

Giosue Migliorini

Based in Irvine, CA

[Website](#) | [Email](#) | [LinkedIn](#) | [GitHub](#) | [Scholar](#)

EXPERIENCE

University of California, Irvine

Graduate Student Researcher

Irvine, CA

Sept. 2023 – Present

- Developed novel deep generative models
- Applied generative AI (diffusion models) to precipitation forecasting

Los Alamos National Laboratory

Graduate Research Assistant (Machine Learning Research Intern)

Los Alamos, NM

June 2023 – Sept. 2023

- Developed open-source Python library for Bayesian deep learning
- Applied Bayesian deep learning to scientific problems, research on Bayesian model selection

University of California, Irvine

Teaching Assistant

Irvine, CA

Sept. 2022 – May 2023

- Discussion sessions, office hours, and grading for classes in statistical theory (undergraduate) and modeling (Master's in Data Science)

EDUCATION

University of California, Irvine

Ph.D. in Statistics

Irvine, CA

Sept. 2022 – Present

- Advisor: Prof. Padhraic Smyth
- Research focus: Deep generative models, optimal transport theory, spatiotemporal models

Bocconi University

M.Sc. in Data Science (*summa cum laude*)

Milan, Italy

Sept. 2020 – July 2022

- Thesis: “Computational methods for high-dimensional Bayesian variable selection”
- Core coursework: machine learning, algorithms, optimization, probability and measure theory

University of Padova

Bachelor in Economics (*summa cum laude*)

Padova, Italy

Oct. 2017 – Sept. 2020

- Merit award “Mille e una Lode” given to top 3 % of the class

PUBLICATIONS AND MANUSCRIPTS

- **Giosue Migliorini** and Padhraic Smyth. Variational Inference for Interacting Particle Systems with Discrete Latent States. *NeurIPS workshop on Bayesian Decision-making and Uncertainty*, 2024.
- Gavin Kerrigan, **Giosue Migliorini**, and Padhraic Smyth. Dynamic Conditional Optimal Transport through Simulation-Free Flows. *Neural Information Processing Systems (NeurIPS)*, 2024.
- Clément Guilloteau, Gavin Kerrigan, Kai Nelson, **Giosue Migliorini**, Padhraic Smyth, Runze Li, and Efi Foufoula-Georgiou. A Generative Diffusion Model for Probabilistic Ensembles of Precipitation Maps Conditioned on Multisensor Satellite Observations, 2024. *Under review at IEEE TGRS*.
- Gavin Kerrigan, **Giosue Migliorini**, and Padhraic Smyth. Functional Flow Matching. *International Conference on Artificial Intelligence and Statistics*, 2024. **Oral, Outstanding Student Paper Highlights**.

TECHNICAL SKILLS

- **Programming:** Python (PyTorch, JAX, Scikit-learn), R, Julia, SQL
- **Areas of Expertise:** Deep Learning, Generative Models on Trajectories, Optimal Transport, Time Series Analysis
- **Developer Tools:** Git, Linux/Unix, Bash

OTHERS

- **Chair and organizer** (jointly with Dr. Natalie Klein, my mentor at Los Alamos) of a session on Bayesian deep learning featuring world-class experts at the Joint Statistical Meeting 2024.
- **Reviewer** for AISTATS 2025, NeurIPS workshop on Bayesian Decision-making and Uncertainty, 2024.
- **Languages:** Italian (native speaker), English (fluent), French (intermediate).
- **Volunteer tutor for CIAI** (*Jan. 2022 - June 2022*): taught mathematics to middle school students affected by remote learning.