Na (Lina) Li

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Appointments

07/2020–	Gordon McKay Professor of Electrical Engineering and Applied Mathematics John A. Paulson School of Engineering and Applied Sciences Harvard University
02/2022 –	Research Scientist (affiliate, 0 FTE) Massachusetts General Hospital
07/2021 – 12/2022	Visiting Research Scientist Google Brain
03/2019 –	Cofounder and Chief Scientific Adviser Singularity Energy Inc
07/2018–06/2020	Thomas D. Cabot Associate Professor of Electrical Engineering and Applied Mathematics John A. Paulson School of Engineering and Applied Sciences Harvard University
07/2014– 06/2018	Assistant Professor of Electrical Engineering and Applied Mathematics John A. Paulson School of Engineering and Applied Sciences Harvard University
09/2018–08/2021	Research Affiliate, Laboratory of Information and Decision Systems Massachusetts Institute of Technology
03/2018–05/2018	Visiting scholar, Simons Institute for the Theory and Computing University of California, Berkeley
07/2013–06/2014	Postdoc Associate, Laboratory of Information and Decision Systems Massachusetts Institute of Technology

Education

2007–2013	Ph.D., Control and Dynamical Systems California Institute of Technology
2003–2007	B.Sc., Mathematics and Applied Mathematics Chu-Ko-Chen College, Zhejiang University
2006–2007	Visiting Student, Mechanical Engineering and Aerospace University of California, Los Angeles

Selected Honors and Awards

2023	IFAC Thoma Manfred Medal The Manfred Thoma medal recognizes outstanding contributions of a young researcher and/or engineer under the age of 40 to the field of systems and control in its widest sense. The medal is awarded by the IFAC Council on the recommendation of a selection committee. Citation: For fundamental contributions to control of multiagent networked systems and application to biomedical and energy systems.
2020-2023	IFAC Pavel J. Nowacki Distinguished Lecturer.
2022	Semi-plenary speaker at International Symposium on Mathematical Theory of Networks and Systems (MTNS2022)
2022	Plenary speaker at MIT LIDS Student Conference 2022
2021- 2026	NSF AI Institute on Dynamical Systems (Thrust leader on Control)
2021	Keynote speaker at UIUC CSL Student Conference 2021
2020	Plenary Speaker at 2020 American Control Conference
2020	Capers W. McDonald and Marion K. McDonald Award for Excellence in Mentoring and Advising
2019	Donald P. Eckman Award from American Automatic Control Council The Eckman Award recognizes an outstanding young engineer in the field of automatic control. Citation: "For fundamental contributions to control and optimization of networked systems, including foundational theory of performance limits, novel algorithm design, and applications to real-world cyber-physical societal systems "
2019	ONR (Office of Naval Research) Young Investigator Program (YIP) Award
2019	Harvard SEAS LInc Faculty Fellowship
2018	Best Student Paper Award Finalist in IEEE Conference on Control Technology and Applications (as an adviser)
2018	Harvard Physical Sciences and Engineering Accelerator Award
2018	Harvard Climate Change Solutions Fund Award
2017	AFOSR (Air Force Office of Scientific Research) Young Investigator Program (YIP) Award
2016	Invited speaker to the inaugural Resnick Institute Young Investigators Symposium at Caltech
2016	NSF CAREER Award
2012	Invitee to "Rising Stars in EECS: An Academia Workshop for Women", MIT
2011	Best Student Paper Award Finalist in IEEE Conference on Decision and Control
2006	Chu KoChen Honors Scholarship (Highest Honor in Zhejiang University, only awarded to 12/20,000 undergraduates each academic year)

Selected Student Honors and Awards

2021	PhD student Xin Chen received the Outstanding Student Paper award in IEEE Conference on Decision and Control for the paper " Model-Free Optimal Voltage Control via Continuous-Time Zeroth-Order Methods"
2021	Undergraduate student Victor Qin received Dean's Awards Horonable Mention for his senior thesis of *Exploiting Multi-Agent Cumulative Reward to Speed Up Reinforcement Learning*.
2020	Undergraduate student Darrell Huang received Dean's Awards Horonable Mention for his senior thesis of *Teleoperation of Multi-Robot Systems Gesture-Based Control*.

2019 Undergraduate student Aldis Elfarsdottir received Dean's Design Awards for her senior thesis of *Thermal Dynamic Model Development and Model Predictive Building Control Using an Extensive Sensor Network*.

2018 PhD student Xin Chen received one of the two Best Student Paper Award Finalists in IEEE Conference on Control Technology and Applications.

2017 Master student Meier Yannick (from ETH) received the Outstanding Master Thesis award, ETH Zurich for his thesis under my supervision.

2015 PhD student Ariana Minot received "Runner-up for 1st Place" award in the poster session of AWM (Association for Women in Mathematics) Research Symposium.

Professional Service

- Vice-chair of IEEE Conference on Decision and Control (CDC), 2023
- Technical Program Committee (co)Chair for ACM e-Energy, 2022
- Associate Editor of IEEE Transactions on Automatic Control, 2019 – present
- Associate Editor of Systems and Control Letters, 2019–present
- Workshop Chair of 60th IEEE Conference on Decision and Control (CDC), 2021
- Organizing committee (Lead of the first panel) for Workshop on Control for Societal-Scale Challenges, 2020-2022.
- Technical Program Committee, L4DC 2020, 2021, 2022
- Publicity Chair of 2020 ACM/IEEE ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS), 2020
- Publication Chair of ACM International Conference on Future Energy Systems (ACM e-Energy), 2019
- Associate Editor of IEEE Control System Letters, 2019
- Associate Editor of the Conference Editorial Board (CEB) of the IEEE Control Systems Society (CSS), 2016–present
- Guest editor for a special issue of IEEE Transactions of Smart Grid on " Intelligent and Sustainable Energy Systems Towards Smart City", 2019
- Guest editor for a special issue of IET Generation Transmission & Distribution titled with "Distributed & autonomous dispatch and control for active distribution network/microgrids– potential scheme to realize plug & play of DER", 2016
- American Automatic Control Council (AACC) Technical Committees on Education, 2016–present
- IEEE Technical Committee on Cybernetics for Cyber-Physical Systems (CPS), 2015–present
- Session Chairs in American Control Conference and IEEE Conference on Decision and Control, 2015–present
- Organizer of invited sessions in American Control Conference and IEEE Conference on Decision and Control, 2015–present
- Power & Energy Society PEEC University Education committee, 2018–2019
- Organizer of invited session in Informs annual meeting, 2018
- Technical program committee for International Conference on Cyber-Physical Systems (ICCPS), 2016
- Technical program committee for ACM Workshop of GreenMetrics, 2014–2016
- Technical program committee for GlobalSIP, 2016

- Technical program committee for IEEE SmartGridComm, 2012, 2014, 2018
- NSF review panelist every year, 2016–present
- Journal and Conference reviewing: Proceedings of the National Academy of Sciences (PNAS); Automatica; IEEE Transactions on Automatic Control; IEEE Transactions on Control of Network Systems; IEEE Transactions on Smart Grid; IEEE Transactions on Power Systems; IEEE Transactions on Systems, Man, and Cybernetics; IEEE Transactions on Signal Processing; IEEE Signal Processing Magazine; IEEE Journal of Selected Topics in Signal Processing; IEEE Transactions on Industrial Informatics; IEEE Transactions on Mobile Computing; IEEE System Journal; ACM Transactions on Internet Technology; IEEE SmarGridComm Conference; IEEE Conference on Decision and Control; American Control Conference; European Control Conference; Power Systems Computation Conference; SIAM conference on Control and Its Applications; Conference on Neural Information Processing Systems (NeurIPS); International Conference on Machine Learning (ICML).

