

Contribution ID: 393

Type: Talk

Studies of Gauge-fixed Fourier acceleration for SU(3) gauge theory

Thursday, 1 August 2024 11:30 (20 minutes)

We report results from the application of Fourier acceleration to SU(3) lattice gauge theory using softly-fixed Landau gauge. Acceleration of the HMC algorithm is studied on a 16^4 lattice volume with the Wilson gauge action and different values of β . Two types of boundary conditions with fixed boundary links are explored. The boundary links are fixed either to unit matrices or to the matrices present on the boundaries of an initial gauge configuration equilibrated with periodic boundary conditions, anticipating a possible application in which a large lattice is continually divided into subvolumes that are evolved independently.

Primary authors: HUO, Yikai (Columbia University); CHRIST, Norman (Columbia University); UREK, Rana (Columbia University)

Presenter: CHRIST, Norman (Columbia University)

Session Classification: Algorithms and artificial intelligence

Track Classification: Algorithms and Artificial Intelligence