

Present status of neutrino physics from a theory perspective

Friday, November 11, 2022 11:10 AM (30 minutes)

One of the most important achievements in the field of particle physics was the discovery of neutrino oscillations. This implies the massive nature of neutrinos and in turn points to the existence of physics Beyond the Standard Model. In this talk I will chiefly focus on several strategies to probe new physics with neutrinos. First and foremost, I will discuss some classes of neutrino mass models and the respective detection prospects. I will also elaborate on the strategies to probe various new physics that is unrelated to neutrino mass, e.g. axion-like particles, at near-future neutrino experiments such as DUNE. Finally, I will discuss anomalies, in particular the excess of events at LSND and MiniBooNE experiments and respective BSM explanations.

Author: BRDAR, Vedran (CERN)

Presenter: BRDAR, Vedran (CERN)

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