

# Publications

Dominik Janzing

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## Co-authored book

- [1] J. Peters, D. Janzing, and B. Schölkopf. *Elements of Causal Inference – Foundations and Learning Algorithms*. MIT Press, 2017.

## Articles in peer-reviewed conference proceedings

- [1] Daniela Schkoda and Dominik Janzing. Root cause analysis in outliers in unknown cyclic graphs. In *to appear in Proceedings of AISTATS*, 2026.
- [2] Philipp Michael Faller and Dominik Janzing. On different notions of redundancy in conditional-independence-based discovery of graphical models. In *to appear in Proceedings of AISTATS*, 2026.
- [3] Sujai Hiremath, Philipp Michael Faller, Patrick Blöbaum, Elke Kirschbaum, Shiva Kasiviswanathan, and Kyra Gan. From guess2graph: When and how can unreliable experts safely boost causal discovery in finite samples? In *to appear in Proceedings of AISTATS*, 2026.
- [4] William Roy Orchard, Nastaran Okati, Sergio Hernan Garrido Mejia, Patrick Blöbaum, and Dominik Janzing. Root cause analysis of outliers with missing structural knowledge. In *The Thirty-ninth Annual Conference on Neural Information Processing Systems*, 2025.
- [5] Vishal Verma, Sawal Acharya, Devansh Bhardwaj, Samuel Simko, Yongjin Yang, Anahita Haghighat, Dominik Janzing, Mrinmaya Sachan, Bernhard Schölkopf, and Zhijing Jin. Causal AI scientist: Facilitating causal data science with large language models. In *NeurIPS 2025 Workshop on CauScien: Uncovering Causality in Science*, 2025.
- [6] Ivaxi Sheth, Zhijing Jin, Bryan Wilder, Dominik Janzing, and Mario Fritz. Can LLMs propose instrumental variables for causal reasoning? In *NeurIPS 2025 Workshop on CauScien: Uncovering Causality in Science*, 2025.
- [7] Daniela Schkoda, Philipp Michael Faller, Dominik Janzing, and Patrick Blöbaum. Cross-validating causal discovery via leave-one-variable-out.

- In Biwei Huang and Mathias Drton, editors, *Proceedings of the Fourth Conference on Causal Learning and Reasoning*, volume 275 of *Proceedings of Machine Learning Research*, pages 659–692. PMLR, 07–09 May 2025.
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- [9] Elias Eulig, Atalanti A. Mastakouri, Patrick Blöbaum, Michaela Hardt, and Dominik Janzing. Toward falsifying causal graphs using a permutation-based test. In *Proceedings of the 39th Annual AAAI Conference on Artificial Intelligence*, 2025.
- [10] Philipp M. Faller, Leena Chennuru Vankadara, Atalanti A. Mastakouri, Francesco Locatello, and Dominik Janzing. Self-compatibility: Evaluating causal discovery without ground truth. AISTATS, 2024.
- [11] Yuchen Zhu, Kailash Budhathoki, Jonas M. Kübler, and Dominik Janzing. Meaningful causal aggregation and paradoxical confounding. In Francesco Locatello and Vanessa Didelez, editors, *Proceedings of the Third Conference on Causal Learning and Reasoning*, volume 236 of *Proceedings of Machine Learning Research*, pages 1192–1217. PMLR, 01–03 Apr 2024.
- [12] Francesco Montagna, Atalanti A. Mastakouri, Elias Eulig, Nicoletta Noceti, Lorenzo Rosasco, Dominik Janzing, Bryon Aragam, and Francesco Locatello. Assumption violations in causal discovery and the robustness of score matching. NeurIPS 2023, 2023.
- [13] Bijan Mazaheri, Atalanti Mastakouri, Dominik Janzing, and Mila Hardt. Causal information splitting: Engineering proxy features for robustness to distribution shifts. In *Proceedings of UAI 2023*, 2023.
- [14] Luigi Gresele, Julius Von Kügelgen, Jonas Kübler, Elke Kirschbaum, Bernhard Schölkopf, and Dominik Janzing. Causal inference through the structural causal marginal problem. In Kamalika Chaudhuri, Stefanie Jegelka, Le Song, Csaba Szepesvari, Gang Niu, and Sivan Sabato, editors, *Proceedings of the 39th International Conference on Machine Learning*, volume 162 of *Proceedings of Machine Learning Research*, pages 7793–7824. PMLR, 17–23 Jul 2022.

- [15] Paul Rolland, Volkan Cevher, Matthäus Kleindessner, Chris Russell, Dominik Janzing, Bernhard Schölkopf, and Francesco Locatello. Score matching enables causal discovery of nonlinear additive noise models. In Kamalika Chaudhuri, Stefanie Jegelka, Le Song, Csaba Szepesvari, Gang Niu, and Sivan Sabato, editors, *Proceedings of the 39th International Conference on Machine Learning*, volume 162 of *Proceedings of Machine Learning Research*, pages 18741–18753. PMLR, 17–23 Jul 2022.
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