Machine-Learning-Based Sampling in Lattice Field Theory and Quantum Chemistry



Contribution ID: 20 Type: not specified

Hands on NeuLat: a toolbox for neural samplers in lattice field theory

Thursday, 24 October 2024 11:50 (40 minutes)

Normalizing flows have increasingly gained attention as a promising choice for sampling in lattice field theory. However, there has been a lack of software packages for applying powerful generative Machine Learning models such as Normalizing flows specifically for lattice field theory. To fill this gap, we present NeuLat: a fully customizable software package that allows researchers in lattice field theory to harness the recent advances in deep generative learning. In this hands-on session, we explore how NeuLat can considerably simplify the application and benchmarking of deep generative models for lattice quantum field theory.

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