On the tracks of elementary particles

Special focus: development and QA of rad hard electronics for HEP

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Aula adiacente all'Aula Magna (link: bit.ly/39BDb3g)

The proton-proton collisions at the LHC enabled the production and the observation of the Higgs boson, the last essential element of the Standard Model.

An overview of the main ingredients of the Standard Model, the basic principles of particle detection, and of the analysis of the collisions that led to the Higgs discovery will be presented.

A key element of the particle detectors operating at the LHC is the on-detector electronics, that has extremely challenging requirements in terms of performance and radiation tolerance. Some aspects of the development and quality assurance of such electronics devices, as well as possible future perspectives will be discussed.

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PhD in Physics from Scuola Normale Superiore in Pisa in 1995.

CERN staff member since 1998.

Member of the CMS (Compact Muon Solenoid) Experiment at the LHC (Large Hadron Collider) since 2000. Led the CERN team participating to the construction of the inner part of the CMS Detector, the Tracker.

From 2009 to 2020, project leader for the upgrade of the CMS Tracker, for the High-Luminosity operation of the LHC, due to start in 2028.