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Meson spectroscopy from Lattice QCD

Monday, 29 June 2026 13:00 (30 minutes)

Determining the meson spectrum directly from Quantum Chromodynamics (QCD) remains a central challenge, since QCD is strongly coupled at low energies and most excited states appear as resonances in hadronic decay channels. Advances in lattice QCD and scattering theory now provide a systematic framework for extracting meson spectra and resonance properties from first principles. In this talk, I will present an overview of this program and review current state-of-the-art calculations in meson spectroscopy from lattice QCD. I will highlight recent progress in the extraction of resonant and coupled-channel amplitudes, along with frontier developments in three-body dynamics and the determination of meson photo-couplings. Together, these advances are bringing us closer to a comprehensive first-principles description of the excited meson spectrum.

Collaboration

Primary author: JACKURA, Andrew (The College of William & Mary)

Presenter: JACKURA, Andrew (The College of William & Mary)

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