XIN CHEN

Ph.D. Candidate in Electrical Engineering
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Education

Since Sept. 2017	Ph.D. in Engineering Science at School of Engineering and Applied Science Harvard University Advisor: Prof. Na (Lina) Li
Sept. 2015 - July 2017	M.S. in Electrical Engineering at Department of Electrical Engineering Tsinghua University, China Advisor: Prof. Wenchuan Wu and Prof. Boming Zhang
Sept. 2012 - July 2015	B.A. in Economics at School of Economics and Management Tsinghua University, China
Sept. 2011 - July 2015	B.S. at Department of Engineering Physics (Energy Experimental Class) Tsinghua University, China Advisor: Prof. Hongbin Sun

Selected Honors and Awards

2019	Award of Distinction in Teaching, Harvard University
2018	Best Student Paper Award Finalist in 2nd IEEE Conference on Control Technology and Applications
2017	Excellent Master Graduate, Tsinghua University, China
2017	Outstanding Master Thesis Award, Tsinghua University, China
2016	Best Conference Paper Award in IEEE PES General Meeting
2010	National Chemistry Olympiad Competition, 1st prize in Jiangxi Province, China

Publications

[12] **X. Chen**, and N. Li, "Leveraging Two-Stage Adaptive Robust Optimization for Power Flexibility Aggregation," Arxiv Preprint, arXiv:2005.03768, 2020.

[11] **X. Chen**, C. Zhao and N. Li, "Distributed Automatic Load-frequency Control with Optimality in Power Systems," Arxiv Preprint, arXiv:1811.00892, 2020.

[10] **X. Chen**, Y. Nie, and N. Li, "Online Residential Demand Response via Contextual Multi-Armed Bandits," accepted to IEEE Control Systems Letters, 2020.

[9] **X. Chen**, and N. Li, "Exponential Stability of Primal-Dual Gradient Dynamics with Non-Strong Convexity," accepted to 2020 American Control Conference (ACC), 2020.

[8] Y. Li, **X. Chen**, Na Li, "Online Optimal Control with Linear Dynamics and Predictions: Algorithms and Regret Analysis", Conference on Neural Information Processing Systems (NeurIPS), 2019.

[7] **X. Chen**, E. Dall'Anese, C. Zhao and N. Li, "Aggregate Power Flexibility in Unbalanced Distribution Systems," IEEE Transactions on Smart Grid, vol. 11, no. 1, pp. 258-269, Jan. 2020.

[6] **X. Chen**, C. Zhao and N. Li, "Distributed Automatic Load-frequency Control with Optimality in Power Systems," 2018 IEEE Conference on Control Technology and Applications (CCTA), Copenhagen, pp. 24-31, 2018. (**Best Student Paper Award Finalist**)

[5] **X. Chen**, W. Wu and B. Zhang, "Robust Capacity Assessment of Distributed Generation in Unbalanced Distribution Networks Incorporating ANM Techniques," IEEE Transactions on Sustainable Energy, vol. 9, no. 2, pp. 651-663, April 2018.

[4] C. Lin, W. Wu, **X. Chen** and W. Zheng, "Decentralized Dynamic Economic Dispatch for Integrated Transmission and Active Distribution Networks Using Multi-parametric Programming," IEEE Transactions on Smart Grid, vol. 9, no. 5, pp. 4983-4993, Sept. 2018.

[3] **X. Chen**, W. Wu, B. Zhang and C. Lin, "Data-driven DG Capacity Assessment Method for Active Distribution Networks," IEEE Transactions on Power Systems, vol. 32, no. 5, pp. 3946-3957, Sept. 2017.

[2] **X. Chen**, X. Chen, W. Wu and B. Zhang, "Robust Restoration Method for Active Distribution Networks," IEEE Transactions on Power Systems, vol. 31, no. 5, pp. 4005-4015, Sept. 2016.

[1] **X. Chen**, W. Wu, B. Zhang and X. Shi, "A Robust Approach for Active Distribution Network Restoration Based on Scenario Techniques Considering Load and DG Uncertainties," IEEE Power and Energy Society General Meeting (PESGM), Boston, MA, USA, 2016. (**Best Conference Paper Award**)

Chapter in Book

[1] **X. Chen** and W. Wu, "Network Reconfiguration and Restoration Control for Active Distribution Networks," chapter in Active Distribution Networks Analysis, Operation and Control (in Chinese), Science Press, China, Sept. 2016.

Participated Projects

Since 01/2019	NSF: Eager: Real-Time: Learning, Selection, and Control in Residential Demand Response for Grid Reliability, US.
Since 09/2017	ARPA-E NODES: Real-time optimization and control of next-generation, leaded by National Renewable Energy Laboratory, US.
10/2015 - 02/2017	National Key Research Project: Clustering and coordination control techniques for high penetration of distributed generation, China.
09/2014-12/2015	Guizhou Province Science and Technology Major Project: Key techniques development and demonstration for intelligent decision and analysis systems of urban and rural distribution networks, China.

Invited Presentations

- "Exponential Stability of Primal-Dual Gradient Dynamics with Non-Strong Convexity", in 2020 American Control Conference (ACC), Online, July, 2020.
- "Distributed Automatic Load-Frequency Control in Power Systems", in 2nd IEEE Conference on Control Technology and Applications, Copenhagen, Demark, Aug. 2018.
- "Robust Restoration Approach for Active Distribution Network Based on Scenario Techniques", in Best Conference Paper session, 2016 IEEE PES General Meeting, Boston, U.S., July 2016.

Professional Services

- Reviewer for Journals: Automatica, IEEE Transactions on Automatic Control, IEEE Transactions on Smart Grid, IEEE Transactions on Power Systems, IEEE Transactions on Sustainable Energy, IET Generation, Transmission & Distribution, CSEE Journal of Power and Energy Systems, Systems & Control Letters, IEEE Control Systems Letters.
- Reviewer for Conferences: IEEE Conference on Decision and Control, IEEE Conference on Control Technology and Applications, IEEE International Conference on SmartGridComm, IEEE PES General Meeting, L4DC Conference, European Control Conference, American Control Conference.

Teaching

- (2018 Fall & 2019 Fall) Teaching Fellow for Course "ES 155: Systems and Control", Harvard University.