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**Neutrino masses and interactions a theory perspective**

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Neutrinos are the most mysterious particles of the Standard Model (SM). Some of the neutrino properties can be well described within the SM; however, there are still unanswered questions in the neutrino sector which need to be clarified. How many neutrino species do we have? Are there any CP-violating phase in the neutrino sector? What are the absolute neutrino masses? A general introduction will be given on the current status of the neutrino physics, e.g. sterile neutrinos, neutrino masses, lepton number violation etc. We will also talk about how to systematically study physics beyond the standard model (BSM) in the neutrino oscillation experiments within the standard model Effective Field Theory (SMEFT) framework. In this way, the analysis of the data can capture large classes of models, where the new degrees of freedom have masses well above the relevant energy for the experiment. Moreover, it allows to compare several experiments in a unified framework and in a systematic way. The approach will be applied to several short- and long baseline neutrino experiments. We will show the results of these EFT searches at the Daya Bay and RENO experiments as well as FASERv.