

# THEORY SEMINAR

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## "How to search for new quarks"

All elementary fermions discovered so far are chiral, which means that their masses are not gauge invariant. It is possible that non-chiral fermions exist and have escaped detection due to their large mass.

A heavy fermion of this kind may mix with the top quark, leading to interesting signatures at the Tevatron and LHC colliders. Such new physics at the TeV scale has the potential of revealing the origin of electroweak symmetry breaking.

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