



# detector seminar

SPEAKER: Corrado Gargiulo  
TITLE: **Challenges for future tracking detectors mechanics**  
DATE: 26 Oct 2018, 11:00  
PLACE: 40-S2-A01 - Salle Anderson

## ABSTRACT

The mechanics of the future High Energy Physics tracking detectors will have to cope with a wide range of competing requirements. Hadron detectors will propose exceptional new large dimensions and unprecedented radiation levels, while lepton detectors will require high spatial resolution and extremely low material budget with radiation damage being less a concern. Whether it is to dissipate the heat generated by readout sensors and electronic components, or to extend the service life of sensors in the high radiation environment, integrated cooling will drive the structural design. Furthermore, radiation levels in hadron collider and activation cool-down times will limit future operational scenarios, which should be taken into account in the detector design in terms of remote access and maintenance. In this talk, the challenges for the future tracking detector mechanics and possible developments will be discussed, starting from the present upgrade program that will bring to the full exploitation of the potential of the High-Luminosity-LHC, and looking into the studies for post-LHC projects.

Organised by: Burkhard Schmidt