

Florian Dörfler

Associate Professor for Complex Systems Control

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Academic Positions

- Aug'19–current **ASSOCIATE PROFESSOR**, *Swiss Federal Institute of Technology (ETH) Zürich, Switzerland*
Department of Information Technology and Electrical Engineering
- Jan'21–Jan'22 **DEPUTY DEPARTMENT HEAD**, *Swiss Federal Institute of Technology (ETH) Zürich, Switzerland*
Department of Information Technology and Electrical Engineering
- July'14–July'19 **ASSISTANT PROFESSOR**, *Swiss Federal Institute of Technology (ETH) Zürich, Switzerland*
Department of Information Technology and Electrical Engineering
- Sep'13–July'14 **ASSISTANT PROFESSOR**, *University of California at Los Angeles (UCLA), United States*
Department of Electrical Engineering

Education

- Sep'09–Sep'13 **PH.D.** in Mechanical Engineering, *University of California at Santa Barbara*
Advisor: Francesco Bullo
Ph.D. thesis: *Dynamics and Control in Power Grids and Complex Oscillator Networks*
- Oct'03–Dec'08 **DIPLOMA** in Engineering Cybernetics, *University of Stuttgart*
Advisors: Frank Allgöwer (University of Stuttgart) and Bruce Francis (University of Toronto)
Diploma thesis: *Geometric Analysis of the Formation Problem for Autonomous Robots*
Student thesis: *Port-Hamiltonian Systems – Stability Analysis and Application in Process Control*

Research Interests

My general research interests are centered around system theory, control, and optimization in complex, cyber-physical, and network systems primarily with applications to power systems.

Notable Awards

- 2021 Best Paper Award at IEEE International Conference on Intelligent Transportation Systems
(as co-author and advisor)
- 2020 EUCA European Control Award
(distinguished European researcher under the age of 40 in systems and control)
- 2020 IFAC Manfred Thoma Medal
(distinguished researcher and/or engineer under the age of 40 in systems and control)
- 2020 Best Student Paper Award at IEEE Conference on Decision and Control
(as co-author and advisor)
- 2020 Outstanding Student Paper Award at IEEE Conference on Decision and Control
(as co-author and advisor)
- 2020 Best Paper Award at IEEE PES General Meeting
(as co-author and advisor)
- 2019 Best Student Paper Award at European Control Conference
(as co-author and advisor)
- 2017 Basil Papadias Best Student Paper Award at IEEE PES PowerTech Conference
(as co-author and advisor)
- 2016 IEEE Circuits and Systems Guillemin-Cauer Best Paper Award
(awarded for best paper in IEEE Transactions on Circuits and Systems 2016)
- 2016 Top Five Finalist for Best Student Paper Award at American Control Conference
(as co-author and advisor)
- 2015 UC Santa Barbara Mechanical Engineering Department Best PhD Award
(in recognition of outstanding achievements during PhD studies)
- 2014 IFAC Automatica Best Paper Award
(awarded for best application paper 2012–2014)
- 2013 Top Five Finalist for Best Student Paper Award at European Control Conference
(as co-author and co-advisor)
- 2011 O. Hugo Schuck Best Paper Award awarded by American Automatic Control Council
(awarded for theoretical contributions at one of the largest annual control conferences)
- 2010 Best Student Paper Award at American Control Conference
(awarded at one of the largest annual control conferences)
- 2008 Diplom awarded with special distinction by the University of Stuttgart
(institutional award)

Best Thesis Awards of Students

- 2021 ETH Medal (best master thesis award) for Ezzat Elokda
- 2020 ETH Medal (best master thesis award) for Verena Häberle
- 2020 Schweizer Gesellschaft für Automatik (SGA) best master thesis award for Verena Häberle
- 2020 Willi-Studer Preis (departmental top of the year award) for Nicolas Lanzetti
- 2020 ETH Medal (best master thesis award) for Nicolas Lanzetti

- 2019 ABB Research Award (best master thesis award) for Liviu Aolaritei
- 2017 Willi-Studer Preis (departmental top of the year award) for Yannick Meier
- 2017 ETH Medal (best master thesis award) for Sebastian Curi
- 2017 ETH Medal (best master thesis award) for Yannick Meier

Scholarships

- 2011–2012 Peter J. Frenkel Foundation Fellowship
(one of two campus-wide awards per academic year)
- 2009–2013 Regent’s Special International Fellowship
(the Regent’s scholarships are the most prestigious UC scholarship awards)
- 2008 Baden-Württemberg Stipendium Renewed
(national scholarship)
- 2007–2008 Baden-Württemberg Stipendium
(national scholarship)
- 2007–2008 Ontario Baden-Württemberg Program Fellow
(national scholarship)

