INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

Seminar Notice

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School of Physical Sciences

Title:	**Constraining certain Higgs couplings at the HL-LHC and beyond**
Speaker:	**Shankha Banerjee,Institute for Particle Physics Phenomenology,Durham University,U.K.**
Date:	**January 25, 2019 (Friday)**
Time:	**4:00 p.m.**
Venue:	**Physics Seminar Room - C406,3rd Floor, Centenary Building, IACS**
Abstract:	In this talk, I will review the present status of the Higgs boson's properties since its discovery in 2012. I will focus on the measurements of several Higgs couplings, upon considering standard decay modes, in the context of an effective field theory. I will also discuss the possibility of strongly constraining the couplings affecting the triple gauge boson vertices upon studying the ZH channel in the boosted Higgs regime. I will show the potential of the High luminosity run of the LHC (HL-LHC) and the future 100 TeV FCC-hh machine, to constrain such couplings to stronger degrees than LEP had constrained earlier. Finally, I will discuss various studies pertaining to the measurement of the Higgs trilinear coupling at the HL-LHC and at a future 100 TeV collider.

All are cordially invited to attend the seminar