On a connection between Adaptive Multilevel Splitting and stochastic waves

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Abstract

Adaptive Multilevel Splitting (AMS for short) is a general Monte-Carlo method to simulate and estimate rare events. In the framework of molecular dynamics, this technique can for example be used to generate reactive trajectories, namely equilibrium trajectories leaving a metastable state and ending in another one. In this talk, we will present a connection between AMS and stochastic waves, i.e. the transformation of a Markov process by a random time change. In particular, this connection allows us to analyze AMS as a Fleming-Viot type particle system.

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