UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Higgs boson physics: from discovery to precision

86R-XXXVI-HBP

Aims

Contents

With the discovery of the Higgs boson announced on July the 4th 2012, the ATLAS and CMS Collaborations found the long-sought missing piece of the Standard Model of elementary particles, attaining one of the main objectives of the Large Hadron Collider (LHC) with a dataset far smaller than initially estimated. Soon after, thanks to a multitude of analysis channels, high luminosity and sophisticated data mining techniques the Higgs quest became a vast campaign of precision measurements, that will be during the forthcoming data taking campaign of the LHC. In this course, the theoretical motivations and the experimental challenges of the discovery will be presented, followed by the prospects of the Higgs physics for the years to come, and its role in the falsification of the Standard Model.

Detailed program

Prerequisites

Teaching form

2 CFU, 16 hours, language: English.

Textbook and teaching resource

Semester

II semester

Assessment method

Office hours