Abstract Submitted
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Iterative Monte Carlo for Quantum Dynamics[1] VIKRAM JADHAO, NANCY MAKRI, University of Illinois at Urbana-Champaign — We present a fully quantum mechanical methodology for calculating complex-time correlation functions by evaluating the discretized path integral expression iteratively on a grid selected by a Monte Carlo procedure [1]. Both the grid points and the summations performed in each iteration utilize importance sampling, leading to favorable scaling with the number of particles, while the stepwise evaluation of the integrals circumvents the exponential growth of statistical error with time.
[1] V. Jadhao and N. Makri J.Chem.Phys. 129, 161102 (2008)

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