Biased Metropolis Algorithms for Lattice Gauge Theory

Presenter: Alexei Bazavov
Alexei Bazavov, Bernd A. Berg
Abstract: For simple examples of 4D SU(2) and U(1) lattice gauge theory we illustrate how a Biased Metropolis Algorithm (BMA) can be constructed, which in essence leads to Heat Bath Algorithm (HBA) efficiencies. Besides having advantages in parallelization, the BMA still works well when the HBA is computationally inefficient.