

Abstract Submitted
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Quantum geometry and entanglement in the Rabi model JUSTIN WILSON, VICTOR GALITSKI, University of Maryland at College Park — In composite systems, entanglement can be useful for control since one system's properties become fundamentally linked with another system's properties. One way of measuring entanglement is with a quantity called I-concurrence, a generalization of concurrence to systems that have more states than a qubit. We show that I-concurrence can be rewritten in terms of quantum geometric quantities. In particular, we show a dependence on the Hilbert-Schmidt distance measure on the Hilbert space of one of the subsystems. Using this quantity and the recently exactly solved Rabi model, we calculate the entanglement between eigenstates in the Rabi model.

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