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# Connecting Dark Matter with flavor puzzle

*Wednesday, 20 December 2023 12:00 (30 minutes)*

In this talk, I will discuss an extension of the Standard Model (SM) with a complex scalar field, known as 'flavon', based on the Froggatt-Nielsen mechanism. In an effective theory approach, the SM fermion masses and mixing patterns are generated in orders of the parameter related to the vacuum expectation value of the flavon field and the cut-off of the effective theory. By introducing right-handed neutrinos, we study the viability of the lightest right-handed neutrino as a dark matter candidate, where the same flavon field acts as a mediator between the dark and the SM sectors.

## Institution

## Designation

## Reference publication/preprint

**Presenters:** MANDAL, Rusa (Siegen University); MANDAL, Rusa

**Session Classification:** Plenary