Contribution ID: **12** Type: **Talk**

Numerical Stochastic Perturbation Theory in φ^4 Theory

Wednesday, 28 June 2017 10:15 (30 minutes)

Numerical stochastic perturbation theory (NSPT) is a powerful tool for estimating high-order perturbative expansions in lattice field theory. The standard NSPT is based on the Langevin equation. In this contribution, we investigate in φ^4 theory some alternative methods. In particular, we present a study of the recently proposed Instantaneous Stochastic Perturbation Theory, as well as a formulation of numerical stochastic perturbation theory based on Generalised Hybrid Molecular Dynamics algorithms.

Title

Numerical Stochastic Perturbation Theory in φ^4 Theory

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