Siyu Xie

Department of Electrical and Computer Engineering (ECE)
Wayne State University (WSU)
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Education

2018.04-present	Postdoc in Wayne State University, Detroit, MI 48202, USA
	Supervisor: Prof. Le Yi Wang (IEEE Fellow) and Prof. Masoud Nazari
2018.09-2019.03	Visiting scholar in Academy of Mathematics and Systems Science (AMSS)
	Chinese Academy of Sciences (CAS)
2013.09-2018.06	Key Laboratory of Systems and Control
	AMSS, CAS, Beijing, China
	Ph.D degree in control theory
	Supervisor: Prof. Lei Guo (Academician of Chinese Academy of Sciences)
2009.09-2013.06	Department of Mathematics and Systems Science
	Beihang University, Beijing, China
	Bachelor degree in information and computing science (systems control)

Research Interests

Distributed optimization for power systems, distributed adaptive filters, adaptive signal processing, distributed control theory, networked systems, machine learning, compressive sensing

Skills

· MATLAB, LATEX, Python

· (adaptive) filtering algorithms, estimation of unknown (time-varying) parameters, system identification, adaptive control, distributed adaptive filters, optimization theory, multi-agent system, some general machine learning algorithms and signal processing theory, probability theory and mathematical statistics

Honors

· President Scholarship of Chinese Academy of Sciences, 2018.

· China National Scholarship for graduate students, 2017. (top 15 among 600 graduate students)

· Excellent Student of University of Chinese Academy of Sciences, 2016.

· IEEE Control Systems Society Beijing Chapter Youth Author Award, 2015.

· Outstanding Student Scholarship of CAS, 2013.

Publications

· D. Gan, S. Y. Xie, and Z. X. Liu, *Stability of the Distributed Kalman Filter With General Random Coefficients*, accepted by **SCIENCE CHINA Information Sciences**, 2020. (Regular paper)

· S. Y. Xie and L. Guo, *Analysis of Compressed Distributed Adaptive Filters*, **Automatica**, vol. 112, February 2020. (Regular paper)

· P. Zhao, X. Q. Wang, S. Y. Xie, L. Guo and Z. H. Zhou, *Distribution-free One-pass Learning*, **IEEE Transactions on Knowledge and Data Engineering**, August 2019. (Regular paper)

· S. Y. Xie and L. Guo, *Analysis of Distributed Adaptive Filters Based on Diffusion Strategies over Sensor Networks*, **IEEE Transactions on Automatic Control**, vol. 63, no. 11, pp. 3643–3658, November 2018. (Regular paper)

· S. Y. Xie and L. Guo, *A Necessary and Sufficient Condition for Stability of LMS-based Consensus Adaptive Filters*, **Automatica**, vol. 93, pp. 12-19, July 2018. (Regular paper)

· S. Y. Xie and L. Guo, *Analysis of NLMS-based Consensus Adaptive Filters under a General Information Condition*, **SIAM Journal on Control and Optimization** , vol. 56, no. 5, pp. 3404-3431, January 2018. (Regular paper)

· S. Y. Xie and L. Guo, *Exponential Stability of LMS-Based Distributed Adaptive Filters*, Proc.of the 20th World Congress of the International Federation of Automatic Control (**IFAC**), Toulouse, France, July 9-14, 2017, pp. 13764-13769.

· S. Y. Xie and L. Guo, *Compressive Distributed Adaptive Filtering*, 35th Chinese Control Conference (**CCC**), Chengdu, China, July 2016, pp. 5229-5234.

· S. Y. Xie and L. Guo, *Stability of Distributed LMS under Cooperative Stochastic Excitation*, 34th Chinese Control Conference (**CCC**), Hangzhou, China, July 2015, pp. 7445-7450.

Papers in Preparation

· S. Y. Xie, S. Liang, L. Y. Wang, G. Yin and W. Chen, *Stochastic Adaptive Optimization with Dithers*, submitted to **IEEE Transactions on Automatic Control**, 2020. (Regular paper)

· S. Y. Xie, M. H. Nazari, L. Y. Wang, G. Yin and W. Chen, *Impact of Stochastic Generation/Load Variations on Distributed Optimal Energy Management in DC Microgrids*, submitted to **IEEE Transactions on Intelligent Transportation Systems**, 2020. (Regular paper)

· M. H. Nazari, S. Y. Xie, L. Y. Wang, G. Yin and W. Chen, *Impact of Communication Packet Delivery Ratio on Reliability and Resilience in Optimal Power Management of DC Microgrids*, submitted to **IEEE Transactions on Smart Grid**, 2020. (Regular paper)

· A. S. Matveev, M. Almodarresi, R. Ortega, A. Pyrkin and S. Y. Xie, *Diffusion-based Distributed Parameter Estimation Through Directed Graphs with Switching Topology: Application of Dynamic Regressor Extension and Mixing*, submitted to **IEEE Transactions on Automatic Control**, 2020. (Regular paper)

· S. Y. Xie, Y. Q. Zhang and L. Guo, *Learning and Prediction Theory of Distributed Least Squares*, submitted to **IEEE Transactions on Automatic Control**, 2019. (Regular paper)