. Ling Shi, Hong Kong University of Science and Technology, Hong Kong.

Organized invited sessions "Recent advances in event-triggered control I" and "Recent advances in event-triggered control II" at the IEEE Conference on Decision and Control, Orlando, FL, USA, 2011, together with Prof. Sandra Hirche, TU Munich, Germany, and Prof. Maurice Heemels, TU Eindhoven, the Netherlands.

Organized invited session "Recent advances in event-based control" at the IEEE Conference on Decision and Control, Atlanta, GA, USA, 2010, together with Dr. Sandra Hirche, TU Munich, Germany.

Organized invited session "Wireless control systems" at the European Control Conference, Budapest, Hungary, 2009, together with Dr. Maurice Heemels, Technische Universiteit Eindhoven, the Netherlands.

Organized invited session "Sensing, estimation, consensus and control over networks" at the IFAC World Congress, Seoul, 2008, together with Dr. Ling Shi and Prof. Richard Murray, California Institute of Technology, USA.

Organized invited session "Automotive control and estimation using look-ahead road information" at the IFAC World Congress, Seoul, 2008, together with Prof. Lars Nielsen, Linköping University, Sweden.

Organized invited session "Advances in networked systems: asynchronous control, estimation and synchronization problems" at the IFAC World Congress, Seoul, 2008, together with Dr. Mongi Ben Gaid and Prof. Carlos Canudas-de-Wit, INRIA and CNRS, France.

Organized invited session "Industrial control over wireless networks" at the IEEE Conference on Control Applications, Singapore, 2007, together with Dr. Mikael Johansson, Royal Institute of Technology, Sweden.

Organized mini-tutorial session "Toward a component-based framework for networked control" at the European Control Conference, Kos, Greece, 2007, together with Prof. John Lygeros, ETH Zurich, Switzerland.

Organized invited session "Advances in networked controlled systems" at the American Control Conference, Minneapolis, Minnesota, USA, 2006, together with Prof. Carlos Canudas de Wit, Institut National Polytechnique de Grenoble, France.

Organized half-day workshop tutorial on "Advances in Networked Autonomous Vehicles: Technologies, Tools, and Case Studies" at IEEE International Conference on Robotics and Automation, Orlando, Florida, USA, 2006, together with Mr. Joao Borges de Sousa, University of Porto, Portugal.

Organized invited session "Oscillations in nonsmooth feedback systems" at IFAC World Congress, Barcelona, Spain, 2002, together with Dr. Mario di Bernardo, University of Bristol, U.K.

Organized invited session "Modeling of hybrid systems: Theory and computational tools" at IEEE Conference on Decision and Control, Phoenix, AZ, 1999, together with Dr. John Lygeros, UC Berkeley.

Presented tutorial lecture on simulation of hybrid systems at the workshop "Hybrid systems: Modeling, analysis, and control", 38th IEEE Conference on Decision and Control, Phoenix, AZ, 1999 [CM-9].

Membership of Committees and Professional Societies

Fellow of IEEE. Member of ACM, IIASA Society, and SIAM.

Teaching Experience

Taught several regular and intensive courses at undergraduate and postgraduate level for academic and industrial audiences in Sweden and abroad, mainly in the area of systems and control as described below. Regularly invited lecturer to international PhD courses and summer school, see section on invited lectures above.

Member of the Steering Committee and member of the Board of the International Curriculum Option (ICO) of Doctoral Studies in Hybrid Control for Complex, Distributed and Heterogeneous Embedded Systems. Coordinated by University of Pisa, Italy.

Lecturer in undergraduate/graduate course 2E1245 Hybrid and Embedded Control Systems (2004–2006). Full course development including all course material (lecture notes, exercises, and homeworks).

Lecturer in undergraduate/graduate course 2E1262 Nonlinear Control (2000–2003) at Royal Institute of Technology, inluding development of lecture notes, exercises, and homeworks. Lecturer in graduate course EECS291E Hybrid Systems (2000) at University of California, Berkeley (lecture notes, homeworks, projects). Lecturer in undergraduate course FRT075 Nonlinear and Servo Systems (1998) at Lund University (lecture notes, exercises).