Teaching

ES 155: Systems and Control (Harvard SEAS, undergraduate)

ES/AM 158: Feedback Control Systems: Analysis and Design (Harvard SEAS, undergraduate)

ES 202/AM 232: Estimation and Control of Dynamical Systems (Harvard SEAS, graduate)

ES 203/AM 233: Interply between Learning and Control (Harvard SEAS, graduate)

Advising

Current PhD students

- Tianpeng Zhang, 08/2019-present
- Runyu Zhang, 08/2019-present
- Zhaolin Ren, 08/2019-present
- Aoxiao Zhong, 08/2018-present, co-advised with Prof. Quanzheng Li (MGH)

Postdoc associates (current)

- Yujie Tang, Feb 2019–present, Graduation school: Caltech

Current undergraduate research assistants (current)

- Saba Zerefa

PhD students who graduated

- Xin Chen (Jan. 2022), Thesis: *Distributed and Data-Driven Decision-Making for Sustainable Power Systems*, Next step: Postdoc at MIT
- Yingying Li (Jul. 2021), Thesis: *Real-time Decision Making in Control and Optimization with Performance and Safety Guarantees*, Next step: Postdoc at UIUC
- Guannan Qu (May 2019), Thesis: *Distributed Decision Making in Cyber-Physical Network Systems*, Now: Assistant Professor at CMU
- Ariana Minot (May 2017, co-advised with Prof. Yue Lu), Thesis: *Distributed Optimization Methods for Monitoring and Operating Electric Power Systems*, Now: Research scientist in MIT Lincoln Lab

Postdoc Associates (past)

- Yang Zheng, Feb 2019–Aug 2020, Assistant Professor at University of California, San Diego
- Sindri Magnusson, 08/2018-07/2019, Associate Professor at Stockholm University.
- Jorge I. Poveda, 09/2018-12/2018, Current: Tenure-track Assistant Professor at University of Colorado, Boulder
- Chinwendu Enyioha, 07/2015-01/2018, co-supervised with Prof. Vahid Tarokh, Current: Assistant Professor University of Central Florida
- Qinran Hu, 09/2015-07/2018, Current: Associate Professor Southeast University, China
- Xuan Zhang, 11/2015-10/2017, co-supervised with Prof. Ali Malkawi in Graduate School of Design, Current: Assistant professor at Tsinghua-Berkeley Shenzhen Institute
- Wei Wei, 12/2014-03/2015, Current: Assistant Professor at Tsinghua University

Master Theses

- Kasper Johansson (02/2022-06/2022), Master in KTH, Stockholm, Sweden, Thesis: *Graph Bandits: Multi-Armed Bandits with Locality Constraints*
- Filip Klaesson (01/2020-06/2020), Master in KTH, Stockholm, Sweden, Thesis: *Distributed Bayesian Optimization in Multi-Agent Systems*
- Johannes Koehler (10/2016-12/2016), Master in University of Stuttgart, Germany, Thesis: *Distributed Economic Model Predictive Control under Inexact Minimization with Application to Power Systems*
- Yannick Meier (12/2015-06/2016, Master in ETH), Thesis: *Parallel and Distributed Primal-Dual Interior Point Methods for Optimal Power Flow in Distribution Networks*, **Outstanding Master Thesis Award at ETH Zurich**
- David Brown (09/2014-06/2015, Now as a researcher in Lincoln Lab), Thesis: *Distributed Greedy Algorithm for Satellite Assignment Problem*

Undergraduate senior theses

- Victor Qin (2020-2021), Thesis: Exploiting Multi-Agent Cumulative Reward to Speed Up Reinforcement Learning, **Dean's Design Award Honorable Mention**
- Darell Hwang (2019-2020), Thesis: Teleoperation of Multi-Robot Systems Using Gesture-Based Control, **Dean's Design Award Honorable Mention**
- Amy Donna Bittler (2019-2020), Thesis: Battery Storage Optimization Algorithm for Emission Reduction
- Aldis Elfarsdottir (2018-2019), Thesis: *Thermal Dynamic Model Development and Predictive Building Control using an Extensive Sensor Network*, **Dean's Design Award**
- Bahlakoana Mabetha (2017-2018), Thesis: *A Smart Humidifier*
- Seif Abou Eleinen (2017-2018), Thesis: *A Smart Arm Crutch*
- Austen Novis (2015-2016), Thesis: *Swim Power Meter*
- Tyler Barringer (2015-2016), Thesis: *Solar Photovoltaic Power: Short Term Volatility and its Future under Climate Change*

Ph.D thesis committee

- Miguel Picallo, ETH, Zurich, 2022, *Interconnected Online Feedback Optimization and EstimationAlgorithms for Power System Operation in Real Time*
- Laith Alhussein, Harvard University, 2022, *Understanding How Environmental Dynamics and Uncertainty Affect Adaptive Changes in Motor Planning*

- Xin Chen, Harvard University, 2021, *Distributed and Data-Driven Decision-Making for Sustainable Power Systems*
- Yingying Li, Harvard University, 2021, *Real-time Decision Making in Control and Optimization with Performance and Safety Guarantees*
- Changxin Liu, University of Victoria, 2021 *Provably Efficient Algorithms for Distributed Optimization*
- Wei Zhang, Harvard University, 2021, *Data-driven Predictive Control Optimization for Natural Ventilation in Buildings*
- Nick Boffi, Harvard University, 2021, *Methods for scientific simulation, machine learning, and nonlinear control*
- Lindsey Brown, Harvard University, 2021, *A Systems Biology Approach to the Modeling and Control of Circadian Rhythms*
- Artin Spiridonoff, Boston University, 2021, *First-order Distributed Optimization Methods for Machine Learning with Linear Speed-up*
- Amin Gholami, Georgia Institute of Technology, 2021, *Stability, Control, and Optimization of Nonlinear Dynamical Systems with Applications in Electric Power Networks*
- Majid Heidarifar, Boston University, 2021, *Load Flow And Optimal Power Flow in Power Distribution Systems - Application of Riemannian Optimization and Holomorphic Embedding*
- Xinlei Yi, KTH, 2020, *Distributed Optimization and Control: Primal–Dual, Online, and Event-Triggered Algorithms*
- Guannan Qu, Harvard University, 2019, *Distributed Decision Making in Cyber-Physical Network Systems*
- Hongyao Ma, Harvard University, 2019, *Mechanism Design for Coordinating Behavior*
- Wangyu Luo, Harvard University, 2019, *Analysis and Generalization of Several Information Processing Methods Related to Stein's Lemma*
- Neel Doshi, Harvard University, 2019, *Model-based Design, Control, and Planning for Legged Microrobots*
- Tianyi Chen, University of Minnesota Twin Cities, 2019, *Thesis: Efficient Methods for Distributed Machine Learning and Resource Management in the Internet-of-Things*
- Reza Amizi, Brown University, 2018, Thesis: *Improving the Performance of Power Constrained Computing Clusters*
- Shuai Wang, Boston University, 2018, Thesis: *Paradigm and Paradox in Power Networks*
- Xin Zhan, Brown University, 2017, Thesis: *Energy-Efficiency Optimization Techniques for Computing Clusters: Exploiting the Heterogeneities*
- Ariana Minot, Harvard University 2017, Thesis: *Distributed Optimization Methods for Monitoring and Operating Electric Power Systems*
- Ian Weiner, Harvard University, 2016, Thesis: *High-SNR Capacity of AWGN Channels with generic alphabet constraint*
- Ioannis Gkioulekas, Harvard University, 2016, Thesis: *A Framework for Inverse Scattering*
- Kevin Chen, Harvard University, 2016, Thesis: *Gradient Descent for Optimization Problems with sparse Solutions*
- Elli Ntakou, Boston University, 2016, Thesis: *Distribution Power Markets: Detailed Modelding and Tractable algorithms*

Research Support

Current

- (co)PI, Thrust Leader for Control, NSF AI Institute for Dynamical Systems, 10/2021-09/2026.
- (co)PI, NSF CPS: Medium: An AI-enabled Cyber-Physical-Biological System for Cardiac Organoid Maturation, 09/15/2020-08/31/2023.
- PI, NSF CNS Collaborative Research: MLWiNS: Distributed Learning over Multi-Access Channels: From Bandlimited Coordinate Descent to Gradient Sketching, 10/01/2020-09/30/2023.
- PI, ONR YIP: *Real-Time Distributed Coordination of Multi-Agent Systems Under Limited Communication*, 03/01/2019-02/28/2022.
- PI, NSF CAREER: *Optimization, Control, and Incentive Design for Power Networks with High Levels of Distributed Energy Resources*, 02/01/2016-01/31/2021.

