Qeios

Peer Review

Review of: "Restoring Heisenberg-Limited Precision in Non-Markovian Open Quantum Systems via Dynamical Decoupling"

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The setting considered by the authors is that of quantum systems encoded with an unknown parameter to estimate, which is interacting with an environment. The authors present a theorem that specifies under which conditions the interaction with the environment can be decoupled, so that the Heisenberg scaling can be recovered. They also present an application to the Jaynes-Cummings model.

I have verified the derivation of the theorem, and it is correct. I haven't verified all the calculations of the particular example, but the results seem sound.

The paper is interesting, and the presentation is clear; I would suggest publication.

Declarations

Potential competing interests: No potential competing interests to declare.

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