Contribution ID: **931**   Type: **Parallel Talk**

A $\mathcal{T}_{13}$ Family Symmetry Model for Quarks and Leptons

Monday, 4 May 2020 17:15 (15 minutes)

I will propose a phenomenologically successful $SU(5)$ Yukawa texture for both quarks and leptons that explains their GUT-scale mass ratios and mixing angles. Together with a complex-tribimaximal (TBM) seesaw mixing, this texture reproduces the neutrino mixing angles and predicts both Dirac and Majorana leptonic CP violation. I will show that this framework can be accommodated in a family symmetry model based on the Frobenius group $\mathcal{T}_{13}$, a subgroup of $SU(3)$. The most important ingredient of the texture, asymmetry, singles out $\mathcal{T}_{13}$ as the minimal discrete symmetry. I will discuss how to build a unified model of effective interactions that yields the nontrivial features of the asymmetric texture without any fine-tuning.

Summary

I will discuss an $SU(5) \times \mathcal{T}_{13}$ gauge-family symmetry model for quarks and leptons.

Primary author: RAHAT, Moinul Hossain (University of Florida)

Presenter: RAHAT, Moinul Hossain (University of Florida)

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