Lecturer at CDC workshop, see Conference Services.

Lecturer in three-day industrial control course at ABB Power Systems AB in Ludvika (1998), including development of course material and computer exercises on control of high voltage direct current link.

Course development and teaching assistant in 2E1241 Automatic Control Project Course (2001) and 2E1700 Electro Project (2001) at Royal Institute of Technology. Teaching assistant in the graduate and undergraduate courses System Identification (1995–1997), Adaptive Control (1994–1995), Computer-Controlled Systems (1993), Automatic Process Control (1993), Automatic Control (1992–1993,1996), Linear Algebra (1990–1991), Calculus 1–3 (1990–1992). The teaching included supervising problem solving sessions and examination. In the control courses it also included laboratory exercises, supervising course projects, and development of course material. Developed a short preparation course for the basic course in automatic control. Teaching assistant in laboratory exercises in Physics (1989–1990). All courses at Lund University.

Developed new multivariable laboratory process called the Quadruple-Tank Process, which is now used in several control courses and research projects worldwide including ETH Zurich, Switzerland (Prof. Manfred Morari); Linköping University, Sweden (Prof. Lennart Ljung); Lund University, Sweden (Prof. Karl Johan Åström); Pondicherry Engineering College, India (Prof. Ananda Natarajan); Royal Institute of Technology, Sweden (Prof. Bo Wahlberg); Universidad de Chile, Santiago, Chile, (Prof. Bernardo A. Leon de la Barra); Universidad Tcnica Federico Santa Mara, Valparaso, Chile (Prof. Mario E. Salgado); University of Calgary, Canada; University of Delaware, Newark, USA (Prof. Frank J. Doyle); University of Illinois, Urbana-Champaign (Prof. Richard D. Braatz); University of Newcastle, Australia (Prof. Graham Goodwin); University of Sevilla, Spain (Prof. Eduardo Camacho); University of Stuttgart, Germany (Prof. Frank Allgöwer); Tampere University of Technology , Finland (Dr. Antti Jaatinen); and Technion, Haifa, Israel (Prof. Zalman Palmor and Dr. Per-Olof Gutman). A commercial version was developed together with Quanser Consulting Inc., Markham, Canada (Dr. Jacob Apkarian).

Reported achieved advances in teaching control curriculum at IFAC World Congress 1996 and at IEEE CDC 1999.

Pedagogical Education

Course on supervision of doctoral students (*docentkurs*) at Royal Institute of Technology, Sep 2002.

Pedagogical course on teaching and presentation of research (*Presentationsteknik*) at Lund University, 1993.

Further Particulars

Administration

Ph.D. student representative on the Board of Engineering Physics, Lund University, July 1992–June 1996.

Ph.D. student representative on the Board of Department of Automatic Control, Lund University, November 1994–June 1998.

Member of the the board of home owner's association St. Jacob in Lund March 1993–March 1998, vice-chair March 1997–March 1998. Turnover 4 MSEK and assets 40 MSEK.

Military Service

15 months compulsory military service as second lieutenant (*fänrik*) in the Swedish Army, anti-tank forces, June 1987–August 1988.

References

Prof. Karl Johan Åström, Department of Automatic Control, Lund University, Box 118, SE–221 00 Lund, Sweden, `kja@control.lth.se`.

Prof. Shankar Sastry, Department of EECS, UC Berkeley, 269M Cory Hall, Berkeley, CA 94720–1770, USA, Phone +1 510 642-1857, `sastry@eecs.berkeley.edu`.

Prof. Richard Murray, Control and Dynamical Systems, California Institute of Technology, Pasadena, CA 91106, USA, `murray@cds.caltech.edu`.

Prof. Anders Rantzer, Department of Automatic Control, Lund University, Box 118, SE–221 00 Lund, Sweden, Phone +46 46 2228778, `rantzer@control.lth.se`.

Publications of Karl H. Johansson

Theses

[T-1] K. H. Johansson and L. Wilhelmsson. Two step noise reduction with application to AEP-estimation. Master thesis, Department of Telecommunication Theory, Lund University, 1991. In Swedish.

