

Tensor networks: from ground states to excitations and back

Monday, 25 March 2024 10:00 (1 hour)

Tensor networks provide a way to systematically study not only ground states but also excitation spectrum of quantum many-body systems. When dealing with the latter, diagrammatic summation would typically arise. In this talk, I will describe the idea of using generating functions to solve this problem in the context of both matrix product states and projected entangled-pair states. As an application of excitation ansatz, I will discuss the results for the Kitaev model. If time permits, a variant of this model and related questions will also be mentioned.

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