Research Experience

- July’19–current **ASSOCIATE PROFESSOR**, *Swiss Federal Institute of Technology (ETH) Zürich*
at *Automatic Control Laboratory*
- Mar’20–Jul’20 **VISITING PROFESSOR**, *KTH Stockholm*
at *Division of Decision and Control Systems*
- July’14–July’19 **ASSISTANT PROFESSOR**, *Swiss Federal Institute of Technology (ETH) Zürich*
at *Automatic Control Laboratory*
- Sep’13–July’14 **ASSISTANT PROFESSOR**, *University of California at Los Angeles*
at *Department of Electrical Engineering*
- Mar’13–July’14 **VISITING PROFESSOR**, *California Institute of Technology*
at *Rigorous Systems Research Group* hosted by Steven Low and Adam Wierman
- Apr’09–Sep’13 **Graduate Student Researcher** at *University of California at Santa Barbara*
at *Center for Control, Dynamical Systems, and Computation* advised by Francesco Bullo
- May’11–Jul’11 **Graduate Student Researcher** at *Los Alamos National Laboratories*
at *Center for Nonlinear Studies* advised by Michael Chertkov and Scott Backhaus
- Jun’12–Aug’12
- Aug’08–Dec’08 **Corporate Research Intern** at *EADS Astrium, Friedrichshafen, Germany*
at *Attitude and Orbit Control Group* advised by Jochen M. Rieber and Trond D. Krøvel
- Aug’07–Aug’08 **Graduate Student Researcher** at *University of Toronto*
at *Systems Control Group* advised by Bruce Francis
- May’07–Jul’07 **Student Research Assistant** at *University of Stuttgart*
at *Institute for Systems Theory and Automatic Control* advised by Jørgen K. Johnsen and Frank Allgöwer

Educational Activities

LECTURING

- 2015–current *Control Systems I*
- 2015–current *ETH Control Seminar Series*
- 2019 *Signals and Systems II*
- 2015–2018, 2021 *Distributed Systems and Control*
- 2014 *Linear Systems: State-Space Approach (at UCLA)*
- 2014 *Distributed Systems and Control (at UCLA)*

GRADUATE SCHOOLS

- 2021 “Optimization and Control of Infrastructure Networks” Summer School (virtual)
- 2020 EECI Graduate School on “Control and Optimization of Autonomous Power Systems”, KTH Stockholm, Sweden.
- 2019 Autumn School DFG-Schwerpunktprogramm 1984 “Hybrid and multimodal energy systems”, Karlsruher Institut für Technologie (KIT), Karlsruhe, Germany.
- 2017 “Innovative controls for renewable source integration into smart energy systems” (INCITE) European Summer School, Barcelona, Spain
- 2016 DISC Winter Course on “Power Systems Control - from Circuits to Economics”, Groningen, Netherlands
- 2015 Grid Science Winter School & Conference, Santa Fe, United States
- 2015 MSE Winter School Holistic Modeling and Control of Energy Systems, Ohlstadt, Germany

DIDACTICS

- 2016 Speaker at ETH LET teaching event “Increasing Interactivity”

Advising

Doctoral Students

- May'21–current Sophie Hall
- Nov'20–current Lenart Treven (co-advised with Andreas Krause)
- Nov'20–current Andrea Martin (co-advised with Giancarlo Ferrari Trecate and John Lygeros)
- Nov'20–current Jean-Sébastien Brouillon (co-advised with Giancarlo Ferrari Trecate)
- Oct'20–current Ezzat Elokda (co-advised with Saverio Bolognani, Andrea Censi, and Emilio Frazzoli)
- Oct'20–current Alessandro Zanardi (co-advised with Saverio Bolognani, Andrea Censi, and Emilio Frazzoli)
- Oct'20–current Michael Schneeberger (co-advised with Silvia Mastellone)
- June'20–current Verena Häberle
- Oct'19–current Nicolas Lanzetti
- Feb'19–current Miguel Picallo Cruz
- Jan'19–current Irina Subotic (co-advised with Dominic Groß)
- Oct'18–current Lukas Ortmann (co-advised with Saverio Bolognani)
- Mar'18–current Liviu Aolaritei

Sep'17–current Jeremy Coulson (co-advised with John Lygeros)
Aug'17–current Ali Tayyebi-Khameneh (externally supervised from Austrian Institute of Technology)

