

# The Higgs boson: a promising portal to New Physics

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The Higgs boson, responsible for the mass of the SM fundamental particles, plays a central role in propounding New Physics (NP) that might shed some light on the still unanswered questions present within the standard frame of particle physics. For example, the appearance of resonances in the scattering of longitudinally polarized vector bosons (intimately related to the Higgs mechanism) would be a clear indication of the presence of such NP. In this presentation I will talk about the importance of the Higgs particle to unravel the questions that we do not get to understand using the standard framework and then focus on the advances in our phenomenological studies on vector boson scattering (VBS) to look for new heavy resonant states.

## Abstract

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