

# Looking for the solution to the Hierarchy Problem in Top physics

Thursday 18 July 2024 15:24 (18 minutes)

The top quark loop gives the major quantum correction to the Higgs mass squared, playing the dominant role in the well-known Hierarchy Problem. Traditional models address the issue by introducing TeV-scale top partners. However, the absence of these new particles urges for an alternative solution. In this talk, I will present a new scenario where the top Yukawa coupling is modified to tackle the hierarchy problem. In the model, the top Yukawa coupling is strongly suppressed at high scales due to new interactions and degrees of freedom which will have direct impacts on Top physics. I will discuss both the possible UV completions and the relevant phenomenology.

## Alternate track

1. Beyond the Standard Model

## I read the instructions above

Yes

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**Session Classification:** Top Quark and Electroweak Physics

**Track Classification:** 04. Top Quark and Electroweak Physics