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Stochastic wave-function unravelling of the generalized Lindblad equation using correlated states

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Abstract content
   (Max 300 words)

We present a stochastic wave-function unravelling of the generalized Lindblad master equation using correlated states, that is a combination of the system state vectors and the environment population. We apply the time-convolutionless projection operator method (TCL) to a two-state system, a qubit, coupled to an environment consisting of two energy bands which are both populated. Monte Carlo wave-function simulations based on the unravelling of the master equation are compared to the TCL solution and the exact solution of the Schrodinger equation. A typical quantum trajectory and average time evolution of the state vector on the Bloch sphere is also presented.

Apply to be
 consider for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD)?

PhD

Main supervisor (name and email)
and his / her institution

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Would you like to <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

No

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