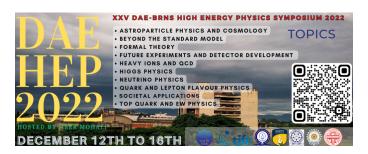
## XXV DAE-BRNS High Energy Physics Symposium 2022



Contribution ID: 303 Type: Poster

## Addressing flavor anomalies, $(g-2)_{\mu}$ , neutrino mass and matter-antimatter asymmetry of the universe within SO(10) GUT with a scalar leptoquark and scalar triplets

Tuesday 13 December 2022 14:00 (1 hour)

Motivated by the recent flavor anomalies we consider the extension of the Standard Model with a scalar leptoquark  $S_1(\bar{3},1,1/3)$  and a scalar triplet to investigate the rare semileptonic B decays involving quark level transitions  $b\to c\ell^-\bar\nu_\ell$ ,  $(g-2)_\mu$  anomaly, neutrino mass and matter-antimatter asymmetry simultaneously. The important feature of the work is that it leads to successful gauge coupling unification of fundamental forces when embedded in non-SUSY SO(10) grand unified theory. We also comment on the feasibility of parameter space that can be probed at low-energy experiments like neutrinoless double beta decay or at high-energy colliders.

## Session

Beyond the Standard Model

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Session Classification: Poster - 2