Contribution ID: **90** Type: **not specified**

The flavour violating Goldstone

Wednesday, 2 July 2025 09:30 (30 minutes)

In this talk, I explore low-scale seesaw scenarios in which a single global U(1) symmetry —and its spontaneous breaking —plays multiple theoretical roles and determines the resulting phenomenology. I will present four example models that share a similar particle content but differ only in their charge assignments, leading to qualitatively distinct physical scenarios, where the Goldstone boson associated with the U(1) breaking (Majoron or Diracon) plays a central role. I will highlight the complementarity between low-energy flavour experiments and cosmological observations in constraining and distinguishing these models.

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Session Classification: Morning session