

Yifei Xiong

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🌐 <https://yifei-xiong.github.io/>

Education

- Sep 2021 – Present 📖 **M.Sc., Probability and Mathematical Statistics.**
School of Mathematical Sciences, University of Chinese Academy of Sciences.
Advisor: Prof. Sanguo Zhang
GPA: 3.93 / 4.00; (No ranking provided for graduate studies)
- Sep 2017 – Jul 2021 📖 **B.Sc., Mathematics and Applied Mathematics.**
Minor in Computer Science and Technology
School of Mathematics, South China University of Technology.
Graduation Thesis Advisor: Prof. Zhijian He
GPA: 3.76 / 4.00; Major Rank: 1 / 50;

Research Interests

- Bayesian Statistics 📖 Likelihood-free inference, Approximate Bayesian computation
- Sampling Methods 📖 Multilevel Monte Carlo, Quasi-Monte Carlo
- Machine Learning 📖 Flow-based generative models, Neural networks

Publications

Published Papers and Preprints

- 1 Y. Xiong, N. P. Ju, and S. Zhang, “Conditional density estimations from privacy-protected data,” *arXiv preprint arXiv:2310.12781*, 2023. 🔗 URL: <https://arxiv.org/abs/2310.12781>.
- 2 Y. Xiong, X. Yang, S. Zhang, and Z. He, “An efficient likelihood-free Bayesian inference method based on sequential neural posterior estimation,” *arXiv preprint arXiv:2311.12530*, 2023. 🔗 URL: <https://arxiv.org/abs/2311.12530>.
- 3 J. Gao, Y. Xiong, Q. Zhang, *et al.*, “3D geometric modeling analysis of contact probability effect in carbon black oxidation over MnOx-CeO2 catalysts,” *Chemical Engineering Journal*, vol. 398, p. 125 448, 2020. 🔗 DOI: 10.1016/j.cej.2020.125448.

Working Papers

- 1 X. Yang, Y. Xiong, and Z. He, “Leveraging Nested MLMC for Efficient Sequential Neural Posterior Estimation with Intractable Likelihoods.”



Talks

- Aug 2023 📖 SNPE-B Revisited: Rethinking of Data Efficiency and Variance Reduction.
10th International Congress on Industrial and Applied Mathematics (ICIAM)
Waseda University, Tokyo.
- Jun 2023 📖 An efficient likelihood-free Bayesian inference method based on sequential neural posterior estimation.
The 24th Beijing-Tianjin-Hebei Youth Symposium on Probability Statistics
Tsinghua University, Beijing.



Awards and Honors

- 2022  Merit Student, University of Chinese Academy of Sciences.
- 2021  Outstanding Graduation Thesis, South China University of Technology.
  Outstanding Graduates, South China University of Technology.
- 2020  **China National Scholarship (top 1%)**, in academic year 2019-2020.
  Meritorious Winners, 2020 Mathematical Contest In Modeling.
- 2019  First Prize, 11th National University Student Mathematics Competition.
  Merit Student, South China University of Technology.
  First Prize, CUMCM (Contemporary Undergraduate Mathematical Contest in Modeling), Guangdong Region.
  **China National Scholarship (top 1%)**, in academic year 2018-2019.
  Meritorious Winners, 2019 Mathematical Contest In Modeling.

Teaching Experience

- Fall 2023, Fall 2022  **Advanced Probability.** Teaching Assistant, Postgraduate Courses in University of Chinese Academy of Sciences
- Spring 2023  **Stochastic Processes.** Teaching Assistant, Postgraduate Courses in University of Chinese Academy of Sciences

Skills

- Coding  Python, R, Matlab, C/C++, C#, Mathematica
- Misc  Academic research, Algorithm design and performance analysis, Markdown & \LaTeX type-setting and publishing.