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## Universal inverse seesaw and radiative neutrino masses.

*Thursday 2 December 2021 15:30 (20 minutes)*

In this talk I will describe a theory where the Inverse seesaw mechanism is implemented not only in the neutrino sector but also in the SM charged fermion sector in order to explain the pattern of SM fermion masses. To the best of my knowledge, that model corresponds to the first implementation of the inverse seesaw mechanism for the charged fermion sector. I will discuss its implications in the muon and electron anomalous magnetic moments, meson oscillations, dark matter and leptogenesis. Then, I will explain a scotogenic neutrino mass model where the fermionic particles mediating the one-loop level radiative seesaw mechanism are crucial for achieving successful gauge coupling unification. Finally, I will discuss a theory capable of reproducing the  $g-2$  muon anomaly, where the Universal seesaw mechanism generates the SM fermion mass hierarchy and a radiative linear seesaw mechanism produces the tiny masses of the light active neutrinos.

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