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Genuine multipartite entanglement in Quantum Annealing

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Generating bipartite entanglement in quantum computing technologies is widely regarded as a pivotal benchmark. However, multipartite entanglement can appear when solving a complicated optimization problem where the correlation between multiple qubits is beneficial. Understanding whether such entanglement contributes to achieving a feasible solution is crucial from both algorithmic and hardware standpoints. Here, we tackle this query by analyzing genuine multipartite entanglement generated in quantum annealing with respect to its occurrence in the annealing schedule and how the quantitative value correlates to the algorithm's success probability.

Abstract category

Quantum Simulations

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