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## Flavor seesaw mechanism

In the Standard Model, Yukawa couplings parametrize the fermion masses and mixing angles with the exception of neutrino masses. The hierarchies and apparent regularities among the quark and lepton masses are, however, otherwise a mystery.

In this talk I discuss a class of model having vector-like fermions that can potentially address this problem and provide a new mechanism for fermion mass generation. The masses of the third and second generations of quarks and leptons arise at tree level via the seesaw mechanism from new physics, while loop corrections produce the masses for the first generation. This mechanism has a number of interesting and testable consequences. Among them are unavoidable flavor-violating signals at the upcoming experiments and the fact that neutrinos have naturally only Dirac masses. This talk is based on Phys. Rev. D 105 (2022), 115015.

**Author:** KLETT, Sophie

**Presenter:** KLETT, Sophie

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