[T-2] K. H. Johansson. *Relay feedback and multivariable control*. PhD thesis, Dept. of Automatic Control, Lund University, Sweden, October 1997.

Journal Papers

[JP-1] K. H. Johansson, A. Rantzer, and K. J. Åström. Fast switches in relay feedback systems. *Automatica*, 35(4):539–552, April 1999.

[JP-2] K. H. Johansson and A. Rantzer. Decentralized control of sequentially minimum phase systems. *IEEE Transactions on Automatic Control*, 44(10):1909–1913, 1999.

[JP-3] K. H. Johansson, M. Egerstedt, J. Lygeros, and S. Sastry. On the regularization of Zeno hybrid automata. *System & Control Letters*, 38:141–150, 1999.

[JP-4] K. H. Johansson. The Quadruple-Tank Process—a multivariable laboratory process with an adjustable zero. *IEEE Transactions on Control Systems Technology*, 8(3):456–465, 2000.

[JP-5] M. di Bernardo, K. H. Johansson, and F. Vasca. Self-oscillations and sliding in relay feedback systems: Symmetry and bifurcations. *International Journal of Bifurcations and Chaos*, 11(4):1121–1140, April 2000.

[JP-6] J. Zhang, K. H. Johansson, J. Lygeros, and S. Sastry. Zeno hybrid systems. *International Journal of Robust and Nonlinear Control*, 11(5):435–451, 2001.

[JP-7] K. H. Johansson. Interaction bounds in multivariable control systems. *Automatica*, 38(6):1045–1051, 2002.

[JP-8] K. J. Åström, K. H. Johansson, and Q. G. Wang. Design of decoupled PI controllers for two-by-two systems. *IEE Proceedings D—Control Theory and Application*, 149(61):74–81, 2002. Invited paper to special issue on PID control.

[JP-9] K. H. Johansson, A. Barabanov, and K. J. Åström. Limit cycles with chattering in relay feedback systems. *IEEE Transactions on Automatic Control*, 47(9):1414 – 1423, 2002.

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[JP-11] L. Iannelli, K. H. Johansson, U. Jönsson, and F. Vasca. Dither for smoothing relay feedback systems. *IEEE Transactions on Circuits and Systems, Part I*, 50(8):1025–1035, 2003.

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[JP-13] K.-H. Cho, K. H. Johansson, and O. Wolkenhauer. A hybrid systems framework for cellular processes. *BioSystems*, 80:273–282, 2005.

[JP-14] A. Balluchi, L. Benvenuti, S. Engell, T. Geyer, K. H. Johansson, F. Lamnabhi-Lagarrigue, J. Lygeros, M. Morari, G. Papafotiou, A. L. Sangiovanni-Vincentelli, F. Santucci, and O. Stursberg. Hybrid control of networked embedded systems. *European Journal of Control*, 11(4–5), 2005. Invited paper to special issue on Fundamental Issues in Control.

[JP-15] L. Iannelli, K. H. Johansson, U. Jönsson, and F. Vasca. Averaging of nonsmooth systems using dither. *Automatica*, 42(4):669–676, 2006.

[JP-16] N. Pettersson and K. H. Johansson. Modeling and control of auxilary loads in heavy vehicles. *International Journal of Control*, 79(5):479–495, 2006. Special issue on advanced design methodologies in automotive control. Invited paper.

[JP-17] K.-E. Årzén, A. Robertsson, D. Henriksson, M. Johansson, H. Hjalmarsson, and K. H. Johansson. Conclusions of the ARTIST2 roadmap on control of computing systems. *ACM SIGBED Review*, 3(2), 2006. Special issue on feedback control implementation and design in computing systems and networks.

[JP-18] J. Borges de Sousa, K. H. Johansson, J. Silva, and A. Speranzon. A verified hierarchical control architecture for coordinated multi-vehicle operations. *International Journal of Adaptive Control and Signal Processing*, 21(2–3):159–188, 2007. Special issue on autonomous adaptive control of vehicles.

