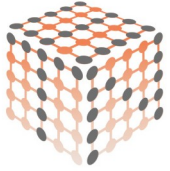


Tensor Networks in Simulation of Quantum Matter: T-NiSQ



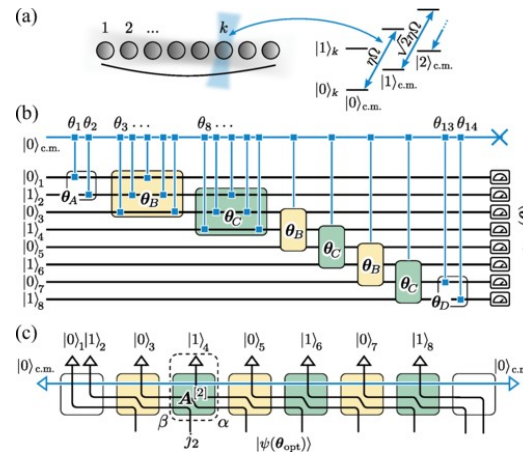
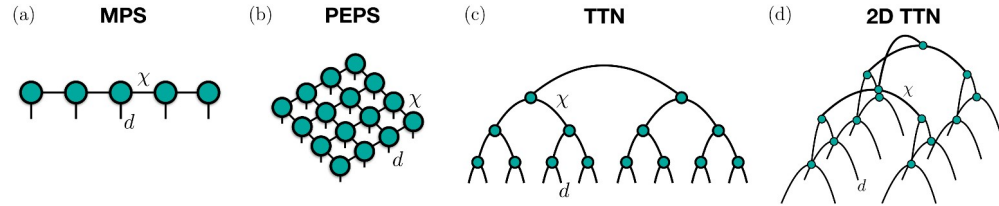
T-NiSQ

Tensor Networks in Simulation of Quantum Matter



Objective: Study quantum matter through the development of

1. Theoretical tools: algorithms, methods, modeling
 2. Experimental tools: devices, setups, platforms
- ...based or inspired to Tensor Networks



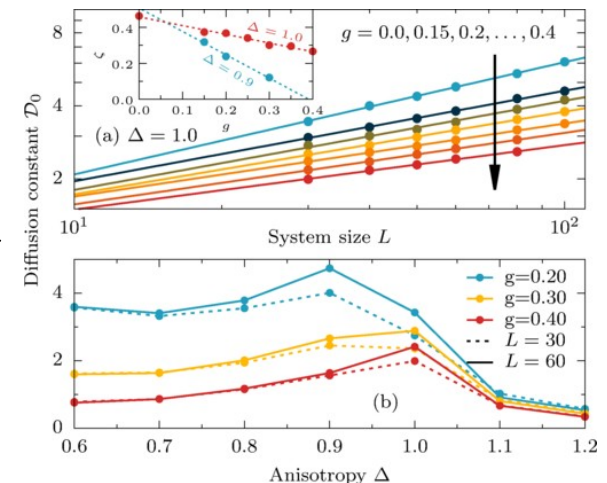
Spin diffusion in perturbed isotropic Heisenberg spin chains:
 Tensor Network dynamics of many-body quantum open sys.
 [Phys. Rev. B **108**, L081115 (2022)]

THEORY

Highlights:

EXPERIMENT

Ion-Trap Tensor Network variational eigensolver, to probe phases of quantum matter
 [Phys. Rev. X **12**, 041035 (2022)]



WEBSITE

<https://t-nisq.pd.infn.it/>