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Brief biography

Mingzhou Yin is a doctoral student supervised by Prof. Roy S. Smith in the Automatic Control Laboratory at ETH Zurich since February 2019. He has been supported by the project "Modeling, Identification and Control of Periodic Systems in Energy Applications" from the Swiss National Science Foundation. He received his MSc degree *cum laude* in control & simulation at the Faculty of Aerospace Engineering, Delft University of Technology, the Netherlands in 2018. His master thesis research is on envelope-protected non-linear control of over-actuated aircraft in collaboration with Lockheed Martin. He received the joint bachelor's degree in Mechanical Engineering at Shanghai Jiao Tong University, China and the University of Hong Kong, China with first-class honours in 2016. He was the recipient of the IEEE Control Systems Society Swiss Chapter Young Author Best Journal Paper Award in 2023.

Research interests

His research interests include data-driven modeling, simulation & control, sparse learning theory, system identification with subspace and regularized methods, model predictive control, and periodic system theory.

Selected publications (full list here)

- **Yin M.**, Iannelli A., Smith R.S. (2021). Maximum Likelihood Estimation in Data-Driven Modeling and Control. *IEEE Transactions on Automatic Control*, 68(1), 317-328. arXiv:2011.00925.
- **Yin M.**, Smith R.S. (2023). Error Bounds for Kernel-Based Linear System Identification with Unknown Hyperparameters. *IEEE Control Systems Letters*, 7, 2491-2496. arXiv:2303.09842.
- **Yin M.**, Iannelli A., Smith R.S. (2021). Maximum Likelihood Signal Matrix Model for Data-Driven Predictive Control. *Conference on Learning for Dynamics and Control*, PMLR 144:1004-1014. arXiv:2012.04678.
- **Yin M.**, Iannelli A., Smith R.S. (2022). Data-Driven Prediction with Stochastic Data: Confidence Regions and Minimum Mean-Squared Error Estimates. *European Control Conference*. arXiv:2111.04789.
- **Yin M.**, Iannelli A., Smith R.S. (2021). Subspace Identification of Linear Time-Periodic Systems with Periodic Inputs. *IEEE Control Systems Letters*, 5(1), 145-150. arXiv:2006.03838.
- **Yin M.**, Akan M.T., Iannelli A., Smith R.S. (2022). Infinite-Dimensional Sparse Learning in Linear System Identification. *IEEE Conference on Decision and Control*. arXiv:2203.14731.
- **Yin M.**, Chu Q. P., Zhang Y., Niestroy M. A., de Visser C. C. (2019). Probabilistic Flight Envelope Estimation with Application to Unstable Overactuated Aircraft. *Journal of Guidance, Control, and Dynamics*, 42(12), 2650-2663. arXiv:2003.06588.