

Departmental Colloquium

On Gapped Ground State Phases of Quantum Matter

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Abstract: Materials exhibiting quantum mechanical effects hold the promise of developing revolutionary new technologies. A vital component to this progress is understanding the phase of individual quantum systems, which groups together physical systems that exhibit similar properties and characteristics. One of the fundamental quantities in this classification is whether or not there is a spectral gap above the ground state energy of the system. In this talk, we will discuss how these phases are modeled, how the gap is defined and its role in phase classification, and highlight some of the key past and current research related to this vital task.

Friday, November 1 at 3:00 PM in 636 SEO