

Quantum Computation of Thermal Averages in the Presence of a Sign Problem

Thursday, 12 December 2019 13:15 (15 minutes)

We illustrate the application of Quantum Computing techniques to the investigation of the thermodynamical properties of a simple system, made up of three quantum spins with frustrated pair interactions and affected by a hard sign problem when treated within classical computational schemes.

We show how quantum algorithms completely solve the problem, and discuss how this can apply to more complex system of physical interest.

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