Contribution ID: **14** Type: **not specified**

Dark matter as the trigger of flavor changing neutral current decays of the top quark

Thursday 25 April 2024 12:30 (20 minutes)

Reference: https://arxiv.org/abs/2402.08652

In this talk, I will discuss a possible between dark matter (DM) and one-loop induced top quark FCNC decays. In a simplified t-channel DM model that extends the SM with one colored scalar mediator and one right-handed fermion both odd under an ad-hoc Z_2 symmetry, I will show that that moderate to large rates of the top quark FCNC decays are
possible while respecting the existing constraints. Then I will discuss the phenomenological implications at hadron colliders (HL-LHC and FCC-hh) of four phenomenologically viable scenarios.

Presenter: Dr JUEID, Adil (Institute for Basic Science)

Session Classification: LHC top WG Open Meeting