Past

- PI, Center of excellence for NEOM Research at KAUST, *Green and Smart Buildings*, 09/2019-08/2021.
- PI, NSF EAGER: *Real-Time: Learning, Selection, and Control in Residential Demand Response for Grid Reliability*, 10/01/2018-09/30/2021.
- PI, AFOSR Yong Investigator Program (YIP) Award: *Distributed Coordination in Multi-Agent Networked Systems: Algorithms and Fundamental Limits*, 12/15/2017-12/14/2021.
- PI, Harvard Climate Change Solutions Fund Award: *Identifying the challenges and technical pathways toward a reliable carbon-free energy system in the United States*, 01/15/2018-01/14/2020,
- PI, NSF Collaborative Research: *Towards Communication-Cognizant Voltage Regulation and Energy Management for Power Distribution Systems*, 08/01/1016-07/31/2019.
- PI, Harvard Physical Sciences and Engineering Accelerator Award: *Singularity: AI-Powered Distributed Energy Networks*, 02/01/2018-01/31/2019,
- PI(Subcontractor), ARPA-E NODES: *Real-time optimization and control of next-generation*, 08/01/2016-07/31/2019.
- PI, Guodian Nanjing Automation Co., Ltd: *Optimal Bidding Strategy and Assets Allocation Plan for Generation Companies*, 04/01/2016-03/31/2018,
- co-PI, NSF Eager: *Limited Communications Demand Control in the Power Grid*, 08/15/2015-07/31/2017.
- PI, Lincoln Laboratory, *Optimization of Distributed Space Systems*, 09/01/2014-08/31/2015.

Journal Publications and Preprints

1. Yujie Tang, Zhaolin Ren, Na Li, "Zeroth-Order Feedback Optimization for Cooperative Multi-Agent Systems", Automatica, Accepted
2. Niloy Patari, Anurag Srivastava, Na Li, "Distributed Optimal Voltage Control Considering Latency and Asynchronous Communication for Three Phase Unbalanced Distribution Systems", IEEE Transactions on Power Systems, 10.1109/TPWRS.2022.3173634, 2022

3. Xin Chen, Guannan Qu, Yujie Tang, Steven Low, **Na Li**, "Reinforcement Learning for Selective Key Applications in Power Systems: Recent Advances and Future Challenges", *IEEE Transactions on Smart Grid*, 13 (4), pages 2935 - 2958, 2022
4. Yang Zheng, Luca Furieri, Maryam Kamgarpour, Na (Lina) Li, "System-level, Input-output and New Parameterizations of Stabilizing Controllers, and Their Numerical Computation", Automatica, doi.org/10.1016/j.automatica.2022.110211, 2022
5. Yujie Tang, Vikram Ramanathan, Junshan Zhang, Na Li, "Communication-Efficient Distributed SGD with Compressed Sensing", IEEE Control Systems Letters (L-CSS), Vol 6, Pages 2054 - 2059, 2022
6. Guannan Qu, Adam Wierman, Na Li, "Scalable Reinforcement Learning for Multi-Agent Networked Systems", Operation Research, ISSN 1526-5463 (online), 2022
7. Xin Chen, Yingying Li, Jun Shimada, Na Li, "Online Learning and Distributed Control for Residential Demand Response", IEEE Transactions on Smart Grid, 12(6): 4843 - 4853, 2021
8. Yingying Li*, Yujie Tang*, Runyu Zhang, Na Li, "Distributed Reinforcement Learning for Decentralized Linear Quadratic Control: A Derivative-Free Policy Optimization Approach", DOI: 10.1109/TAC.2021.3128592, 2021
9. Xin Chen, Na Li, "Leveraging Two-Stage Adaptive Robust Optimization for Power Flexibility Aggregation", IEEE Transactions on Smart Grid, 12(5):3954 - 3965, 2021.
10. Panagiotis Andrianesis, Michael Caramanis, and Na Li, "Optimal Distributed Energy Resource Coordination: A Decomposition Method Based on Distribution Locational Marginal Costs", IEEE Transactions on Smart Grids, 13(2):1200 - 1212, 2021.
11. Niloy Patari, Venkatesh Venkataramanan, Anurag Srivastava, Daniel K. Molzahn, Na Li, and Anuradha Annaswamy, "Distributed Optimization in Distribution Systems: Use Cases, Limitations, and Research Needs", IEEE Transactions on Power Systems, 37 (5), DOI: 10.1109/TPWRS.2021.3132348, 2021
12. Niloy Patari, Anurag Srivastava, Guannan Qu, and Na Li, "Distributed Voltage Control for Three-Phase Unbalanced Distribution Systems with DERs and Practical Constraints", IEEE Transactions on Industry Applications, 57(6):6622 - 6633, 2021.
13. Yang Zheng, **Na Li**, "Non-Asymptotic Identification of Linear Dynamical Systems Using Multiple Trajectories", IEEE Control System Letters, 5 (5), pages 1693-1698, 2021
14. Yingying Li, Guannan Qu, **Na Li**, "Online Optimization with Predictions and Switching Costs: Fast Algorithms and Fundamental Limits", *IEEE Transactions of Automatic Control*, 66(10): 4761 - 4768, 2021
15. Han Shu, Xuan Zhang, **Na Li**, Antonis Papachristodoulou, "Control Reconfiguration of Dynamical Systems for Improved Performance via Reverse-engineering and Forward-engineering", IEEE Transactions on Automatic Control, 67(3): 1490 - 1497, 2021.
16. Xin Chen, Changhong Zhao, **Na Li**, "Distributed Automatic Load-frequency Control with Optimality in Power Systems", *IEEE Transactions of Control of Networked Systems*, 8(1), 307-318, 2021.
17. Jorge I. Poveda, **Na Li**, "Robust Hybrid Zero-Order Optimization Algorithms with Acceleration via Averaging in Time", *Automatica*, volume 123, 109361, 2021.
18. Yujie Tang, Junshan Zhang, **Na Li**, "Distributed Zero-Order Algorithms for Nonconvex Multi-Agent Optimization", *IEEE Transactions of Control of Network Systems*, 8(1), 269 - 281, 2021.
19. Sindri Magnusson, Hossein Shokri-Ghadikolaei, **Na Li**, "On Maintaining Linear Convergence of Distributed Learning under Limited Communication", IEEE Transactions on Signal Processing, volume 68, pages 6101-6116, 2020.

