



**UNIVERSITÄT
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Machine learning for Thermodynamic Observables in Lattice Field Theories

In this talk, I will discuss how applying machine learning techniques to lattice field theory is a promising route for solving problems where Markov Chain Monte Carlo (MCMC) methods are problematic. More specifically, I will show that deep generative models can be used to estimate thermodynamic observables like the free energy, which contrasts with existing MCMC-based methods that are limited to only estimate free energy differences. I will demonstrate the effectiveness of the proposed method for two-dimensional φ^4 theory and compare it to MCMC-based methods in detailed numerical experiments.

Tuesday, 6. July 2021, 14:15
Online, via ZOOM

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