

ACADEMIC POSITION

Flatiron Institute
Associate Research Scientist

New York, NY
2025 - Current

EDUCATION

Columbia University
Ph.D. in Statistics. Advisor: John Cunningham and David Blei
M.Phil. in Statistics
M.S. in Data Science

New York, NY
2020 - Current
2020 - 2024
2018 - 2020

Nanjing University
B.S. in Mathematics

Nanjing, China
2014 - 2018

RESEARCH INTERESTS

- Generative models
- Approximate inference and sampling
- Probabilistic modeling and Bayesian methods

PUBLICATIONS

* for equal contribution

1. Bayesian Modeling of Data from Heterogeneous Environments. *Under review, 2025*
Luhuan Wu, Mingzhang Yin, Yixin Wang, John P. Cunningham, and David M. Blei
2. Posterior Uncertainty Quantification in Neural Networks using Data Augmentation. *AISTATS 2024*
Luhuan Wu, Sinead Williamson
3. Practical and Asymptotically Exact Conditional Sampling in Diffusion Models. *NeurIPS 2023*
Luhuan Wu*, Brian L. Trippe*, John P. Cunningham, and David M. Blei
4. Denoising Deep Generative Models. *NeurIPS 2022 I Can't Believe It's Not Better Workshop*
Gabriel Loaiza-Ganem, Brendan Leigh Ross, **Luhuan Wu**, John P. Cunningham, Jesse C. Cresswell, Anthony L. Caterini
5. Variational Nearest Neighbor Gaussian Processes. *ICML 2022*
Luhuan Wu, Geoff Pleiss, and John P. Cunningham
6. Bias-free Scalable Gaussian Processes via Randomized Truncations. *ICML 2021*
Andres Potapczynski*, **Luhuan Wu***, Dan Biderman*, Geoff Pleiss, and John P. Cunningham
7. Hierarchical Inducing Point Gaussian Process for Inter-domain Observations. *AISTATS 2021*
Luhuan Wu*, Andrew Miller*, Lauren Anderson, Geoff Pleiss, David M. Blei, and John P. Cunningham
8. Inverse Articulated-body Dynamics from Video via Variational Sequential Monte Carlo. *NeurIPS 2020 Workshop on Differentiable Vision, Graphics, and Physics in Machine Learning*
Dan Biderman, Christian A. Naesseth, **Luhuan Wu**, Taiga Abe, Alice C. Mosberger, Leslie J. Sibener, Rui Costa, James Murray, John P. Cunningham
9. Variational Objectives for Markovian Dynamics with Backward Simulation. *ECAI 2020*
Antonio Khalil Moretti*, Zizhao Wang*, **Luhuan Wu***, Iddo Drori, Itsik Pe'er

PROFESSIONAL EXPERIENCE

Apple, AIML

Research Intern

Seattle, WA

May 2023 - Sept 2023

Conduct research on statistical uncertainty quantification methods for deep learning models. Develop a method based on Bayesian nonparametrics and data augmentation techniques.

Columbia University, Zuckerman Institute

Research Staff

New York, NY

Feb 2020 - Sept 2020

Conduct research on statistical machine learning methods for neuroscience applications. Develop a state space model for analyzing the animal behavioral datasets.

ACADEMIC SERVICE

Reviewer for JMLR (2021,2023), AISTSTS (2022,2023,2024), ICML (2023,2024), NeurIPS (2022,2023,2025), ICLR (2024), UAI (2024), AAAI (2024)

TALKS

Jun 2025: The Gatsby Tri-center Annaul Meeting. *London, UK*

Apr 2025: The 7th Advances in Approximate Bayesian Inference. *Singapore*

Oct 2024: Yale FDS Conference: Recent Advances and Future Directions for Sampling. *New Haven, CT*

Jun 2024: The 33rd ICSA Applied Statistics Symposium. *Nashville, TN*

Apr 2023: Berkeley–Columbia Meeting in Engineering and Statistics. *New York, NY*

May 2022: The 35th New England Statistical Symposium. *Storrs, CT*

SKILLS

Programming: Python (PyTorch), R, Matlab, L^AT_EX