Abstract Submitted
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Fast sampling in the slow manifold: The momentum-enhanced hybrid Monte Carlo method IOAN ANDRICIOAEI, University of Michigan — We will present a novel dynamic algorithm, the MEHMC method, which enhances sampling and at the same time yielding correct Boltzmann weighted statistical distributions. The gist of the MEHMC method is to use momentum averaging to identify the slow manifold and bias along this manifold the Maxwell distribution of momenta usually employed in Hybrid Monte Carlo. Several tests and applications are to exemplify the method.

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