Contribution ID: **50** Type: **not specified**

Overview of experimental results in the Higgs sector: precision, BSM and diHiggs

Friday 6 January 2023 09:30 (40 minutes)

The 2012 discovery of the Higgs boson by the ATLAS and CMS experiments at CERN's Large Hadron Collider (LHC) marked the completion of the Standard Model (SM). Since then the experiments have collected more than ten times the amount of data, which are being used to carefully map the properties of the Higgs boson and to search for additional scalars. Looking ahead, one of the main goals of the high-luminosity upgrade of the LHC will be to measure the Higgs boson self-couping which will shed light on the shape of the Higgs potential. Given the unique role that the Higgs boson plays in the SM, it is linked to many fundamental questions such as the vacuum stability and the matter-antimatter asymmetry. This talk will summarize what the LHC has taught us about the Higgs boson over the past ten years and what measurements and searches lie ahead at current and possible future colliders.

Presenter: STRANDBERG, Sara (Stockholm University (SE))

Session Classification: Invited talks V