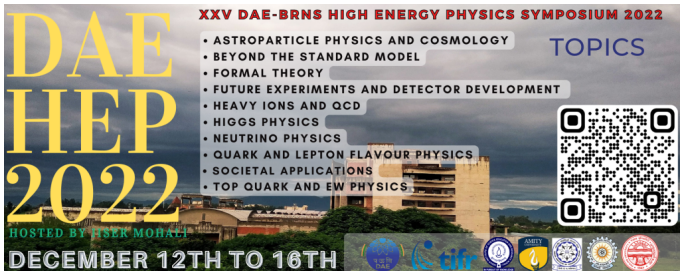


Contribution ID: **582** Type: **Poster**

# WIMP and Self Interacting FIMP dark matter in the context of Singlet Doublet Moldel

*Tuesday 13 December 2022 14:00 (1 hour)*

We examine a singlet-doublet fermion dark matter where the incorporation of a small Majorana mass term for the singlet fermion helps evade the severe direct detection constraint by making the dark matter pseudo-Dirac. Interestingly, the same mass term provides a platform to address the non-zero neutrino mass in the presence of singlet scalars. In addition, we discuss the realization of the freeze-in production of dark matter in the same setup. Here, a light scalar mediator present in our framework can mediate a large self-interaction for the fermion dark matter, which is capable of solving the small-scale structure anomalies of the Universe.

## Session

Beyond the Standard Model

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**Session Classification:** Poster - 2