Contribution ID: **21** Type: **not specified**

# Colloquium: Chiral EFT meets lattice QCD

*Thursday, 2 October 2025 14:00 (1 hour)*

Absrtact: Lattice QCD provides a truly ab-initio approach to the structure and dynamics of hadronic and nuclear systems. I will discuss how this method can be further enhanced by explicitly taking into account long-range pion dynamics that can be described in a systematic and model-independent fashion using chiral EFT. I will show how these ideas allow one to solve the long-standing left-hand cut problem in Lüscher's method for extracting two-body scattering information from finite-volume energy levels. Applications considered include the analysis of lattice QCD data for the two-nucleon and DD* meson systems.

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