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Sujai Hiremath

TL:DR

- 3rd year ORIE PhD student at Cornell Tech, working on causality and LLMs.
- Published 3 first-author papers (NeurIPS 2024, UAI 2025, NeurIPS 2025) on sample-efficient and robust causal discovery methods within 1.5 years.
- Currently interning at Amazon Research Tübingen, where I released a preprint on LLM-aided causal discovery within 4 months.

Publications AND

Preprints

- 1. Hiremath, S.*, et al. From Guess2Graph: When and How Can Unreliable Experts Safely Boost Causal Discovery in Finite Samples? arXiv preprint, 2025.
- 2. Meier, D.* and Hiremath, S.*, et al. When Additive Noise Meets Unobserved Mediators: Bivariate Denoising Diffusion for Causal Discovery. Thirty-Ninth Annual Conference on Neural Information Processing Systems, 2025.
- 3. Hiremath, S.*, et al. LoSAM: Local Search in Additive Noise Models with Mixed Mechanisms and General Noise for Global Causal Discovery. Proceedings of the Forty-first Conference on Uncertainty in Artificial Intelligence, 2025.
- 4. Hiremath, S.*, et al. Hybrid Top-Down Global Causal Discovery with Local Search for Linear and Nonlinear Additive Noise Models. Thirty-Eighth Annual Conference on Neural Information Processing Systems, 2024.

Work EXPERIENCE

Applied Scientist Intern | Amazon Research Tübingen, Germany

06.2025 - Present

- Managers: Dr. Dominik Janzing, Dr. Shiva Kasiviswanathan, Dr. Elke Kirschbaum.
- Developed a method leveraging LLMs as unreliable experts to improve causal discovery in finite samples; released preprint in <4 months.
- Currently investigating causal reinforcement learning approaches for sample-efficient training of LLMs in low-data regimes.

PhD Student Researcher | Cornell Tech

11.2023 - Present

- PIs: Dr. Kyra Gan, Dr. Promit Ghosal.
- Developed 3 novel causal discovery algorithms that use diffusion models, independence tests, and nonparametric regression techniques.
- Published 3 first-author papers at NeurIPS (2024, 2025) and UAI (2025) on improving finite-sample causal structure learning while relaxing assumptions.

FDUCATION

Cornell Tech | New York, NY

2024 - 2028

PhD in Operations Research and Information Engineering | GPA: 3.9

(expected)

Areas: AI, Causal Discovery, Causal Inference

Cornell University | Ithaca, NY

2023 - 2024

PhD in Operations Research and Information Engineering

California Institute of Technology | Pasadena, CA

2019 - 2023

BS in Applied and Computational Mathematics | GPA: 4.0

• Areas: Machine Learning, Mathematical Modelling, Deep Learning

SERVICE & AWARDS

Service: Reviewer for NeurIPS 2025, ICLR 2025, AISTATS 2025

Awards: NeurIPS Top Reviewer 2025 | Cornell Fellowship 2023 | Thomas I. Watson

Fellowship, IBM (2019-2022) | SURF Fellowship, Caltech (2020, 2021)