

Cyclotron Seminar

Thursday, January 10th

At 3:30pm



Dr. Henry Lamm
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Emerging Methods for Dense and Nonequilibrium Matter

Abstract:

Experimental nuclear science in the next decade promises to drastically expand our understanding. Measurements of the properties of neutron stars via gravitational and electromagnetic wave detection provide insight into the nuclear equation of state. New and existing programs for creating and reacting rare isotopes will reveal information both about nuclear structure and the stellar evolution of the universe. For nuclear theorists, this wealth of data presents a challenge--our standard Monte Carlo methods fail spectacularly due to "sign problems" that spoil our ability to importance sample, precluding us from providing first-principle predictions. In this talk, I will discuss two emerging methods to alleviate these sign problems: complexification and quantum computers, and how theorist can use them to extract the properties of neutron stars and reaction rates.

CYCLOTRON INSTITUTE

Room 228

Refreshments will be served at 3:15pm

