

Seminar

Role of TIFR in Phase-2 Upgrade of the CMS detector at CERN

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In Phase-2, as LHC is upgraded, the High Luminosity LHC (HL-LHC) will integrate 10 times more luminosity than the LHC currently and this poses significant challenges for radiation tolerance and event pileup on detectors, especially for forward calorimetry in CMS. As part of its HL-LHC upgrade program, the CMS collaboration is designing a High Granularity Calorimeter (HGCal) to replace the existing endcap calorimeters. HGCal will have fine transverse and longitudinal segmentation as well as timing measurements, which would enable mitigation of challenges arising from HL-LHC. TIFR is playing a major role in various aspects of HGCal design and development, specifically in the area of critical high speed trigger system. I will present various cutting-edge hardware and firmware developments in the group pertaining to Phase-2 upgrade in general and HGCal in particular. I will also touch upon proposed Module Assembly Center (MAC) for HGCal silicon modules at TIFR Mumbai.

Thursday, Feb 27th 2020

4:00 PM (Tea/Coffee at 3:30 PM)

Auditorium, TIFR-H