PHYSICSCOLLOQUIA2026

The discovery of the Higgs boson by the ATLAS and CMS experiments at CERN's Large Hadron Collider (LHC) marked a breakthrough in particle physics and stands among the greatest scientific discoveries of all time.
The Higgs boson is a ripple of a scalar field that gives mass to elementary particles, thereby governing the structure of atoms, molecules, and biological life.
Measurements at the LHC, many of which have surpassed the expected instrumental sensitivity, have yielded spectacular insights into the new particle's characteristics, but crucial properties remain untested.
To unlock these and many other secrets in fundamental physics, the LHC and its experiments are undergoing major upgrades for the High-Luminosity LHC, which will operate during the 2030s.
In this colloquium, I will introduce the current landscape of physics at the LHC, with an emphasis on the Higgs boson, and present the preparations for the High-Luminosity LHC and its physics goals.

ANDREAS HOECKER | CERN, Genève

WHAT WE STILL DON'T KNOW ABOUT THE HIGGS BOSON: THE LHC'S NEXT ACT

3:00 p.m. | **CLASSROOM A** | Via Celoria 16 | Milan

MAR 17

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