20. Xin Chen, Yutong Nie, Na Li, "Online Residential Demand Response via Contextual Multi-Armed Bandits", IEEE Control Systems Letters, 5(2), pages 433-438, 2020
21. Yujie Tang, Guannan Qu, **Na Li**, "Semi-Global Exponential Stability of Primal-Dual Gradient Dynamics for Constrained Convex Optimization", System & Control Letters, volume 144, 104754, 2020.
22. Yingying Li, Qinran Hu, **Na Li**, "A reliability-aware multi-armed bandit approach to learn and select users in demand response", *Automatica*, Volume 119, 109015, 2020. **Editor's Choice for the September 2020 Issue**
23. Guannan Qu, **Na Li**, "Accelerated Distributed Nesterov Gradient Descent", *IEEE Transactions on Automatic Control*, 65(6), Pages 2566 - 2581, 2020.
24. Yang Zheng, Luca Furieri, Antonis Papachristodoulou, **Na Li**, Maryam Kamgarpour, "On the equivalence of Youla, System-level and input-output parameterizations", IEEE Transactions on Automatic Control, 66(1), pages 413-420, 2020
25. Bala Kameshwar Poolla, Saverio Bolognani, Li Na, Florian Dörfler, "A Market Mechanism for Virtual Inertia", IEEE Transactions on Smart Grid, 11(4), pages 3570-3579, 2020
26. Sindri Magnusson, Guannan Qu, **Na Li**, "Distributed Optimal Voltage Control with Asynchronous and Delayed Communication", IEEE Transactions of Smart Grid, 11(4), pages 3469-3482, 2020.
27. Guannan Qu, **Na Li**, "Optimal Distributed Feedback Voltage Control under Limited Reactive Power", *IEEE Transactions of Power Systems*, 35(1), pages 315-331, 2020.
28. Xin Chen, Emiliano Dall'Anese, Changhong Zhao, **Na Li**, "Aggregate Power Flexibility in Unbalanced Distribution Systems", *IEEE Transactions of Smart Grids*, 11(1), Pages 258 - 269, 2019.
29. Sindri Magnusson, Guannan Qu, **Na Li**, Carlo Fischione, "Voltage Control Using Limited Communication", *IEEE Transactions on Control of Network Systems*, 6(3), pages: 993 - 1003, 2019
30. Guannan Qu, David Brown, **Na Li**, "Distributed Greedy Algorithm for Multi-Agent Task Assignment Problem with Submodular Utility Functions", *Automatica*, 105, Page 206-215, 2019.
31. Guannan Qu, **Na Li**, "On the Exponential Stability of Primal-Dual Gradient Dynamics", *IEEE Control System Letters*, 3(1), Pages: 43-48, 2019.
32. Xiaoqi Tan, Guannan Qu, Bo Sun, **Na Li**, Danny Tsang, "Optimal Scheduling of Battery Charging Station Serving Electric Vehicles Based on Battery Swapping", *IEEE Transactions on Smart Grid*, 10(2), 1372 - 1384, 2019.
33. Sindri Magnusson, Chinwendu Enyioha, **Na Li**, Carlo Fischione, Vahid Tarokh, "Communication Complexity of Dual Decomposition Methods for Distributed Resource Allocation Optimization", *IEEE Journal of Selected Topics in Signal Processing*, Special Issue on Signal and Information Processing for Critical Infrastructures, 12(4), Pages: 717-732, 2018.
34. Takeshi Hatanaka, Nikhil Chopra, Takayuki Ishizaki, **Na Li**, "Passivity-Based Distributed Optimization with Communication Delays Using PI Consensus Algorithm", *IEEE Transactions on Automatic Control*, 63(12), Pages: 4421-4428, 2018.
35. Guannan Qu, **Na Li**, "Harnessing Smoothness to Accelerate Distributed Optimization", *IEEE Transactions on Control of Network Systems*, 5(3), Pages: 1245-1260, 2018.
36. Xuan Zhang, Antonis Papachiristodoulou, **Na Li**, "Distributed Control for Achieving Optimal Steady State", *IEEE Transactions on Automatic Control*, 63(3), 864–871, 2018.
37. Sindri Magnusson, Chinwendu Enyioha, **Na Li**, Carlo Fischione, and Vahid Tarokh, "Convergence of Limited Communications Gradient Methods", *IEEE Transactions on Automatic Control*, 63(5), 1356–1371, 2018.

38. Chinwendu Enyioha, Sindri Magnusson, **Na Li**, Carlo Fischione, and Vahid Tarokh, "On the variability of Renewable energy and Online power allocation", *IEEE Transactions on Power Systems*, 33(1), 451-462 2018.
39. Wei Wei, Jianhui Wang, **Na Li**, and Shengwei Mei, "Optimal Power Flow of Radial Networks and its Variations: A Sequential Convex Optimization Approach", *IEEE Transactions on Smart Grid*, 8(6), 2974–2987, 2017.
40. Wenbo Shi, **Na Li**, Chi-Cheng Chu, and Rajit Gadh, "Real-Time Energy Management in Microgrids", *IEEE Transactions on Smart Grid*, 8(1), Pages 228-238, 2017.
41. Wei Wei, **Na Li**, Jianhui Wang, Shengwei Mei, "Estimating the Probability of Infeasible Real-time Dispatch without Exact Distributions of Stochastic Wind Generations", *IEEE Transactions on Power Systems*, 31(6), Pages 5022-5032, 2016.
42. Ariana Minot, Yue Lu, **Na Li**, "A Distributed Newton Method for Power System State Estimation", *IEEE Transactions on Power Systems*, 31(5), Pages 3804-3815, 2016.
43. Qingqing Huang, Leilai Shao, **Na Li**, "Dynamic Detection of Transmission Line Outages Using Hidden Markov Models", *IEEE Transactions on Power Systems*, 31(3), Pages 2026-2033, 2016.
44. **Na Li**, Lijun Chen, Changhong Zhao, "Connecting Automatic General Control and Economic Dispatch from an Optimization View", *IEEE Transactions on Control of Network Systems*, 3(3), Pages 254-264, 2016.
45. Yunjian Xu, **Na Li**, Steven Low, "Demand Response with Capacity Constrained Supply Function Bidding", *IEEE Transactions on Power Systems*, 31(2), Pages 1377-1394, 2016.
46. Lijun Chen, **Na Li**, "On the Interaction between Load Balancing and Speed Scaling", *IEEE Journal on Selected Areas Communication (JSAC)- Series on Green Communications and Networking*, 33(12), Pages 2567-2578, 2015.
47. **Na Li**, Lijun Chen, Munther Dahleh, "Demand Response Using Linear Supply Function Bidding", *IEEE Transactions on Smart Grid*, 6(4), Pages 1827-1838, 2015.
48. Lingwen Gan, **Na Li**, Ufuk Topcu, Steven Low, "Exact Convex Relaxation for Optimal Power Flow in Radial Networks", *IEEE Transactions on Automatic Control*, 60(1), Pages 72-87, 2015.
49. **Na Li**, Jerry Cruz, Chenghao Chien, Somayeh Sojoudi, Ben Recht, David Stone, Marie Csete, Daniel Bahmiller, John Doyle, "Robust Efficiency and Actuator Saturation Explain Healthy Heart Rate Control and Variability", *Proceedings of National Academia Sciences*, 111(33), Pages E3476–E3485, 2014.
50. Wenbo Shi, **Na Li**, Xiaorong Xie, Chi-Cheng Chu, and Rajit Gadh, "Optimal Residential Demand Response in Distribution Network", *IEEE Journal on Selected Areas in Communications*, 32(7), Pages 1-10, 2014.
51. Changhong Zhao, Ufuk Topcu, **Na Li**, Steven Low, "Design and Stability of Load-Side Primary Frequency Control in Power System", *IEEE Transactions on Automatic Control*, 59(5), Pages 1177-1189, 2014.
52. **Na Li**, Jason Marden, "Decoupling Coupled Constraints through Utility Design", *IEEE Transactions on Automatic Control*,59(8), Pages 2289-2294, 2014.
53. **Na Li**, Jason Marden, "Designing Games for Distributed Optimization", *the Journal of IEEE Selected Topics in Signal Processing*,7(2), Pages:230-242, 2013.

Book (Chapters)

1. Lijun Chen, **Na Li**, Libin Jiang, Steven H. Low, "Optimal Demand Response: Problem Formulation and Deterministic Case", Chapter in Control and Optimization Theory for Electric Smart Grids, Aranya Chakarabortty and Marija Ilic (Eds.), Springer, 2012.

2. Takeshi Hatanaka, Tomohiro Ikawa and **Na Li**, "A Passivity-Based Design of Cyber-Physical Building HVAC Energy Management Integrating Optimization and Physical Dynamics", Chapter in Economically-enabled Energy Management: Interplay between Control Engineering and Economics, T. Hatanaka, Y. Wasa and K. Uchida (Dds.) Springer-Verlag, to be published, 2020.

