KCETA Colloquium

From Simulation to Inference: Tackling Astrophysical Analysis Challenges with Implicit Methods

Thursday, Dec. 12, 2024
Kleiner Hörsaal A (CS) 15:45 - 17:00

Dr. Christoph Weniger
(U. Amsterdam)

Modern astrophysics and cosmology rely on complex simulations to model the universe, but inverting these models to infer parameters or test theories remains a major challenge.

Implicit simulation-based inference (SBI) methods offer powerful tools for tackling such problems, enabling rigorous analysis of high-dimensional, large-scale models that are computationally intractable with traditional approaches. In this talk, I will discuss how advances in deep learning algorithms and tools are driving the adoption of these methods, transforming astrophysical analysis and enabling breakthroughs in applications ranging from gravitational waves to large-scale structure.

Please note:
The colloquium will also be live-streamed to B401 SR410 (CN).

KIT Center Elementary Particle and Astroparticle Physics (KCETA)
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