Numerical Estimation of Keldysh-Countour Path Integrals for Nonequilibrium Problems

ANDREW MILLIS, Columbia University, PHILIPP WERNER — We propose an idea for simulating the dynamics of open (coupled to reservoirs) systems in a nonequilibrium steady state and present preliminary numerical results for the nonequilibrium spin boson and Anderson models. The method builds on the observation (Phys. Rev. Lett. 94 076404) that out of equilibrium the Keldysh time evolution operator exhibits an exponential time decay, and uses the stochastic hybridization expansion techniques of Phys. Rev. Lett. 97, 07640.

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