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Flow-based sampling for lattice field theories

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Critical slowing down and topological freezing severely hinder Monte Carlo sampling of lattice field theories as the continuum limit is approached. Recently, significant progress has been made in applying a class of generative machine learning models, known as "flow-based" samplers, to combat these issues. These generative samplers also 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.

Topical area

Algorithms and Artificial Intelligence

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