Bethe Colloquium

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Generative Flow Models for Lattice Field Theory

Lattice field theory simulations provide a non-perturbative understanding of strongly interacting field theories, such as quantum chromodynamics (QCD), and for example play an important role in providing inputs for a variety of high-energy experiments. State-of-the-art lattice calculations are, however, limited by the large computational cost of Monte Carlo simulation. Recently, significant progress has been made in applying a class of generative machine learning "flow models" to combat this issue. These generative samplers enable promising practical improvements in Monte Carlo sampling, such as fully parallelized configuration generation. In this talk, I will discuss the progress towards this goal and future prospects of the method.

BCTP, Room W 2.019 - Wegelerstr. 10 - 53115 Bonn

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