



Colloquium

Tenure Talk

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ISTA

Host: Christoph Lampert

Causality at Machine Learning Scale and Complexity Distinguishing coincidence from cause-and-effect relationships is a central challenge in AI (and science): which patterns just co-occur, and which signal causality? Statistical causality offers a rigorous framework for this question, but it assumes clean, low-dimensional, structured data, which clashes with the raw, high-dimensional observations of machine learning applications, including in science. In this talk, I will present how we can now learn causal structure directly from unstructured data using deep learning, bridging between the modeling power of causality and the scalability properties of machine learning. I will also highlight some cross-disciplinary collaborations my group has built, uniquely enabled by ISTA.

Monday, September 28, 2026 11:30am - 12:30pm

Raiffeisen Lecture Hall



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

Please find a schedule of the ISTA Shuttle on our webpage:

<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.