Contribution ID : **11** Type : **not specified**

# Scalar dark matter candidate and its connection with neutrino physics

## Abstract content

The existence of non-baryonic Dark Matter (DM) is well established by cosmological and astrophysical probes, however its detailed nature still remains elusive. Among the extensions of the Standard Model explaining the DM relic aboundance, the simplest one is the addition of an inert scalar to the theory. In this talk I intend to give a brief review of this scenario and its possible connection with neutrino physics. I will in particular outline the discrete dark matter mechanism, which consist in extending the SM with a non-Abelian flavor symmetry. In this scenario, when the flavor symmetry is spontaneously broken by the electroweak symmetry breaking mechanism, it will explain the neutrino mixing patterns and at the same time will render the dark matter stable.

## Summary

**Primary author(s) :** Dr. PEINADO, Eduardo (INFN, Laboratori Nazionali di Frascati)

**Presenter(s) :** Dr. PEINADO, Eduardo (INFN, Laboratori Nazionali di Frascati)