[JP-19] K.-E. Årzén, A. Bicchi, G. Dini, S. Hailes, K. H. Johansson, J. Lygeros, and A. Tzes. A component-based approach to the design of networked control systems. *European Journal of Control*, 13(2–3), 2007. Invited paper.

[JP-20] K. H. Johansson. Book review of Relay Feedback by Wang et al. *IEEE Control Systems Magazine*, 27(3):101–103, 2007.

[JP-21] K. H. Johansson. Discussion on: "stabilization of networked control system with time delays and data-packet losses". *European Journal of Control*, 2007.

[JP-22] B. Johansson, A. Speranzon, M. Johansson, and K. H. Johansson. On decentralized negotiation of optimal consensus. *Automatica*, 44(4):1175–1179, 2008.

[JP-23] L. Iannelli, K. H. Johansson, U. Jönsson, and F. Vasca. Subtleties in the averaging of a class of hybrid systems with applications to power converters. *Control Engineering Practice*, 16(8):961–975, 2008. Special issue on hybrid systems.

[JP-24] A. Speranzon, C. Fischione, K. H. Johansson, and A. Sangiovanni-Vincentelli. A distributed minimum variance estimator for wireless sensor networks. *IEEE Journal on Selected Areas in Communications*, 26(4), 2008.

[JP-25] M. Lindhe and K. H. Johansson. Using robot mobility to exploit multipath fading. *IEEE Wireless Communications*, 16(1), 2009.

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[JP-28] A. Bemporad, S. Di Cairano, E. Henriksson, and K. H. Johansson. Hybrid model predictive control based on wireless sensor feedback: an experimental study. *International Journal of Nonlinear and Robust Control*, 20(2):209–225, 2009.

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[JP-30] L. Shi, A. Capponi, K. H. Johansson, and R. Murray. Resource optimization in a wireless sensor network with guaranteed estimator performance. *IET Control Theory & Applications*, 4(5):710–723, 2010.

[JP-31] D. Dimarogonas and K. H. Johansson. Bounded control of network connectivity in multi-agent systems. *IET Control Theory & Applications*, 4(8):1330–1338, 2010.

[JP-32] D. Dimarogonas and K. H. Johansson. Stability analysis for multi-agent systems using the incidence matrix: quantized communication and formation control. *Automatica*, 46(4):695–700, 2010.

[JP-33] A. Tang, L. L. H. Andrew, K. Jacobsson, K. H. Johansson, H. Hjalmarsson, and S. H. Low. Queue dynamics with window flow control. *IEEE/ACM Transactions on Networking*, 18(5):1422–1435, 2010.

[JP-34] P. Sahlholm and K. H. Johansson. Road grade estimation for look-ahead vehicle control using multiple measurement runs. *Control Engineering Practice*, 18(11):1328–1341, 2010.

[JP-35] L. Bao, M. Skoglund, and K. H. Johansson. Iterative encoder-controller design for feedback control over noisy channels. *IEEE Transactions on Automatic Control*, 56(2):265–278, 2011.

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[JP-38] R. Alur, A. D'Innocenzo, K. H. Johansson, G. J. Pappas, and G. Weiss. Compositional modeling and analysis of multi-hop control networks. *IEEE Transactions on Automatic Control*, 56(10):2345–2357, 2011. Special Issue on Wireless Sensor and Actuator Networks.

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[JP-46] P. Di Marco, P. Park, C. Fischione, and K. H. Johansson. Analytical modeling of multi-hop IEEE 802.15.4 networks. *IEEE Transactions on Vehicular Technology*, 61(7):3191–3208, 2012.

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[JP-48] D. V. Dimarogonas, E. Frazzoli, and K. H. Johansson. Distributed event-triggered control for multi-agent systems. *IEEE Transactions on Automatic Control*, 57(5):1291–1297, 2012.

[JP-49] G. Shi and K. H. Johansson. Randomized optimal consensus of multi-agent systems. *Automatica*, 48(12):3018–3030, 2012.

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[JP-51] G. A. Kiener, D. Lehmann, and K. H. Johansson. Actuator saturation and anti-windup compensation in event-triggered control. *Discrete Event Dynamic Systemss: Theory and Applications*, 2012.

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