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## Radiative neutrino masses

*Friday 21 July 2023 15:40 (20 minutes)*

In the first part of the talk I will describe a Majoron-like extension of the Standard Model with an extra global  $U(1)_X$  symmetry where neutrino masses are generated through an inverse seesaw mechanism at the 1-loop level. In contrast to the tree-level inverse seesaw, the framework contains dark matter candidates stabilized by a residual  $Z_2$  symmetry surviving spontaneous breaking of the  $U(1)_X$  group. I will discuss the implications of the model in dark matter and charged lepton flavor violation. In the second part of the talk I will describe a minimally extended inert doublet model where the tiny neutrino masses are generated through a three-loop seesaw. The model leads to a rich phenomenology while satisfying all the current constraints imposed by neutrinoless double-beta decay, charged-lepton flavor violation, and electroweak precision observables. The model could also successfully explain the  $W$  mass anomaly and provides viable fermionic or scalar dark matter candidates.

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