# LHC Seminar

SPEAKER: Jian Wang (Universite Libre de Bruxelles (BE))

TITLE: **Higgs boson width from off-shell production and decay to ZZ**

DATE: Tue 15/04/2014 11:00

PLACE: Main Auditorium


**ABSTRACT**

Constraints on the total Higgs boson width, Gamma_H, are presented using off-shell production and decay to ZZ in the 4l and 2l2nu final states. The analysis is based on data collected in 2012 by the CMS experiment at the LHC, corresponding to an integrated luminosity of L = 19.7/fb at a centre-of-mass energy of 8 TeV. The combined analysis of the 4l and 2l2nu events at high mass with the 4l measurement of the Higgs boson peak at 125.6 GeV leads to an upper limit on the Higgs boson width of Gamma_H < 4.2 x Gamma_H(SM) at the 95% confidence level, assuming Gamma_H(SM) = 4.15 MeV. This result considerably improves over previous experimental constraints from direct measurements at the Higgs resonance peak.


Organised by: M. Mangano, C. Lourenco, G. Unal.....

**Tea and Coffee will be served at 10h30**