Contribution ID: **1392** Type: **Parallel session talk**

Deconstructing flavor anomalously

Friday 19 July 2024 11:19 (17 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.

Alternate track

1. Quark and Lepton Flavour Physics

I read the instructions above

Yes

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Session Classification: Beyond the Standard Model

Track Classification: 03. Beyond the Standard Model