

Seminarium Szkoły Doktorskiej NCBJ

Thursday, 21 October, 9:00

<https://www.gotomeet.me/NCBJmeetings/phd-seminar>

Speaker:

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Title:

Vector Like extension of Standard Model

Abstract:

A coupling constant determines how much force will be exerted in a given interaction. In renormalized perturbation theory, a coupling receives contributions from higher-order loop diagrams. Therefore, one can define the effective coupling as the sum of tree-level coupling and all higher-order contributions. The goal of the project is to find the Zff effective coupling. At the tree level this coupling is determined by the electroweak gauge coupling and the quantum numbers of the fermion. The loop corrections in the Standard Model are known and consistent with the experimental measurements. That is not the case for a generic BSM scenario, where the contributions to the effective coupling need to be calculated and confronted with the data. In my talk, I will discuss contributions to Zff effective coupling in a class of BSM scenarios considering vector-like fermions. I will also show how these results could be used to indirectly look for the New Physics.