

**SUSY 2024**

**Theory meets Experiment**

**Madrid**

**10-14 June 2024**

Contribution ID: 151

Type: **Parallel Talk**

## **Deconstructing flavor anomalously**

*Monday 10 June 2024 16:25 (20 minutes)*

Flavor deconstruction refers to ultraviolet completions of the Standard Model where the gauge group is split into multiple factors under which fermions transform non-universally. We propose a mechanism for charging same-family fermions into different factors of a deconstructed gauge theory in a way that gauge anomalies are avoided. The mechanism relies in the inclusion of a strongly-coupled sector, responsible of both anomaly cancellation and the breaking of the non-universal gauge symmetry. As an application, we propose different flavor deconstructions of the Standard Model that, instead of complete families, uniquely identify specific third-family fermions. All these deconstructions allow for a new physics scale that can be as low as few TeV and provide an excellent starting point for the explanation of the Standard Model flavor hierarchies.

**Primary author:** LIZANA, Javier (IFT UAM-CSIC)

**Presenter:** LIZANA, Javier (IFT UAM-CSIC)

**Session Classification:** Flavour physics and neutrinos

**Track Classification:** Flavour physics and neutrinos