

SEMINAR

The East African Institute for Fundamental Research (EAIFR) invites you to a seminar

Title: Extended Higgs sectors at the Large Hadron Collider

by
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Date: Wednesday, 17 April, 2019

<u>Time:</u> 16:00 – 17:00 HRS

Venue: EAIFR, top floor

(Former "KIST2" Building of the Univ. of Rwanda in Nyarugenge)

This is a seminar that can be of interest to physicists and mathematicians. The general public is invited.

Abstract: The Standard Model (SM) of electroweak interactions has long been known to be inconsistent with some cosmological as well as collider observations. Many frameworks of new physics have been suggested and investigated in an attempt to explain such phenomena. Most of these frameworks contain additional Higgs bosons besides the candidate for the 125 GeV one observed at the Large Hadron Collider (LHS) in 2012. However, these new Higgs bosons might have escaped detection at the LHC so far, owing to their heavy masses or very weak interaction strengths with the SM particles. This warrants improved search strategies and, at the same time, exploitation of rare search channels that might give a better yield in specific phase space regions. I will discuss the possibilities offered by some such channels at the next run of the LHC, in the context of models with two Higgs doublets, with and without Supersymmetry.

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