Peer-Reviewed Conference Publications (Recent)

1. Yingying Li, Tianpeng Zhang, Subhro Das, Jeff Shamma, Na Li, "Non-asymptotic System Identification for Linear Systems with Nonlinear Policies", submitted
2. Runyu Zhang, Yang Zheng, Weiyu Li, Na Li, "On the Relationship of Optimal State Feedback and Disturbance Response Controllers", submitted
3. Tianpeng Zhang, Kasper Johansson, "Multi-armed Bandit Learning on a Graph", ArXiv, Submitted
4. Yingying Li, Subhro Das, Jeff Shamma, Na Li, "Safe Adaptive Learning-based Control for Constrained Linear Quadratic Regulators with Regret Guarantees", arXiv.
5. Runyu Zhang, Weiyu Li, Na Li, "On the Optimal Control of Network LQR with Spatially-Exponential Decaying Structure", ArXiv, submitted
6. Zhaolin Ren, Yujie Tang, Na Li, "Escaping saddle points in zeroth-order optimization: two function evaluations suffice", ArXiv, submitted
7. Yang Zheng, Yue Sun, Maryam Fazel, Na Li, "Escaping High-order Saddles in Policy Optimization for Linear Quadratic Gaussian (LQG) Control", CDC 2022
8. Runyu Zhang, Qinghua Liu, Huan Wang, Caiming Xiong, Na Li, Yu Bai, "Policy Optimization for Markov Games: Unified Framework and Faster Convergence", NeurIPS, 2022
9. Runyu Zhang, Jincheng Mei, Bo Dai, Dale Schuurmans, Na Li, "On the Global Convergence Rates of Decentralized Softmax Gradient Play in Markov Potential Games", NeurIPS, 2022
10. Runyu Zhang, Zhaolin Ren, Na Li, "Gradient Play in Stochastic Games: Stationary Points and Local Geometry", MTNS, 2022
11. Xin Chen, Yujie Tang, Na Li, "Improve Single-Point Zeroth-Order Optimization Using High-Pass and Low-Pass Filters", ICML, 2022
12. Xin Chen, Jorge Poveda, Na Li, "Model-Free Optimal Voltage Control via Continuous-Time Zeroth-Order Methods", CDC, 2021, **Outstanding Student Paper Award**
13. Tianpeng Zhang, Victor Qin, Yujie Tang, Na Li, "Source Seeking by Dynamic Source Location Estimation", IROS, 2021
14. Yang Zheng, Yujie Tang, Na Li, "Analysis of the Optimization Landscape of Linear Quadratic Gaussian (LQG) Control", L4DC, 2021
15. Yang Zheng, Luca Furieri, Maryam Kamgarpour, Na Li, "Sample Complexity of Linear Quadratic Gaussian (LQG) Control for Output Feedback Systems", L4DC, 2021
16. Jiaying Zhou, Xun Xian, Na Li, Jie Ding, "Assisted Learning: Cooperative AI with Autonomy", ICASSP 2021
17. Runyu Zhang, Yingying Li, Na Li, "On the Regret Analysis of Online LQR Control with Predictions", ACC 2021
18. Zhaolin Ren, Aoxiao Zhong, Na Li, "LQR with Tracking: A Zeroth-order Approach and Its Global Convergence", ACC 2021
19. Junshang Zhang, Na Li, Mehmet Dedeoglu, "Federated Learning over Wireless Networks: A Band-limited Coordinated Descent Approach", IEEE INFOCOM 2021.

20. Yingying Li, Subhro Das, Na Li, "Online Optimal Control with Affine Constraints", AAAI-21, 2021.
21. Guannan Qu, Yiheng Lin, Adam Wierman, Na Li, "Scalable Multi-Agent Reinforcement Learning for Networked Systems with Average Reward", NeurIPS 2020.
22. Yingying Li, Na Li, "Leveraging Predictions in Smoothed Online Convex Optimization via Gradient-based Algorithms", NeurIPS 2020.
23. Yujie Tang, Zhaolin Ren, Na Li, "Zeroth-Order Feedback Optimization for Cooperative Multi-Agent Systems", CDC 2020.
24. Yichu Jin, Conor James Walsh*, Haedo Cho, Oluwaseun Adelowo Araromi, Moritz A. Graule, Robert Wood, Christina glover, Na Li, "Soft Sensing Shirt for Shoulder Kinematics Estimation", ICRA 2020
25. Niloy Patari, Anurag Srivastava, Guannan Qu, Na Li, "Distributed Optimal Voltage Control for Three-Phase Unbalanced Distribution Systems with DERs", IEEE IAS Annual Meeting 2020.
26. Han Shu, Xuan Zhang, Na Li, Antonis Papachristodoulou, "Control Reconfiguration of Cyber-physical Systems for Improved Performance via Reverse-engineering and Accelerated First-order Algorithms", ICCPS 2020.
27. Guannan Qu, Adam Weirman, **Na Li**, "Scalable Reinforcement Learning of Localized Policies for Multi-Agent Networked Systems", Learning for Dynamics and Control (L4DC) 2020. https://arxiv.org/abs/1912.02906
28. Yingying Li, Yujie Tang, Runyu Zhang, and **Na Li**, "Distributed Reinforcement Learning for Decentralized Linear Quadratic controllers: A Derivative-free Policy Optimization Approach", Learning for Dynamics and Control (L4DC) 2020. https://nali.seas.harvard.edu/files/nali/files/dpgdc.pdf
29. Xin Chen, **Na Li**, "Exponential Stability of Primal-Dual Gradient Dynamics with Non-Strong Convexity", ArXiv:1905.00298, ACC 2020
30. Yingying Li, Xin Chen, **Na Li**, "Online Optimal Control with Linear Dynamics and Predictions: Algorithms and Regret Analysis", 33rd Annual Conference on Neural Information Processing Systems (NeurIPS 2019), 2019.
31. Yujie Tang, **Na Li**, "Distributed Zero-Order Algorithms for Nonconvex Multi-Agent Optimization", Allerton Conference on Communication, Control, and Computing, 2019.
32. Sindri Magnusson, Hossein Shokri-Ghadikolaei, **Na Li**, "On Maintaining Linear Convergence of Distributed Learning under Limited Communication", Asilomar Conference on Signals, Systems, and Computers, 2019.
33. Yingying Li, Aoxiao Zhong, Guannan Qu, **Na Li**, "Online Markov Decision Processes with Time-varying Transition Probabilities and Rewards", ICML workshop on Real-world Sequential Decision Making, 2019.
34. Guannan Qu, **Na Li**, "Exploiting Fast Decaying and Locality in Multi-Agent MDP with Tree Dependence Structure", IEEE Conference on Decision and Control (CDC), 2019.
35. Jorge I. Poveda, **Na Li**, "Inducing Uniform Asymptotic Stability in Accelerated Optimization Dynamics via Hybrid Regularization", ArXiv, IEEE Conference on Decision and Control (CDC), 2019.
36. Sindri Magnusson, Carlo Fishione, Na Li, "Optimal Voltage Control Using Event Triggered Communication", ACM E-Energy, 2019.
37. Yingying Li, **Na Li**, "Online Learning for Markov Decision Processes in Nonstationary Environments: A Dynamic Regret Analysis", American Control Conference, 2019.
38. Sindri Magnusson, Guannan Qu, **Na Li** "Distributed Voltage Control with Communication Delays", American Control Conference, 2019.

