42nd International Symposium on Lattice Field Theory (Lattice 2025)



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Monte Carlo estimates of flow fields for sampling and noise problems

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Learned field transformations may help address ubiquitous critical slowing down and signal-to-noise problems in lattice field theory. This approach has close ties to trivializing maps and numerical stochastic perturbation theory, in which field transformations are defined by integrating flow fields that exactly solve a local transport problem. In this talk, I will discuss a new Monte Carlo approach to estimating these flow fields, which can then be used directly in such contexts or as a means of generating "ground truth" data for machine learning approaches.

Parallel Session (for talks only)

Algorithms and artificial intelligence

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Session Classification: Algorithms and artificial intelligence