Postdoctoral Researchers

Nov'21–current Xiuqiang He
Oct'20–current Alberto Padoan (co-advised with John Lygeros)
Sep'20–current Linbin Huang
Sep'20–current Giuseppe Belgioioso

Senior Scientist

Jan'16–current Saverio Bolognani

Alumni

Feb'20–current Michael Fisher
now Assistant Professor at University of Waterloo
Oct'21–Dec'21 Henk van Waarde
now Assistant Professor at University of Groningen
Oct'20–Aug'21 Soroosh Shafiee
now postdoc at Carnegie Mellon University
Jun'18–Jun'21 Wenjun Mei
now Assistant Professor at Peking University, China
Jan'16–Apr'21 Nicolò Pagan
now postdoc at Universität Zürich and ETH Zürich
Apr'15–Jan'19 Adrian Hauswirth
now Research Scientist at the Data Science and Analytics team of Fortum
Aug'18–Jul'20 Robin Delabays
now postdoc at UC Santa Barbara
Jan'15–Dec'19 Catalin Arghir
now Engineer at RUAG Space
Jan'16–Dec'19 Dominic Groß
now Assistant Professor at University of Wisconsin, Madison, United States
Aug'16–Jan'18 Marcello Colombino
now Assistant Professor at McGill University, Montreal, Canada
Apr'16–Dec'16 Theodor Borsche
now at Boston Consulting Group, Oslo, Norway
July'14–July'19 Bala Kameshwar Poolla
now postdoc at UC Berkeley
Jan'15–Jan'16 Saverio Bolognani
now Senior Scientist at ETH Zürich

Advisor for Long-Term Visiting Scientists

2022 Eduardo Prieto, Julian Berberich
2021 Meng Chen, Eduardo Prieto, Keith Moffat, Ivan Markovskiy, Zhiyu He
2020 Matteo Tachi, Paolo Gherardo Carlet, Andrea Favato, Ivan Markovskiy
2019 Linbin Huang, Paolo Gherardo Carlet, Andrea Favato
2018 Linbin Huang, Miguel Picallo Cruz

- 2017 Enric Sánchez Sánchez, Robin Delabays
- 2016 Xiaofan Wu, Wei Chen
- 2015 Spyros Chatzivasileiadis, Nima Monshizadeh, John W. Simpson-Porco, Marco Todescato, Diego Romeres

Graduate Student Mentor

Nov'13–current approximately 60 master & semester theses at ETH Zürich and UCLA

Research Awards

- 2020 SNF/FW Weave Project 200021E_20397: *From model-based to data-driven design: Signal processing and control of noisy nonlinear systems*
- 2020 SNF NCCR Automation 51NF40_180545
- 2020 European Commission H2020 #883985: *POWering SYstem flexibiliTY in the Future through RES – POSYTYF*
- 2019 KAUST Office of Sponsored Research, Award No. OSR-2019-CoE-NEOM-4178.11: *GRIDX: The Autonomous Digital Grid*
- 2019 SNF Assistant Professor Energy Grant #PYAPP2_160573/2: mobility funds
- 2019 SNF Scientific Exchanges IZSEZo_185442: *International Workshop on “Future Electric Power Systems”*
- 2019 Swiss Federal Office of Energy (SFOE) Research Program Pilot-, Demonstrations- und Leuchtturmprojekte: *Renewable Management and Real-Time Control Platform (ReMaP) (SI/501810-01)*
- 2018 SNF Scientific Exchanges IZSEZo_183110: *Workshop on “Vistas in Control”*
- 2018 Swiss Federal Office of Energy (SFOE) Research Program Grids SI/501708: *a UNIfied COntrol framework for Real-time power system operation* (note: led by Saverio Bolognani)
- 2018 Swiss Federal Office of Energy (SFOE) Research Program Grids SI/501707: *Grid-forming control of renewable generation and power electronics* (note: led by Dominic Groß)
- 2018 SATW Scientific Conference Funding F-2018-010: *International Workshop on “Vistas in Control”*
- 2017 ETH Zürich and ABB Schweiz AG Contract #12376: *Decentralized Control of Power Converters*
- 2016 European Commission H2020 #691800: *Massive InteGRATion of power Electronic devices – MIGRATE*
- 2016 SNF Scientific Conference Funding 20CO21_171241/1: *International Workshop on “Future Electric Power Systems”*
- 2015 ETH Seed Project SP-ESC 2015-07(4): *Novel control approaches for low-inertia power grids*
- 2015 SNF Assistant Professor Energy Grant #PYAPP2_160573: *Plug-and-Play Control & Optimization in Microgrids*

