

Probabilistic sampling for physics: finding needles in a field of high-dimensional haystacks

ID de Contribution: 15

Type: **Non spécifié**

Upgrading MCMC dynamics by necessary symmetries and non-reversibility

mardi 5 septembre 2023 14:00 (1 heure)

In this talk, I will review the older and most recent developments regarding reversibility breaking in Markov-chain Monte Carlo (MCMC), from lifting to piecewise deterministic Markov processes. This will offer the opportunity to discuss the differences between necessary and sufficient symmetries for correctness in MCMC and how removing restrictive conditions can lead to more efficient algorithms. The discussed algorithms will be illustrated in statistical mechanics notorious examples, from particle to spin systems.

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Classification de Session: Challenge and Perspective