Zhaobo Liu

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Education

Academy of Mathematics and Systems Science, Chinese Academy of Sciences	**2015.9 − 2020.7**
Ph.D. of Control Theory, supervised by Lei Guo, Chanying Li	*Beijing, China*
School of Mathematical Sciences, Peking University	**2011.9 − 2015.7**
B.A. of Mathematics and Applied Mathematics	*Beijing, China*

Research Interests

- Adaptive Nonlinear Control
- Data Science
- Stochastic Control
- Computational Intelligence

Work Experience

Institute for Advanced Study, Shenzhen University	**2022.9 − Now**
Research Scientist, Assistant Professor	*Shenzhen, China*
College of Computer and Software, Shenzhen University	**2020.9 − 2022.8**
Post-Doctoral Fellow, supervised by Zexuan Zhu	*Shenzhen, China*

Research

Publications

- **Z. Liu**, G. Li, H. Zhang, Z. Liang, Z. Zhu. (2023) Multifactorial Evolutionary Algorithm Based on Diffusion Gradient Descent. IEEE Transactions on Cybernetics.(accepted)
- **Z. Liu**, and C. Li. (2023) Asymptotic Behavior of Least Squares Estimator for Nonlinear Autoregressive Models. SCIENCE CHINA Information Sciences, vol. 66, no. 6, pp.1-2.
- **Z. Liu**, and C. Li. (2022) Global Stabilizability Theorems on Discrete-Time Nonlinear Uncertain Systems. IEEE Transactions on Automatic Control, DOI: 10.1109/TAC.2022.3194962.
- **Z. Liu**, and C. Li. (2022) A Note on the Convergence of Distributed RLS. IEEE Transactions on Automatic Control, vol. 67, no. 12, pp. 6762–6769.
- **Z. Liu**, Q. Xie and C. Li. (2022) Inverse Eigenvalue Problem for Mass-Spring-Inerter Systems. Mechanical Systems and Signal Processing, vol. 167, Part A, DOI:10.1016/j.ymssp.2021.108506.
- **Z. Liu**, and C. Li. (2021) On the Convergence of Least Squares Estimator for Nonlinear Autoregressive Models. Proceedings of the 40th Chinese Control Conference, July 26-28, 2021, Shanghai, China.
- **Z. Liu**, and C. Li. (2019) Is It Possible to Stabilize Discrete-Time Parameterized Uncertain Systems Growing Exponentially Fast?. SIAM Journal on Control and Optimization, vol. 57, no. 3, pp. 1965–1984.
- **Z. Liu**, and C. Li. (2019) Stabilizability Theorem of Discrete-time Nonlinear Systems with Scalar Parameters. Control Theory and Applications, vol. 36, no. 11, pp. 1929–1935.

Preprints

- **Z. Liu**, Q. Xie and C. Li. Further Results on Inverse Eigenvalue Problem For Mass-spring-Inerter. Submitted to Mechanical Systems and Signal Processing(Under review; https://zblsigma.github.io/files/fixedfixed0703.pdf).
- H. Zhang[†], **Z. Liu**[†], G. Zou. Least Squares Model Averaging for Distributed Data. Submitted to Journal of Machine Learning Research (Encouraged to submit a revised manuscript; https://zblsigma.github.io/files/dMMA22.pdf).
- G. Li, **Z. Liu**, L. Liu, Z. Zhu. Multifactorial Memetic Algorithm with Adaptive Auxiliary Tasks for Service Migration Optimization in 5G Mobile Edge Computing, Submitted to IEEE Transactions on Emerging Topics in Computational Intelligence (Under review; https://zblsigma.github.io/files/mfma23.pdf).
- H. Zhang, Y. Tang, X. Jiang, J. Jiang, **Z. Liu**. A Fast Distributed Screening for High-Dimensional Linear Quantile Regression. Submitted to Statistics and Computing (Under review; https://zblsigma.github.io/files/fds23.pdf).

Projects

Shenzhen Science and Technology Innovation Commission	**2022.11 − 2025.10**

- *Shenzhen Basic Research Project*, JCYJ20220531102617039. Multi-mission optimization based UAV Cluster trajectory planning based on multi-mission optimization. RMB 300,000, under research, participating.

Guangdong Fundamental and Applied Basic Research Fund Committee	**2021.01 − 2023.12**

- *Guangdong Natural Science Foundation*, 2021A1515011911. Edge-Oriented Computing for Large-Scale Service Placement. RMB 100,000, under research, participating.

Science and Technology Commission of the Military Commission	**2018.9 − 2021.8**

- *Key Projects of Defense Science and Technology Innovation Program.* Theory of Intelligent Cooperative Control of Distributed Complex Systems. RMB 3.6 million, completed, participated.

Awards / Fellowships

IEEE CSS Beijing Chapter Young Author Nomination Prize(3/1662) **2021.7**

Outstanding Graduates from University of Chinese Academy of Sciences **2020.7**

Beijing Outstanding Doctoral Graduates **2020.7**

Technical Skills

Languages: Python, C, Matlab
Technologies/Frameworks: Linux, GitHub