- 2014 NSF EPCN Medium #1406891: *Virtual Oscillator Control for Microgrids*
(returned and declined when moving from UCLA to ETH Zürich)
- 2011 NSF CPS Medium:#1219917: *The Cyber-Physical Challenges of Transient Stability and Security in Power Grids* (contributed as consultant)

Total amount of competitive personal third-party funding acquired thus far: 6015647.42 CHF

Professional Service

SOCIETY LEADERSHIP

- 2021–current Council member (treasurer) of the *European Control Association*

EVENT ORGANIZER/CO-ORGANIZER

- 2022 9th IFAC Workshop on *Distributed Estimation and Control in Networked Systems* (NecSys), Zürich, Switzerland
- 2022 Conference on *Future Electric Power Systems and the Energy Transition*, Champéry, Switzerland
- 2021 Workshop on *Control for Autonomous Cities*, IEEE Conference on Decision and Control, Austin, TX, United States
- 2020 Workshop on Emerging Topics in Control of Power Systems, Stockholm, Sweden
- 2019 Conference on *Future Electric Power Systems and the Energy Transition*, Champéry, Switzerland
- 2019 Publicity Chair *ACM e-Energy Conference*, Phoenix, AZ, United States, June, 2019
- 2018 Vistas in Control: ETH Control Workshop
- 2018–2019 EECI International Graduate School on Control, ETH Zürich
- 2017 Conference on *Future Electric Power Systems and the Energy Transition*, Champéry, Switzerland
- 2016 EECI International Graduate School on Control, ETH Zürich
- 2015 MSE Winter School Holistic Modelling and Control of Energy Systems, Ohlstadt, Germany.
- 2011 Santa Barbara Control Workshop 2011

EDITORIAL SERVICE (JOURNALS)

- 2021–current Editorial Advisory Board of International Journal of Control
- 2020–current Editorial Board of Annual Reviews in Control
- 2018–current Associate Editor for Automatica
- 2016 Guest Editor for IEEE Transactions on Smart Grid special issue “Distributed Control and Efficient Optimization Methods for Smart Grid”

TECHNICAL PROGRAM COMMITTEES (CONFERENCES)

2021	4th Annual Learning for Dynamics & Control Conference (L4DC)
2021	Conference on Decision and Control (CDC)
2020	3rd Annual Learning for Dynamics & Control Conference (L4DC)
2020	Conference on Decision and Control (CDC)
2019	IFAC World Congress
2019	IEEE Global Conference on Signal and Information Processing (GlobalSIP)
2019	IEEE International Conference on Smart Grid Synchronized Measurements and Analytics (SGSMA)
2019	Conference on Decision and Control (CDC)
2019	IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)
2018	Iranian Smart Grid Conference (SGC)
2018	IEEE Global Conference on Signal and Information Processing (GlobalSIP)
2018	IEEE International Conference on Smart Grid Communications (SmartGridComm)
2018	IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)
2018	International School and Conference on Network Science (NetSci)
2017	“Data Mining for Cyber-physical and Industrial Systems” Workshop at IEEE ICDM
2017	IEEE International Conference on Smart Grid Communications (SmartGridComm)
2017	Greenmetrics (Sigmetrics) Workshop
2016	Workshop on Complex Networks
2015	IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)
2014	IEEE International Conference on Smart Grid Communications (SmartGridComm)

TECHNICAL REVIEWER

Journals	<p><i>Control systems:</i> IEEE Transactions on Automatic Control ◦ IEEE Transactions on Control of Network Systems ◦ IEEE Transactions on Control Systems Technology ◦ Automatica ◦ SIAM Journal on Control and Optimization ◦ Systems and Control Letters ◦ European Journal of Control ◦ IEEE Transactions on Circuits and Systems Part II ◦ Journal of Process Control ◦ IEEE Control Systems Magazine ◦ IEEE Control Systems Letters ◦ ACM Transactions on Cyber-Physical Systems</p> <p><i>Power systems & energy:</i> IEEE Transactions on Power Systems ◦ IEEE Transactions on Energy Conversion ◦ IEEE Transactions on Power Delivery ◦ IEEE PES Letters ◦ International Transactions on Electrical Energy Systems ◦ International Journal of Electrical Power and Energy Systems ◦ Sustainable Energy, Grids and Networks ◦ Energies</p> <p><i>Dynamical systems:</i> Physica D ◦ SIAM Journal on Applied Dynamical Systems ◦ Chaos: An Interdisciplinary Journal of Nonlinear Science ◦ Nonlinearity ◦ Nonlinear Analysis: Hybrid Systems ◦ Communications in Mathematical Sciences ◦ Journal of Statistical Physics ◦ Journal of Mathematical Physics ◦ Applied Mathematical Modeling ◦ New Journal of Physics ◦ Journal of Statistical Physics</p>
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Computer science & discrete mathematics: IEEE Transactions on Network Science and Engineering ◦ SIAM Journal on Applied Mathematics ◦ Discrete Applied Mathematics ◦ Journal of Complexity

