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Chiral fermion on quantum computers

Thursday, 3 August 2023 16:00 (20 minutes)

Quantum computation often suffers from artificial symmetry breaking. We should strive to suppress the artifact both by theoretical and technical improvements. As for chiral symmetry, there is a celebrated theoretical formalism, i.e., the overlap fermion. In this presentation, I will talk about how the overlap fermion guarantees chiral symmetry in quantum computation. I will also show that, although a drawback of the overlap fermion is its computational cost, there is a loophole in one dimension.

Topical area

Quantum Computing and Quantum Information

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