Institut Ruđer Bošković ZAVOD ZA TEORIJSKU FIZIKU

Bijenička c. 54 ZAGREB, HRVATSKA

SEMINAR ZAVODA ZA TEORLISKU FIZIKU

(Zajednički seminari Zavoda za teorijsku fiziku, Zavoda za eksperimentalnu fiziku IRB-a i Fizičkog odsjeka PMF-a)

The confirmation of the Standard Model at the LHC

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Datum: srijeda, 22. studenog 2017. Vrijeme : **14 sati c.t.** Mjesto: IRB, predavaona I krila

Abstract:

Since its start of operation in 2010, the Large Hadron Collider (LHC) has commented a very large amount of proton proton collisions at center of mass energies of 7, 8 and 13 TeV. Besides searching directly for manifestations of physics beyond the Standard Model (SM) of Particle Physics, an important tast of the LHC is check the validity of the SM at the TeV scale. As it is well known, a central part of this task consisting in confirming the SM mechanism to introduce masses of bosons and fermions through Spontaneous Symmertry Breaking was successfully completed through the discovery of a Higgs boson by the CMS and ATLAS Collaboration in 2012. In this seminar, we will review the status of the SM study at the TeV scale by focusing on the electroweak and Higgs sector, which are both related to the interest and specific contribution of the CMS group at RBI.

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