Appunti di Fisica '19
&
Dottorato di Ricerca in Fisica

19 novembre ore 15:00
Sala seminari, CNR-IPCF

Prospects for Hadron Spectroscopy

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Quantum Chromodynamics is universally acknowledged as the theory of strong interactions. However, the way how the fundamental constituents (quark and gluons) arrange themselves into the hadrons that are actually observed in experiments, is still a mystery. Even at a phenomenological level, the presence of multiple overlapping states leads to intricate interference patterns that make the extraction of meaningful information complicated.
In this colloquium, I will explain what challenges we face every day to understand the spectrum of strong interacting particles. I will review the status of present and planned colliders, and what are the expectations in the near future. I will discuss the role of amplitude analysis in converting the raw experimental data into robust physics information. I will finally show how these tools allow us to solve a longstanding puzzle about the elusive hybrid mesons.

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