Recent Developments in Randomized MLMC

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Abstract

Multi-level Monte Carlo (MLMC) algorithms have been extensively applied in recent years to obtain schemes that often converge at faster rates than corresponding traditional Monte Carlo methods. In this talk, we shall discuss a randomized method introduced in joint work with Chang-han Rhee, and then describe a stratified alternative estimator. Our principal focus in the talk will be on applications to equilibrium computations for Markov chains, computing value functions, sensitivity estimates, and optimization, and covers joint work with Rhee, Jose Blanchet, and Zeyu Zheng.

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