## Stability of Frustration-Free Ground States of Quantum Spin Systems

Monday, 5 September 2016 09:30 (1 hour)

Abstract: We study frustration-free quantum lattice systems with a non-vanishing spectral gap above one or more

(infinite-volume) ground states. The ground states are called stable if arbitrary perturbations of the Hamiltonian that are uniformly small throughout the lattice have only a perturbative effect. In the past several years such stability results have been obtained in increasing generality. We review results by Bravyi-Hastings, Bravyi-Hastings-Michalakis, and Michalakis-Zwolak, as well as recent refinements. (Joint work with Robert Sims and Amanda Young.)

Presenter: Prof. NACHTERGAELE, Bruno (University of California, Davis)