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## Dirac Nature of Neutrinos and Its Implications

*Friday 16 December 2022 14:00 (1 hour)*

More than eighty years after they were first proposed, neutrinos still remain an enigma. Although they are an integral part of the Standard Model, still we know very little about them. In particular, the Dirac or Majorana nature of neutrinos remains a mystery. For a long time, theoretical particle physicists believed that neutrinos must be Majorana in nature and several elegant mass generation mechanisms have been proposed for Majorana neutrinos. However, in recent years there is a renewed interest in exploring the possibility of neutrinos being Dirac particles. In this talk, I will discuss many ways in which naturally small Dirac neutrino masses can be generated. I will also discuss the various interesting and sometimes surprising connections between Dirac nature of neutrinos and Dark Matter stability, proton decay etc.

### Session

Neutrino Physics

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