



Physics of the Large Hadron Collider

February 24, 2021 (Wednesday)
10:00 a.m.

Zoom online lecture

<https://hku.zoom.us/j/98767573700?pwd=bzJ3SXh5aEJsQnozMHlwVi8zZ3VVZz09>

Meeting ID: 987 6757 3700

Password: 2859



Professor Claudio Campagnari
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Abstract:

The Large Hadron Collider (LHC) at the European Center for Nuclear Research (CERN) has now been operating for almost a decade. The highlights of the program have been the discovery of the Higgs Boson in 2012 and the first searches for new physics at the Tera-electronVolt energy scale. In the next decade the LHC is expected to deliver a factor of 30 more data than what have been collected to date. In this talk we will review the most important results and lessons learned from the data taken in the 2010s, and discuss the prospects for the science that will become accessible with the larger dataset.

Biography:

Professor Claudio Campagnari is the Chair of the Physics Department in the University of California at Santa Barbara. He is an experimental high energy physicist and a member of the CMS collaboration at the Large Hadron Collider (LHC) at CERN. His group in CMS has been involved for many years in several searches for supersymmetry (SUSY). In the past they contributed directly to the discovery of the Higgs boson by studying the WW mode. In addition, they have made measurements of Standard Model (SM) processes such as top pair and W pair production, searched for 4th generation top-like quarks, and for production of same sign top pairs. More recently they have started on a program towards the first observation of SM four-top production and they are working on the measurement of the Higgs production in conjunction with a top-antitop pair.

The group recently completed an upgrade of some of the electronics for the CMS muon system. They are now contributing to the maintenance and operation of the muon detectors and the further upgrades. They have recently started to work on the new CMS precision timing detector for the high luminosity LHC era.

Anyone interested is welcome to attend!

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