39. Yingying Li, Qinran Hu, **Na Li**, "Learning and Selecting the Right Customers for Reliability: A Multi-armed Bandit Approach", IEEE Control and Decision Conference, 2018.
40. Xin Chen, Changhong Zhao, **Na Li**, "Distributed Automatic Load-Frequency Control with Optimality in Power Systems", IEEE Conference on Control Technology and Applications (CCTA), 2018. **Best Student Paper Award Finalist.**
41. Guannan Qu, **Na Li**, "An Optimal and Distributed Feedback Voltage Control under Limited Reactive Power", Power Systems Computation Conference (PSCC), 2018.
42. Yingying Li, Guannan Qu, **Na Li**, "Using Predictions in Online Optimization with Switching Costs: A Fast Algorithm and A Fundamental Limit", American Control Conference (ACC), 2018.
43. Takashi Tanaka, **Na Li**, Kenko Uchida, "On the Relationship between the VCG Mechanism and Market Clearing", American Control Conference (ACC), 2018.
44. Tianyi Chen, **Na Li**, Georgios B. Giannakis, "Aggregating Flexibility of Heterogeneous Energy Resources in Distribution Networks", American Control Conference (ACC), 2018.
45. Guannan Qu, **Na Li**, "Accelerated Distributed Nesterov Gradient Descent for Convex and Smooth Functions", IEEE Conference on Decision and Control (CDC), 2017.
46. Johannes Koehler, Matthias A. Muller, **Na Li**, Frank Allgower, "Real Time Economic Dispatch for power networks: A Distributed Economic Model Predictive Control Approach", IEEE Conference on Decision and Control (CDC), 2017.
47. Takeshi Hatanaka, Xuan Zhang, Wenbo Shi, Minghui Zhu, **Na Li**, "Physics-Integrated Hierarchical/Distributed HVAC Optimization for Multiple Buildings with Robustness against Time Delays", IEEE Conference on Decision and Control (CDC), 2017.
48. Xuan Zhang, Bin Yan, Wenbo Shi, Ali Malkawi, (Samuel) Qing-Shan Jia, **Na Li**, "Community-level Geothermal Heat Pump System Management via an Aggregation-disaggregation Framework", IEEE Conference on Decision and Control (CDC), 2017.
49. Masoud Baidiei, **Na Li**, "Stochastic Primal-Dual Method on Riemannian Manifolds with Bounded Sectional Curvature", IEEE International Conference on Machine Learning and Applications (ICMLA), 2017.
50. Sindri Magnusson, Carlo Fischione, **Na Li**, "Voltage Control Using Limited Communication", IFAC 2017.
51. Yingying Li, **Na Li**, "Mechanism Design for Reliability in Demand Response with Uncertainty", Amercian Control Conference (ACC), 2017.
52. Xuan Zhang, Wenbo Shi, Qinran Hu, Bin Yan, Ali Malkawi, **Na Li**, "Distributed Temperature Control via Geothermal Heat Pump Systems in in Energy Efficient Buildings", Amercian Control Conference (ACC), 2017.
53. Yanhua Tian, **Na Li**, Josh Taylor, "Harmonic Reduction via Optimal Power Flow and the Frequency Coupling Matrix", IEEE Conference on Control Technology and Applications, 2017.
54. Takeshi Hatanaka, Xuan Zhang, Wenbo Shi, Minghui Zhu, **Na Li**, "An Integrated Design of Optimization and Physical Dynamics for Energy Efficient Buildings: A Passivity Approach", IEEE Conference on Control Technology and Applications (CCTA), 2017.
55. Reza Azimi, Masoud Badiei, Xin Zhan, **Na Li**, Sherief Reda, "Fast decentralized power capping for server clusters", 23th IEEE Symposium on High Performance Computer Architecture (HPCA), 2017. (acceptance rate, 22%)
56. Guannan Qu, **Na Li**, "Harnessing Smoothness to Accelerate Distributed Optimization", Conference on Decision and Control (CDC), 2016.

57. Donya Ghavidel Dobakhshari, **Na Li**, Vijay Gupta, "An Incentive-Based Approach to Distributed Estimation with Strategic Sensors", Accepted to Conference on Decision and Control (CDC) 2016.
58. Sindri Magnusson, Chinwendu Enyioha, **Na Li**, Carlo Fischione, "Practical Coding Schemes For Bandwidth Limited One-Way Communication Resource Allocation", Accepted to Conference on Decision and Control (CDC), 2016.
59. Masoud Badiei, **Na Li**,"Distributed Regularized Primal-Dual Method", Accepted to GlobalSIP, 2016.
60. Xuan Zhang, Wenbo Shi, Xiwang Li, Bin Yan, Ali Malkawi, **Na Li**, "Decentralized Temperature Control via HVAC Systems in Energy Efficient Buildings: An Approximate Solution Procedure", Accepted to GlobalSIP, 2016.
61. Hongyao Ma, Valentin Robu, **Na Li**, David Parkes, "Incentivizing Reliability in Demand-Side Response", Accepted to *International Joint Conference on Artificial Intelligence IJCAI-16*, 2016.
62. Ariana Minot, Yue Lu, Na Li, "A Distributed Primal-Dual Interior Point Method for Optimal Power Flow", *Power Systems Computation Conference (PSCC)*, 2016.
63. Martin Andreasson and **Na Li**, "Dynamical Decentralized Voltage Control of Multi-Terminal HVDC Grids", European Control Conference, 2016.
64. Sindri Magn´usson, Chinwendu Enyioha, Kathryn Heal, **Na Li**, Carlo Fischione, and Vahid Tarokh, "Convergence of Limited Communications Gradient Methods", *American Control Conference (ACC)*, 2016.
65. Masoud Badiei Khuzani, Xin Zhan, Reza Azimi, Sherief Reda and **Na Li**, "DiBA: Distributed Power Budget Allocation for Large-Scale Computing Clusters", *IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing(CCGrid)*, 2016. (acceptance rate, 20%)
66. Sindri Magn´usson, Chinwendu Enyioha, Kathryn Heal, **Na Li**, Carlo Fischione, and Vahid Tarokh, "Distributed Resource Allocation Using One-Way Communication with Applications to Power Networks", *Conference on Information Sciences and Systems (CISS)*, 2016.
67. Hao Zhu, **Na Li**, "Asynchronous Local Voltage Control in Power Distribution Networks", *IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2016.
68. Guannan Qu, Dave Brown, **Na Li**, "Distributed Greedy Algorithm for Satellite Assignment Problem with Submodular Utility Function", *5th IFAC Workshop on Estimation and Control of Networked Systems (NecSys'15)*, 2015.
69. Masoud Badiei, **Na Li**, Adam Wierman, "Online Convex Optimization with Ramp Constraints", *Proceedings of 54th IEEE Conference on Decision and Control*, 2015.
70. Xuan Zhang, Antonis Papachristodoulou, **Na Li**, "Distributed Optimal Steady-state Control Using Reverse- and Forward- Engineering", *Proceedings of 54th IEEE Conference on Decision and Control*, 2015.
71. **Na Li**, "A Market Design for Electricity Distribution Networks", *Proceedings of 54th IEEE Conference on Decision and Control*, 2015.
72. Xuan Zhang, **Na Li**, Antonis Papachristodoulou, "Achieving Real-time Economic Dispatch in Power Networks via a Saddle Point Design Approach", *Power & Energy Society General Meeting*, 2015.
73. Qingqing Huang, Leilai Shao, **Na Li**, "Dynamic Fault Diagnosis in Power Grids Using Hidden Markov Models", *Proceedings of American Control Conference*, 2015.
74. Ariana Minot, **Na Li**, "Distributed State Estimation", *Proceedings of American Control Conference*, 2015.
75. **Na Li**, Changhong Zhao Lijun Chen, Steven Low, "Connecting Automatic Generation Control and Economic Dispatch from an Optimization View", *Proceedings of American Control Conference*, 2014.

76. **Na Li**, Guannan Qu, Munther Dahleh, "Real-time decentralized voltage control in distribution networks", *52nd Annual Allerton Conference on Communication, Control, and Computing*, 2014.
77. Minghui Zhu, **Na Li**, "Stability Constrained Incentive Mechanisms for Distributed Frequency Control of Power Grid", *Proceedings of 53rd IEEE Conference on Decision and Control*, 2014.
78. Minghui Zhu, **Na Li**, Wenbo Shi, Rajit Gadh, "Distributed Access Control of Volatile Renewable Energy Resources", *Power & Energy Society General Meeting* 2014.
79. Lingwen Gan, **Na Li**, Ufuk Topcu, Steven Low, "Optimal Power Flow in Distribution Networks", *Proceedings of 52nd IEEE Conference on Decision and Control*, 2013.
80. **Na Li**, Lingwen Gan, Lijun Chen, Steven Low, "An Optimization-based Demand Response in Radial Distribution Networks", *IEEE Workshop on Smart Grid Communications: Design for Performance*, 2012.
81. **Na Li**, Lijun Chen, Steven Low, "Demand Response in Radial Distribution Networks: Distributed Algorithm (Invitied Paper)", *Asilomar Conference on Signals, Systems and Computers*, 2012.
82. **Na Li**, Lijun Chen, Steven Low, "Exact Convex Relaxation for Radial Networks Using Branch Flow Models", *IEEE International Conference on Smart Grid Communications*, 2012.
83. Rui Huang, Tiana Huang, Rajit Gadh and **Na Li**, "Solar Generation Prediction Using the ARMA Model in a Laboratory-level Micro-grid", *IEEE International Conference on Smart Grid Communications*, 2012.
84. Lingwen Gan, **Na Li**, Ufuk Topcu, Steven Low, "Branch Flow Model for Radial Networks: Convex Relaxation", *Proceedings of the 51st IEEE Conference on Decision and Control*, 2012.
85. **Na Li**, Jason Marden, "Designing Games for Distributed Optimization with a Time-Varying Communication Graph" *Proceedings of the 51st IEEE Conference on Decision and Control*, 2012.
86. **Na Li**, Jason Marden, " Designing Games for Distributed Optimization", *Proceedings of the 50th IEEE Conference on Decision and Control*, 2011. **Best Student Paper Award Finalist**
87. **Na Li**, Lijun Chen, Steven H. Low, "Optimal Demand Response based on Utility Maximization in Power Networks" *IEEE Power Engineering Society General Meeting*, 2011.
88. Lijun Chen, **Na Li**, Steven H. Low, "On the Interaction between Load Balancing and Speed Scaling", *Information Theory and Applications Workshop*, 2011.
89. Lijun Chen, **Na Li**, Steven H. Low and John C. Doyle, "Two Market Models for Demand Response in Power Networks", *IEEE International Conference on Smart Grid Communications*, 2010.
90. **Na Li**, Jason Marden, "Designing Games to Handle Coupled Constraints", *Proceedings of the 49th IEEE Conference on Decision and Control*, 2010.
91. **Na Li**, Jason Marden, Jeff S. Shamma, "Learning Approaches to the Witsenhausen Counterexample from a View of Potential Games", *Proceedings of the 48th IEEE Conference on Decision and Control*, 2009.

