

EDUCATION

New York University New York, NY
Courant Institute of Mathematical Sciences, Computer Science Fall 2018 - Present
PhD Candidate. Advisors: Rajesh Ranganath and Thomas Wies

Harvard University Cambridge, MA
School of Engineering and Applied Sciences, Computer Science Spring 2016 - Spring 2018
Special Student (mix of undergrad and PhD coursework)

New England Conservatory of Music Boston, MA
Bachelor of Music in Contemporary Improvisation Fall 2011 - Spring 2015

EXPERIENCE

Student Researcher, Google DeepMind, generative models New York, NY
Summer + Fall 2024

Fellow, Harvard SEAS, visitor Cambridge, MA
Summer 2021 - Present

Non-traditional Volunteer, NYU Langone, Population Health department New York, NY
Spring 2020 - Present

Machine Learning Research Intern, Apple, Health AI New York, NY
Supervisor: Andy Miller, Joe Futoma Summer 2021 - Summer 2022

Teaching Assistant, NYU, Computer Science department New York, NY
Fall 2019 - Spring 2022

- CSCI-GA.2565: Machine Learning. Prof: Rajesh Ranganath. Spring 2022.
- CSCI-GA.2565: Machine Learning. Prof: Rajesh Ranganath. Spring 2021.
- CSCI-GA.2572: [Deep Learning](#). Prof: Yann LeCun. Spring 2020.
- CSCI-GA.2565: Machine Learning. Prof: Rajesh Ranganath. Fall 2019.

Teaching Fellow, Harvard University, Computer Science department Cambridge, MA
Spring 2016 - Spring 2021

- CS 181: Machine Learning. Profs: Finale Doshi-Velez and David Parkes. Spring 2021.*⁺
- CS 252: Programming Languages and Artificial Intelligence. Prof: Nada Amin. Fall 2020.^{†+}
- CS 181: Machine Learning. Prof: Finale Doshi-Velez. Spring 2018.*⁺
- CS 281: Advanced Machine Learning. Prof: Sasha Rush. Fall 2017.*^{†+}
- CS 121: Intro to Theoretical CS. Profs: Boaz Barak and Salil Vadhan. Fall 2017.⁺
- CS 181: Machine Learning. Profs: David Parkes and Sasha Rush. Spring 2017.⁺
- CS 61: Systems Programming and Machine Organization. Profs: Margo Seltzer and Eddie Kohler. Fall 2016.⁺

*Head Teaching Fellow, [†]Graduate Level, ⁺Harvard Distinction in Teaching Award

Research Intern, RIKEN, Center for Advanced Intelligence Project Tokyo, Japan
PI: Mohammad Emtiyaz Khan, Approximate Bayesian Inference Team Summer 2019

Research Assistant, MIT, Brain and Cognitive Sciences department Cambridge, MA
PI: Josh Tenenbaum, Computational Cognitive Science group Summer 2018

INVITED TALKS + LECTURES

- Gave a few weeks of talks about diffusions and flows at the Decisions, Risk and Operations ML reading group at Columbia (Nov and Dec 2023).
- Taught a guest lecture on diffusions and flows for the NYU graduate course Inference and Representations (Nov 2023)
- Gave a guest lecture on diffusion models at Yann LeCun and Alfredo Canziani’s Deep Learning course. Fall 2022.
- Spoke about our work on Auxiliary Variable Diffusion Models at [Flatiron Institute’s workshop on Sampling, Transport, and Diffusions](#). Fall 2022.

WORKSHOP ORGANIZATION

- Co-organized the second iteration of [Workshop on Spurious Correlations, Invariance, and Stability @ ICML 2023](#).
- Co-organized [Workshop on Spurious Correlations, Invariance, and Stability @ ICML 2022](#).

WORKSHOP ATTENDANCE

- Participated in the 2nd Flatiron workshop on Measure Transport, Sampling, and Diffusions in Dec, 2023.
- Participated in the 1st Flatiron workshop on Measure Transport, Sampling, and Diffusions in Dec, 2022.

AWARDS + FELLOWSHIPS

- Henning Biermann Prize, 2024 (at NYU): This award honors the memory of Henning Biermann, a brilliant and much-loved Ph.D. student whose dedication to teaching, mentoring, and service enriched academic and extracurricular life for everyone in the department. The award is made to a Computer Science Ph.D. student who exemplifies this spirit through outstanding contributions to education or service to the department.
- Fall 2021: selected as a recipient of the NeurIPS 2021 Outstanding Reviewer Award.
- MacCracken Fellow, NYU Graduate School of Arts and Sciences, 2018. Five years of PhD funding.