Miscellaneous journals: Proceedings of the National Academy of Sciences ◦ Nature Physics ◦ Nature Communications ◦ Nature Scientific Reports ◦ Physical Review Letters ◦ Physical Review X ◦ Proceedings of the IEEE ◦ PLOS ONE ◦ Neurocomputing ◦ Robotics and Autonomous Systems ◦ IEEE Transactions on Industrial Informatics

Conferences American Control Conference ◦ IEEE Conference on Decision and Control ◦ European Control Conference ◦ Multi-conference on Systems and Control ◦ IFAC World Congress ◦ IFAC Workshop on Distributed Estimation and Control in Networked Systems ◦ IFAC Conference on Modeling, Identification and Control of Nonlinear Systems ◦ IFAC Conference on Analysis and Control of Chaotic Systems ◦ IFAC Symposium on Nonlinear Control Systems ◦ IFAC Conference on Analysis and Control of Chaotic Systems ◦ Mediterranean Conference on Control and Automation ◦ International Symposium on Mathematical Theory of Networks and Systems ◦ PowerTech ◦ Power Systems Computation Conference ◦ Indian Control Conference ◦ Africon ◦ IEEE Global Conference on Signal and Information Processing

Books Springer ◦ Birkhäuser ◦ CRC Press, Taylor & Francis Group ◦ Elsevier ◦ Institution of Engineering & Technology ◦ NowPublishers

REVIEW PANELS AND FUNDING COMMITTEES

2021 Helmholtz Association of German Research Centres

2021 German Research Foundation (DFG), Emmy Noether-Programm

2020 ERC Consolidator Grant Remote Referee

2019 National Research, Development and Innovation Office of Hungary

2017 Deutsche Bundesstiftung Umwelt (Promotionsstipendienprogramm)

2017 Chilean National Science and Technology Commission, FONDECYT

2017 German Research Foundation (DFG), Priority Program “Hybrid and multimodal energy systems: System theoretical methods for the transformation and operation of complex networks”

2017 Swiss National Science Foundation (SNSF) Ambizione Energy

2016 Swiss National Science Foundation (SNSF)

2016 Dutch-Indian Data Driven Science, Netherlands Organisation for Scientific Research (NWO)

2015 Energy System Integration - Planning, Operations and Societal Embedding, Netherlands Organisation for Scientific Research (NWO)

2015 Cyber Physical systems with Model Driven Architectures and resilience (CyPhyMedusa), French National Research Agency (ANR) and CHIST-ERA ERA-NET

2015 European PhD Award on Control for Complex and Heterogeneous Systems

2014 Scientific Independence of Young Researchers (SIR) 2014, Italian Ministry for Education University and Research (MIUR)

TECHNICAL COMMITTEES

- 2020–current *IFAC Technical Committee 1.5 Networked Systems*
- 2019–current *IEEE CSS TC on Smart Grid*
- 2016–current *Global Network of Synchrophasor Solutions Steering Committee/Consortium*

ORGANIZATION OF CONFERENCE SATELLITE EVENTS, WORKSHOPS, AND TUTORIALS

- 2020 Workshop on *Emerging challenges in stability, control, and optimization of power systems* at European Control Conference, St. Petersburg, Russia, May 2020
- 2019 Tutorial on *Distributed control and optimization for autonomous power grids* at European Control Conference, Naples, Italy, June 2019
- 2019 Panel Session on *Thinking Outside the "Black Box" - Analytical Foundations of Power System Research* at IEEE PES General Meeting, Atlanta, GA, USA
- 2016 Workshop on *Optimization and Control for Tomorrow's Power Systems* at European Control Conference, Aalborg, Denmark, June 2016
- 2012 Tutorial on *Synchronization in Coupled Oscillators: Theory and Applications* at IEEE Conference on Decision and Control, Maui, HI, USA, December 2012

CONFERENCE SESSION CHAIR/CO-CHAIR

- 2011–current IEEE Conference on Decision and Control ◦ European Control Conference ◦ American Control Conference ◦ Southern California Nonlinear Control Workshop ◦ International Symposium on Mathematical Theory of Networks and Systems ◦ IFAC World Congress ◦ multiple IFAC & IEEE PES conferences

