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Physics of spin systems using quantum computers[1]

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Quantum hardware has advanced to the point where it is now possible to perform simulations of physical systems and elucidate their ground states and excitation spectra. In this talk, I will overview some of our recent results on this topic, focusing mainly on systems of interacting spins and their properties as seen through a quantum computing lens. I will discuss the Heisenberg and Kitaev models, and how we might adapt concepts familiar from many-body theory to quantum hardware.

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