



Exploring new physics scenarios at the LHC

KSETA lectures by

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(Julius Wess Awardee)

KIT Campus South, bldg. 30.23

09.12.2019	09:45 – 11:15 h	room 6/1
10.12.2019	09:45 – 11:15 h	room 6/1
12.12.2019	11:30 – 13:00 h	room 10/1
13.12.2019	09:45 – 11:15 h	room 6/1

Abstract:

In these lectures, I will explore the theoretical constraints on the existence of physics beyond the standard model in the absence of the discovery of new particles. The tools for limiting new physics from unitarity, perturbativity, and precision measurements will be examined both in the context of specific UV complete models and in the context of low energy effective theories. I will give a pedagogical introduction to effective field theories and their uses at the LHC, with particular attention to the need for higher order corrections in the effective field theory and the numerical relevance for future studies at the LHC.