Professional Affiliations

- 2009–current Senior Member, Institute for Electrical and Electronics Engineers (IEEE)
IEEE Societies: Control Systems Society (CSS) ◦ Power and Energy Society (PES)
- 2009–current Member, Society for Industrial and Applied Mathematics (SIAM)
- 2009–current Member, International Federation of Automatic Control (IFAC)

Talks, Seminars, and Presentations

PLENARIES AND INVITED TALKS

- Jan'22 Workshop on *Modelling for modern grids* at University of Nottingham, UK
- Dec'21 Workshop on *Towards a Systems Theory for Optimization Algorithms* at IEEE Conference on Decision and Control Conference, Austin, Texas
- Dec'21 Workshop on *Control for Autonomous Cities* at IEEE Conference on Decision and Control Conference, Austin, Texas
- Dec'21 *IFAC TC 2.4 Optimal Control Seminar*, Online
- Dec'21 *Sharif Control Seminar*, Sharif University, Teheran, Iran
- Dec'21 *ETH Energy Week*, Zürich, Switzerland

Dec'21 *Programma Gaspard Monge (PGMO) Days*, Plenary Talk, Orsay, France

Nov'21 *Data-Enabled Predictive Control*, UC San Diego Control Seminar, San Diego, United States

Oct'21 *Grid-forming control for low-inertia power systems* workshop, at 16th SICC International Tutorial Workshop, "Topics in nonlinear dynamics", online

Jun'21 *Modeling and Control of Power Grids at European Control Conference* workshop, at European Control Conference, Rotterdam, the Netherlands

Jun'21 *Stability of power systems with very high penetration of renewable generation* Panel, Powertech, Madrid, Spain

May'21 *Analysis of Data-driven Optimal Control* workshop at Oberwolfach, Germany

May'21 *Data-driven Analysis and Control of Dynamical Systems* workshop at SIAM Conference on Applications of Dynamical Systems, Portland, United States

Jan'21 Control Meets Learning Virtual Seminar Series

Dec'20 Peking University Control Seminar, China

Dec'20 Workshop on *Energy Systems and Optimization*, Atlanta, Georgia, 2020

Dec'20 Workshop on *Complexity in Energy Systems*, Conference on Complex Systems, Mallorca, Spain, 2020

Dec'20 Workshop on *Data-Driven Control* at IEEE Conference on Decision and Control Conference, Jeju Island. Republic of Korea

Nov'20 Distributed Estimation and Optimization in Dynamical Systems Online Seminar Series

Oct'20 IEEE Energy Conversion Congress and Exposition (ECCE) 2020 Special Session - Power Electronics Intensive Power Systems

Sep'20 Workshop on Emerging Topics in Control of Power Systems, Stockholm, Sweden

Aug'20 Workshop on *Autonomous Energy Systems* at National Renewable Energy Laboratory, Golden, CO, USA

Jun'20 Workshop on *Data-based Methods for Interconnected Systems: Theory and Algorithms* at IFAC World Congress, Berlin, Germany

May'20 KTH Digital Future Series, Stockholm

May'20 Plenary Talk, European Control Conference, St. Petersburg, Russia

May'20 Workshop on *Emerging challenges in stability, control, and optimization of power systems* at European Control Conference, St. Petersburg, Russia

May'20 Peking University Control Seminar, China

May'20 Control & Systems Theory Seminar, Technion, Israel

Apr'20 NetCon Seminar, KTH Stockholm

Jan'20 Symposium: Resilience and Performance of Networked Systems, Zürich, CH

Oct'19 International Conference on Control, Instrumentation, and Automation (ICCIA), Sanandaj, Kurdistan, Iran

Sep'19 Resilient Control of Infrastructure Networks, Torino, Italy

Jun'19 Mediterranean Conference on Control and Automation, Akko, Israel

Jun'19 Tutorial on *Distributed control and optimization for autonomous power grids* at European Control Conference, Naples, Italy

