Avviso di seminario

Dr. Maria Mironova
Lawrence Berkeley National Laboratory (USA - CA)

Martedì 11 Giugno 2024
Ore 15:00
Aula Anni – Dipartimento di Fisica

- HIGGS WHAT NOW? -
Measurements of VH, H→bb/cc and the ATLAS Higgs Physics Program in the Post-Higgs-Boson-Discovery Era

ABSTRACT

Since the discovery of the Higgs boson in 2012, the landscape of Higgs physics measurements has shifted from searches for the unknown particle to understanding the properties of the Higgs boson in increasing detail by exploiting the different possible production and decay channels. The Higgs boson coupling to b-quarks has been well-established, while the Higgs coupling to c-quarks has not yet been observed. New physics effects can manifest either as precision corrections to the H→bb decay rate or significant modifications to the H→cc decay rate. As a consequence, there has been a substantial effort within the ATLAS collaboration to explore both of these signatures and exploit the similarities of the decay modes, which can be separated through the use of jet flavour tagging. This seminar will cover the latest measurements of H→>bb decays and searches for the H→cc process using the ATLAS Run 2 dataset, focusing on the VH production mode. The talk will specifically highlight the importance of modeling of V+jets processes, which constitute the most important background for the VH,H→bb/cc analyses. The seminar will conclude with a discussion of the first ATLAS Run 3 Higgs results and an outlook of the possible Higgs physics program at the HL-LHC and future colliders.

Il seminario è rivolto a ricercatori e studenti.

Organizzato da: Prof.ssa S. Spagnolo e Dott. G. Chiodini