
Higher order variance reduction for nonlinear Monte Carlo problems

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Abstract

In this talk I present several new variance reduction approaches which are applicable to a variety of challenging nonlinear Monte Carlo problems like simulation-based optimal stopping or simulation of McKean-Vlasov-type equations. A distinctive feature of these approaches is that they allow for a significant reduction of the computational complexity not only up to a constant but also in order. A numerical performance of these approaches will also be illustrated.

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