NUCLEAR SEMINAR

Tuesday, February 12 - 3:45 p.m. - Corcoran 404 A

"Excited State Spectroscopy and Meson-Meson Scattering from Lattice QCD"

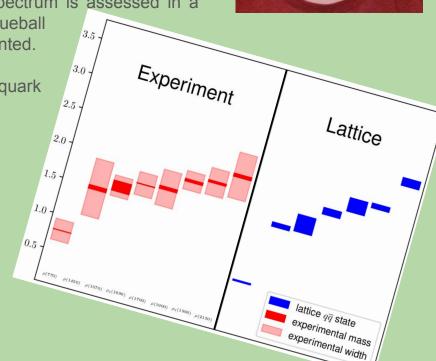
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Due to the nature of the strong interaction (QCD), studying the low-lying QCD spectrum remains a difficult task. Lattice QCD allows us to probe the low-lying states of the theory using first principles numerical calculations.

Using large bases of one- and two-hadron interpolating operators we study the excited state spectrum of QCD in finite-volume. The q-qbar content of the spectrum is assessed in a

number of symmetry channels. Preliminary results for the scalar glueball and it's mixing with nearby meson-meson states will also be presented.

Elastic I=1/2, s- and p-wave Kpi scattering phase-shifts at varying quark masses will also be presented. Partial wave mixing induced by the finite-volume is included for *I*<2.





DEPARTMENT OF PHYSICS