Invited Talks and Presentations

1. "Gradient play in stochastic games: stationary points, convergence, and sample complexity", Allerton, Sep 2022
2. " Escaping saddle points in zeroth-order optimization: two function evaluations suffice", Allerton, Sep 2022
3. "Scalable Distributed Control and Learning in Networked Systems", Semi-Plenary Talk at MTNS, Sep 2022
4. "Learning Localized Policies in Multiagent Systems: How to learn efficiently and what are the learned policies?", Harvard Machine Learning Theory Seminar Series, May 2022
5. "Learning Localized Policies in Multiagent Systems: How to learn efficiently and what are the learned policies?", Multiagent RL and Bandit Learning Workshop, Simons Institute at Berkeley, May 2022

6. “The interplay between control and learning”, Seminar at UIUC ISE, April 2022
7. “The interplay between control and learning”, ZJU Overseas Academicians Workshop Program, March 2022
8. “Real-time Decision-Making in Networks”, Plenary talk in the inaugural workshop of NSF AI Institute for Dynamical Systems, March 2022
9. “Distributed Model-Free Optimal Voltage Control”, Tutorial on Distributed Optimization for Electric Power Systems, Algorithmic Developments, and Use Cases, IEEE/PES workshop, March 2022
10. “The interplay between control and learning”, Purdue’s Center for Innovation in Control, Optimization, and Networks (ICON), Feb 2022
11. “The interplay between control and learning”, ECE Distinguished Seminar Series, George Manson University, Jan 2022.
12. “The interplay between control and learning”, Plenary talk at MIT LIDS Student Conference, Jan 2022.
13. “The interplay between control and learning”, Online Seminar for School of Data Science, City University of Hong Kong, Jan 2022.
14. “Online Learning and Distributed Control of Residential Demand Response”, Dutch Digital Energy Seminar, Jan 2022.
15. “Multi-agent Learning for Stochastic Games – Gradient Play and Beyond”, CDC workshop on “Distributed Learning And Multi-Agent Learning: Overview, Recent Results, And Open Problems”, Dec 2021.
16. “Online Learning and Distributed Control of Residential Demand Response”, CDC workshop on “Control For Autonomous Cities”, Dec 2021.
17. “Safety adaptive learning for constrained linear quadratic control”, virtual Seminar, IFAC TC 2.4 on Optimal Control, Dec 2021.
18. “Distributed real-time decision making over networks”, Peking University, Oct 2021.
19. “ Distributed real-time decision making over networks”, University of Texas, Austin, Oct 2021.
20. “ Distributed real-time decision making over networks”, University of California at Santa Cruz, Oct 2021.
21. “ Distributed real-time decision making over networks”, Georgia Institute of Technology, Sep 2021.
22. “Learning and control of residential demand response”, Power & Energy Society General Meeting, Jun 2021
23. “Learning and control of residential demand response”, the C3.ai Digital Transformation Institute’s Machine Learning for a Resilient, Secure, Carbon-Free Electricity Supply Workshop, Virtual workshop, Jun 2021
24. ”Gradient play for multiagent stochastic games: stationary points and convergence”, Virtual seminar series on Games, Decisions, and Networks, Jun 2021
25. Distributed real-time decision making over networks, College of Engineering Control Seminar, University of Michigan Ann Arbor, April 2021.
26. Distributed real-time decision making over networks, Online seminar on control meet learning, April 2021
27. Distributed real-time decision making over networks, Online Seminar on Math Foundations of Data Science, March 2021
28. Distributed real-time decision making over networks, keynote speaker for 16th CSL Student Conference at University of Illinois at Urbana-Champaign, Feb 2021
29. “Harnessing special properties for Distributed Decision-Making in Network Systems”, Webinar at the Department of Mathematics, RPI, Dec 2020.
30. “Harnessing special properties for Distributed Decision-Making in Network Systems”, Control Group Webinar, department of Engineering Science, University of Oxford, Nov 2020.

31. “Harnessing special properties for Distributed Decision-Making in Network Systems”, H.B. Keller Colloquium, Computational and Mathematical Sciences, Caltech, Nov 2020.
32. 3 invited talks at Informs Annual Meeting, Nov 2020.
33. “Distributed real-time coordination in network systems”, Plenary talk in 2020 American Control Conference, July 2020.
34. “Real-time Decision Making in Networked Dynamical Systems: Algorithms, Fundamental limits, and Applications“, UC Berkeley, Feb 2020
35. “Distributed real-time coordination in network systems”, Invited talk in SICE International Symposium on Control Systems 2020, Japan, March 2020.
36. “Multiagent Reinforcement Learning for Linear Quadratic Regulators by Zero Order Policy Optimization”, NSF CPS meeting special workshop on learning for control, November 2019.
37. “Online Learning and Multiagent Reinforcement Learning in Dynamical Systems with Uncertainties”, the MIT Distinguished Seminar Series in Computational Science and Engineering, November 2019.
38. “Distributed Zero-Order Algorithms and Multi-agent Reinforcement Learning”, Robot Learning Workshop at Lehigh University, October 2019.
39. “Distributed Zero-Order Algorithms for Nonconvex Multi-Agent Optimization”, 57th Allerton Conference on Communication, Control, and Computing, September 2019.
40. Three invited talks at Informs Annual Meeting, 2019.
41. Panelist in NSF CAREER Awardees Session at the IEEE Power & Energy Society General Meeting, August 5-8, 2019.
42. Panelist of *Optimization methods for unbalanced power distribution systems* at Power & Energy Society General Meeting, August 2019.
43. “Online optimization with limited prediction: Fundamental Limits and Fast Algorithms”, Workshop on Control, Optimization, and Machine Learning in American Control Conference (ACC), July 2019.
44. “The role of Prediction in Online Decision Making”, JST-NSF- RCN Workshop on Distributed Energy Management Systems, Japan, June 2019.
45. Dagstuhl Seminar on Control of Networked Cyber-Physical Systems, Schloss Dagstuhl, Germany, May 2019.
46. “Distributed Decision-Making in Networked Systems with Limited Communication”, Princeton University, May 2019.
47. “The Role of Prediction and Learning in Online Decision Making”, *The mathematics of energy systems*, Isaac Newton Institute for Mathematical Sciences, UK, April, 2019.
48. “Distributed Decision-Making in Networked Systems with Limited Communication”, Washington University, St Louis, March 2019.
49. “Distributed Decision-Making in Networked Systems with Limited Communication”, Purdue University, March 2019.
50. “Online optimization with limited prediction: Fundamental Limits and Fast Algorithms”, ITA workshop, 2019.
51. “Distributed Decision-Making in Networked Systems with Limited Communication”, DTC seminar, University of Minnesota, January 2019.
52. “Matrix Completion Embedded PDIP Method for SDP Relaxation of Large-scale OPF Problems”, Informs Annual Meeting, Nov, 2018.
53. Panelist in *Panel:Getting started: How to develop a research agenda, set up a lab, and build a team*, Rising Stars: An Academic Career Workshop for Women in EECS, MIT, Oct, 2018.

