

Resonant hadron systems from EFT, LQCD and Phenomenology

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Reaction independent, universal parameters of resonances are encoded in the analytic structure of transition amplitudes. Symmetries can reduce the family of such amplitudes through the general S-matrix constraints or by using Effective Field Theories, e.g CHPT when dealing with strongly interacting systems. Physical information through experiment or results of numerical calculations of Lattice QCD provide additional valuable constraints at real energies.

In my talk, I will provide an overview of the current frontier and the challenges associated with this workflow, and highlight the recent progress that has been made in overcoming them. I will showcase several examples, including data-driven phenomenological tools and purely theoretical investigations based on Lattice QCD. Finally, synergetic effects between different pathways will be discussed.

Primary author: MAI, Maxim

Presenter: MAI, Maxim

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