



ID de Contribution: 36

Type: Non spécifié

## What can Regge theory tell us about hadron dynamics and spectroscopy?

*vendredi 13 mars 2026 10:10 (20 minutes)*

The spectrum of light hadrons encodes essential information about the non-perturbative dynamics of QCD. Most observed hadrons are resonances, rigorously defined as poles of scattering amplitudes in the complex energy plane. Their properties, such as masses, widths, and couplings, are therefore determined by the analytic structure of the amplitudes describing low-energy hadronic interactions. Regge theory provides a theoretical framework to study scattering amplitudes through their analytical continuation to complex values of the orbital angular momentum, revealing singularities known as Regge poles that represent t-channel exchanges. At sufficiently high energies, this formulation extends the notion of fixed-spin particle exchange to entire families of states with the same quantum numbers and increasing spin called Regge trajectories. Recent high-statistics data from dedicated hadron-spectroscopy programs at experiments such as GlueX, CLAS12, and COMPASS have renewed interest in Regge-based approaches to the analysis of peripheral production processes. In this talk, I will review recent theoretical developments in the description of light meson photoproduction within the framework of Regge theory and discuss what they reveal about hadron dynamics and spectroscopy.

**Orateur:** MONTANA, Gloria (Universitat de Barcelona & ICCUB)

**Classification de Session:** QCD