Jun'19 Learning & Adaptive Systems Lab Seminar, ETH Zürich

May'19 Robotic Systems Lab Seminar, ETH Zürich

May'19 Looking forward to 2050, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK
 Apr'19 Innovative Optimization and Control Methods for Highly Distributed Autonomous Systems Workshop, Golden, Colorado
 Apr'19 ECEE Control, Optimization, and Learning day, CU Boulder
 Jan'19 Workshop on Learning and Control in Network Systems, KTH, Stockholm, Sweden
 Jan'19 Isaac Newton Institute for Mathematical Sciences, Cambridge, UK
 Nov'18 Energy-Open Workshop, Eindhoven, The Netherlands
 Oct'18 International Workshop on Advanced Cooperative Systems, Zagreb, Croatia
 Aug'18 IFAC Workshop on Distributed Estimation and Control in Networked Systems (NECSYS), Groningen, The Netherlands
 May'18 Institute for Automation and Applied Informatics, Karlsruhe Institute of Technology, Germany
 Mar'18 Simons Institute, UC Berkeley, United States
 Mar'18 CCDC Seminar, UC Santa Barbara, United States
 Jan'18 Le Laboratoire GIPSA-lab, Grenoble, France
 Jan'18 Workshop on "Power Systems: Semi-Algebraic Techniques for Optimal Power Flow and Stability Assessment", Versailles, France
 Dec'17 *Melbourne Workshop on Future Power Systems* Melbourne, Australia
 Jun'17 AIT Seminar, Vienna, Austria
 Jun'17 CoNDyNet Workshop "Dynamics in Power Systems – From Science to Industry", Potsdam
 May'17 Institute for Theoretical Studies "Collective dynamics, control and imaging", ETH Zürich
 Mar'17 Ruhr Universität Bochum, Control Seminar, Bochum, Germany
 Mar'17 Optimization and Inference for Physical Flows on Networks, BIRS, Alberta
 Feb'17 Future Electric Power Systems and the Energy Transition, Champéry, Switzerland
 Dec'16 Energy Seminar, UC Berkeley
 Oct'16 Computer Science Departmental Talk, Swiss Federal Institute of Technology (ETH) Zürich
 Jul'16 Workshop on *Smart Grid Control* at American Control Conference, Boston, MA, USA
 Jul'16 National Renewable Energy Laboratory, Golden, CO
 Jun'16 Keynote at Greenmetrics (Sigmetrics) Conference, Nice
 Jun'16 Workshop on *Distributed and Stochastic Optimization: Theory and Applications* at European Control Conference, Aalborg, Denmark
 Jun'16 Workshop on *Optimization and Control for Tomorrow's Power Systems* at European Control Conference, Aalborg, Denmark
 May'16 Automatic Control Seminar, KTH Royal Institute of Technology, Sweden
 May'16 Institute for Mathematics and its Applications, University of Minnesota
 Apr'16 Séminaire d'Automatique du Plateau de Saclay, Laboratoire de Signaux et Systèmes du Supélec
 Nov'15 Laboratoire d'Automatique Seminar, École Polytechnique Fédérale de Lausanne (EPFL)
 Oct'15 KAUST Workshop on Human-Machine Networks and Intelligent Infrastructure, KAUST
 Jun'15 Advanced Methods for Energy Systems, Skolkovo Institute for Science and Technology, Moscow
 May'15 Social Norms and Institutions, Monte Verità, CH
 Apr'15 Control Systems Seminar, Technical University Berlin

Feb'15 Systems and Control Seminar, Université Catholique de Louvain

Jan'15 Swiss Federal Laboratories for Materials Science and Technology (EMPA)

Jan'15 Grid Science Winter School & Conference, Santa Fe, NM

Nov'14 Department of Engineering, University of Cambridge

Nov'14 Oxford Control Group, University of Oxford

Nov'14 Swissgrid Seminar, Laufenburg

Nov'14 Department of Information Engineering, University of Padova

Oct'14 Dagstuhl Seminar Modeling, Verification, & Control of Complex Systems for Energy Networks

Oct'14 ABB Corporate Research Center Seminar, Baden

Oct'14 Introductory Lecture, Swiss Federal Institute of Technology (ETH) Zürich

Oct'14 Dynamics and Control in Networks Workshop, Lund University

Sep'14 MnDRIVE Seminar Series, University of Minnesota

Jun'14 Workshop on *Open Problems in Multi-Agent Systems* at American Control Conference, Portland, OR, USA

Jun'14 Rand Corporation Speaker Series, Los Angeles, CA

Jun'14 CPS Seminar, Department of Electrical Engineering, UC Los Angeles

May'14 Department of Electrical and Computer Engineering, UC San Diego

May'14 Department of Civil and Environmental Science, Stanford University

Mar'14 RASEI/ECEE Seminar, University of Colorado Boulder

Mar'14 National Renewable Energy Laboratory, Golden, CO

Feb'14 Rigorous Systems Research Group Seminar, California Institute of Technology

