

# Higgsing on Symmetric Matter in F-theory

*Thursday, 27 June 2024 17:00 (15 minutes)*

Higgsing on symmetric matter in an  $SU(N)$  gauge theory breaks to a special  $SO(N)$  subgroup with exotic matter representations. We discuss the explicit realization of such Higgsings in F-theory models and analyze the resulting models via dualities with heterotic and type IIB. The  $SO(N)$  gauge factors are supported on Kodaira type  $I_N$  singularities with nontrivial Tate monodromy. These models have nontrivial global gauge group quotients with no apparent Mordell–Weil torsion or additional  $U(1)$  factors, and our results suggest that one can similarly obtain a locally supported  $U(1)$  gauge factor without additional Mordell–Weil sections.

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**Session Classification:** Parallel session