54. "Learning, Selection, and Control in Residential Demand Response for Grid Reliability", NSF workshop on Real Time Data Analytics, Portland, OR, August, 2018.
55. "Limited Communication Gradient Methods for Distributed Resource Allocation Optimization", Workshop of *Interdisciplinary Approaches for Control of Large scale Complex Systems* in American Control Conference (ACC), June 2018.
56. "Limited Communication Gradient Methods for Distributed Resource Allocation Optimization", Workshop of *Mathematical and Computational Challenges in Real-Time Decision Making* in Simons Institute of Berkeley, May 2018.
57. "Distributed Coordination in Multi-Agent Network Systems: Algorithms, Fundamental Limits, and Applications", Iowa State University, April 2018.
58. "Distributed Coordination in Multi-Agent Network Systems: Algorithms, Fundamental Limits, and Applications",University of California, Berkeley, April 2018.
59. "Learning and Targeting the Right Customers for Residential Demand Response: A Case Study and A Multi-Armed Bandit Approach", Workshop of *Societal Networks* in Simons Institute of Berkeley, March 2018.
60. "Distributed Coordination in Multi-Agent Network Systems: Algorithms, Fundamental Limits, and Applications", UPenn, December 2017.
61. "Distributed Coordination in Multi-Agent Network Systems: Algorithms, Fundamental Limits, and Applications", University of California, Santa Barbara, November 2017.
62. "Voltage regulation using limited communication" Workshop on Electric Energy Systems and OR-Analytics, Georgia Tech, November 2017.
63. "A Sequential Convex Optimization Approach to Optimal Power Flow and Its Variations", INFORMS annual meeting, October 2017.
64. "Distributed Coordination in Multi-Agent Systems: Algorithms, Fundamental Limits, and Applications", Boston University, September 2017.
65. "Distributed Coordination in Multi-Agent Systems: Algorithms, Fundamental Limits, and Applications", Yale University, September 2017.
66. "Harness smoothness to accelerate distributed optimization", AFSOR D & C Annual Review, September 2017.
67. "Distributed Energy Management under Limited Communication", MIT September, 2017.
68. "Distributed Resource Allocation under Limited Communication", Rutgers, August 2017.
69. "Mechanism Design for Reliability in Demand Response with Uncertainty", Production and Operations Management Society (POMS) Annual Conference, May 2017.
70. "Parallelized Interior Point Method for Security Constrained Optimal Power Flow (SCOPF)", INFORMS Computing Society Conference, January, 2017.
71. "Voltage Regulation Using Limited Communication", INFORMS Computing Society Conference, January 2017.
72. "Parallelized Interior Point Method for Security Constrained Optimal Power Flow (SCOPF)", INFORMS Annual Meeting, Nov 2016.
73. "Market Design in Transforming Future Electric Distribution Networks", University of Maryland, College Park, October 2016.
74. "Distributed Energy Management with Limited Communication", Worcester Polytechnic Institute (WPI), October 2016.

75. “Distributed Energy Management in Power Networks”, Harvard SEAS/HBS symposium on the Internet of Things, September, 2016.
76. “Market Design in Transforming Future Electric Distribution Networks”, the inaugural Resnick Institute Young Investigators Symposium, The Resnick Sustainability Institute at Caltech, September 2016.
77. “Distributed Energy Management with Limited Communication”, ETH Zurich, June 2016.
78. “Distributed Control for Achieving Optimal Steady State”, DFG-JST-RCN-NSF, May 2016.
79. “A Market Mechanism for Electric Distribution Networks”, Production and Operations Management Society (POMS) Annual Conference, May 2017.
80. “Distributed Energy Management with Limited Communication”, North Carolina State University, Apr. 2016.
81. “Distributed Energy Management with Limited Communication”, University of Southern California, Mar. 2016.
82. “Connecting Distributed Control and Distributed Optimization in the Power Grid”, Tsinghua University, Dec. 2015.
83. “Connecting Distributed Control and Distributed Optimization in the Power Grid”, Young Researchers Workshop on Distributed Energy Management Systems Toward International Collaborations between NSF, NRF and JST CREST projects, Osaka, Japan, Dec. 2015.
84. “Distributed Energy Management with Limited Communication”, Workshop on Power Systems and Markets, Penn State University, Nov. 2015.
85. “Distributed Energy Management with Limited Communication”, Computer Engineering Seminar Series, Brown University, Nov. 2015.
86. “Demand Response Using Supply Function Bidding”, Informs Annual Meeting, Nov. 2015.
87. “A Market for Electricity Distribution Networks”, Informs Annual Meeting, Nov. 2015.
88. “Connecting Distributed Control and Distributed Optimization in the Power Grid”, KAUST Conference on Human-Machine Networks and Intelligent Infrastructure, Oct. 2015.
89. “Distributed Control and Decision Making Over Networks”, Institute for Mathematics and its Applications (IMA), University of Minnesota in Minneapolis, Sep. 2015.
90. “Distributed Mechanism in Electricity Distribution Networks”, Panel session in IEEE Power and Energy Society General Meeting, Jul. 2015.
91. “Fully-Decentralized and Robust Voltage Control in Distribution Networks”, SIAM Conference on Control and Its Application, France, Jul. 2015.
92. “Distributed Optimal Steady-state Control Using Reverse- and Forward- Engineering”, Los Alamos National Lab, May. 2015.
93. “Distributed Optimal Steady-state Control Using Reverse- and Forward- Engineering”, Rensselaer Polytechnic Institute, May. 2015.
94. “Robust Efficiency and Actuator Saturation Explain Heart Rate Control and Variability”, MIT CIR seminar, Apr. 2015.
95. “Real-time Decentralized and Robust Voltage Control in Distribution Networks”, ITA Workshop in San Diego, Feb. 2015.
96. “Distributed Algorithm and Mechanism in Smart Grid”, Harvard University Center for Environment(HUCE) Graduate Consortium seminar, Oct. 2014.
97. “Distributed Optimization and Control in Smart Grid”, Workshop on Urban Research, Harvard-MIT-University of Madrid, Oct. 2014.
98. “Distributed Energy Management in Power Networks”, New England ISO, Mar. 2014.

99. “Connecting AGC and Economic Dispatch from an Optimization Point of View”, NSF Workshop: Role of Distributed Coordination in Resilient & Fine-Grain Control of Power Grids, Feb. 2014.
100. “Distributed Energy Management in Power Networks”, Cornell University, Mar. 2013.
101. “Robust Efficiency and Actuator Saturation Explain Healthy Heart Rate Control and Variability”,University of California–San Diego, Mar. 2013.
102. “Distributed Energy Management in Power Networks”, University of Michigan–Ann Arbor, Mar. 2013.
103. “Distributed Energy Management in Power Networks”, University of Wisconsin– Madison, Mar. 2013.
104. “Distributed Energy Management in Power Networks”, Harvard University, Mar. 2013.
105. “Distributed Energy Management in Power Networks”, University of Illinois, Urbana-Champion, Mar. 2013.
106. “Distributed Energy Management in Power Networks”, Georgia Institute of Technology, Feb. 2013.
107. “Distributed Energy Management in Power Networks”, Carnegie Mellon University, Feb. 2013.
108. “Designing Games for Distributed Optimization”, ITA Workshop in San Diego, “Graduation Day”, Feb. 2013.
109. “Distributed Energy Management in Power Networks”, University of California–San Diego, Jan. 2013.
110. “Robust Efficiency and Actuator Saturation Explain Healthy Heart Rate Control and Variability”, Rising Stars in EECS: an Academia Career Workshop for Women, MIT, Nov. 2012.