Nov'13 Ming Hsieh Department of Electrical Engineering, University of Southern California

Jul'13 Center for Nonlinear Studies, Los Alamos National Laboratories

Jun'13 Hybrid Control Systems Workshop, Technical University Munich

Jun'13 Symposium on Complex Systems Control, Swiss Federal Institute of Technology (ETH) Zürich

Mar'13 Department of Electrical Engineering, UC Los Angeles

Mar'13 School of Electrical and Computer Engineering, Georgia Institute of Technology

Feb'13 Center for Nonlinear Studies, Los Alamos National Laboratories

Dec'12 Tutorial on *Synchronization in Coupled Oscillators: Theory and Applications* at IEEE Conference on Decision and Control, Maui, HI, USA

Oct'12 Automatic Control Laboratory, Swiss Federal Institute of Technology (ETH) Zürich

Jul'12 Institute for Systems Theory and Automatic Control, University of Stuttgart

Jul'12 Siemens Colloquium, Siemens AG, Munich

Jun'12 Center for Nonlinear Studies, Los Alamos National Laboratories

May'12 Optimization and Control for Smart Grids, Santa Fe, NM

Apr'12 Department of Mathematics, UI Urbana-Champaign

Mar'12 Center for Nonlinear Studies, Los Alamos National Laboratories

Feb'12 Department of Electrical Engineering, UC Los Angeles

Dec'11 Workshop on *Control Systems Security: Challenges and Directions* at IEEE Conference on Decision and Control and European Control Conference, Orlando, FL, USA

Oct'11 Institute for Energy Efficiency, UC Santa Barbara
 Jun'11 Center for Nonlinear Studies, Los Alamos National Laboratories
 Sep'10 Systems Control Group, University of Toronto
 Aug'10 Institute of Automatic Control Engineering, Technical University Munich
 Jun'10 Center for Control, Dynamical Systems and Computation, UC Santa Barbara
 May'10 Control and Dynamical Systems, California Institute of Technology
 Sep'08 Institute for Systems Theory and Automatic Control, University of Stuttgart
 Aug'08 Systems Control Group, University of Toronto

CONTRIBUTED TALKS AT CONFERENCES, COLLOQUIA, ETC.

Dec'19 IEEE Conference on Decision and Control, Nice, France
 Oct'18 Allerton Conference, UI Urbana-Champaign, IL
 Sep'15 Allerton Conference, UI Urbana-Champaign, IL
 Dec'17 IEEE Conference on Decision and Control, Melbourne, Australia
 Jul'17 IFAC World Congress, Toulouse, France
 Dec'16 IEEE Conference on Decision and Control, Las Vegas, United States
 Jul'16 American Control Conference, Boston, MA
 Dec'15 IEEE Conference on Decision and Control, Osaka, Japan
 Sep'15 Allerton Conference, UI Urbana-Champaign, IL
 Jun'15 NetSci 2015, Zaragoza, Spain
 Sep'14 Allerton Conference, UI Urbana-Champaign, IL
 Jul'14 Int. Symposium on Mathematical Theory of Networks and Systems, Groningen, Netherlands
 Jun'14 European Control Conference, Strasbourg, France
 Feb'14 Information Theory and Applications Workshop, San Diego, CA
 Dec'13 IEEE Conference on Decision and Control, Florence, Italy
 Jul'13 IEEE Power & Energy Society General Meeting
 Jul'13 SIAM Conference on Control and its Applications
 Dec'12 IEEE Conference on Decision and Control, Maui, HI
 Dec'11 IEEE Conference on Decision and Control, Orlando, FL
 Sep'11 Allerton Conference, UI Urbana-Champaign, IL
 Jun'11 American Control Conference, San Francisco, CA
 Oct'10 IEEE SmartGridComm Conference, Gaithersburg, MD
 Sep'10 IFAC NecSys Workshop, Annecy, France
 Jun'10 American Control Conference, Baltimore, MD
 Aug'09 European Control Conference, Budapest, Hungary
 Jun'08 American Control Conference, Seattle, WA

Journal Publications

- [J1] I. Markovsky and F. Dörfler. Data-driven dynamic interpolation and approximation. *Automatica*, 135, February 2022.
- [J2] Z. He, S. Bolognani, J. He, F. Dörfler, and Guan X. Model-free nonlinear feedback optimization. January 2022.
- [J3] P. Carlet, Favato. A., S. Bolognani, and F. Dörfler. Data-driven continuous-set predictive current control for synchronous motor drives. *IEEE Transactions on Power Electronics*, 37(6):6637–6646, 2022.
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