PUBLICATIONS

Yuxuan Hu, Mark Goldstein, Rajesh Ranganath, and others. A dynamic risk score for early prediction of cardiogenic shock using machine learning. [European Heart Journal: Acute Cardiovascular Care](#). 2024. [arxiv](#).

Yifan Chen, **Mark Goldstein**, **Mengjian Hua**, Michael S. Albergo, Nicholas M. Boffi, and Eric Vanden-Eijnden. [Probabilistic Forecasting with Stochastic Interpolants and Föllmer Processes](#). 2024.

Nanye Willis Ma, Mark Goldstein, Michael Albergo, Nick Boffi, Eric Vanden-Eijnden, and Saining Xie. [SiT: Exploring Flow and Diffusion-based Generative Models with Scalable Interpolant Transformers](#). 2024.

Mark Goldstein, **Michael Albergo**, Nick Boffi, Rajesh Ranganath, and Eric Vanden-Eijnden. [Stochastic interpolants with data-dependent couplings](#). 2023.

Hao Zhang, Mark Goldstein, Rajesh Ranganath, and others. [QTNet: Predicting Drug-Induced QT Prolongation with Artificial Intelligence-Enabled Electrocardiograms](#). Published in Journals of the American College of Cardiology, Clinical Electrophysiology. 2023.

Mark Goldstein, **Raghav Singhal**, Rajesh Ranganath. [Where to Diffuse, How to Diffuse and How to get back: Learning in Multivariate Diffusions](#). Conference paper @ International Conference on Learning Representations. 2023.

Xintian Han, Mark Goldstein, Rajesh Ranganath. [Survival Mixture Density Networks](#). Conference paper @ Machine Learning for Healthcare Conference. PMLR, 2022.

Mark Goldstein, Jörn-Henrik Jacobsen, Olina Chau, Adriel Saporta, Aahlad Puli, Rajesh Ranganath, Andrew C. Miller. [Learning Invariant Representations with Missing Data \(full version\)](#). Conference paper @ CLear (Causal Learning and Reasoning) 2022.

Mark Goldstein, Jörn-Henrik Jacobsen, Olina Chau, Adriel Saporta, Aahlad Puli, Rajesh Ranganath, Andrew C. Miller. Learning Invariant Representations with Missing Data. DistShift Workshop @ NeurIPS 2021.

Mark Goldstein, Xintian Han, Aahlad Manas Puli, Thomas Wies, Adler J. Perotte, Rajesh Ranganath. [Inverse-Weighted Survival Games](#). Conference paper @ NeurIPS 2021.

Lily H. Zhang, Mark Goldstein, Rajesh Ranganath. [Understanding Failures in Out-of-Distribution Detection with Deep Generative Models](#). Conference paper @ ICML 2021.

Lily H. Zhang, Mark Goldstein, Rajesh Ranganath. Understanding Out-of-Distribution Detection with Deep Generative Models. RobustML Workshop @ ICLR 2021.

Mark Goldstein, Xintian Han, Aahlad Manas Puli, Adler J. Perotte, Rajesh Ranganath. [X-CAL: Explicit Calibration for Survival Analysis](#). Conference paper @ NeurIPS 2020.

Thomas Pasquier, Xueyuan Han, Mark Goldstein, Thomas Moyer, David Eysers, Margo Seltzer, Jean Bacon. Practical Whole-System Provenance Capture. Proceedings of the ACM Symposium on Cloud Computing (SoCC) 2017.

Xueyuan Han, Thomas Pasquier, Tanvi Ranjan, Mark Goldstein, Margo Seltzer. FRAPPuccino: Fault-detection through Runtime Analysis of Provenance. HotCloud Workshop @ USENIX ATC 2017.

Thomas Pasquier, Xueyuan Han, Mark Goldstein, Margo Seltzer, David Eysers, Jean Bacon. *Practical Provenance Capture in the Linux Operating System*. Poster at USENIX ATC. 2017.

MISC

Coding Experience: Python (PyTorch, etc).

REVIEWING

Since 2020, I have been reviewing for machine learning conferences such as NeurIPS, AISTATS, ICML, AAAI, ICLR, CLeaR, and miscellaneous workshops at these conferences.

REFERENCES

1. Rajesh Ranganath, NYU Courant, rajeshr@cims.nyu.edu
2. Finale Doshi-Velez, Harvard CS, finale@seas.harvard.edu.