

# **Common exotic decays of vector-like top partners: Motivation, challenges, and opportunities for collider searches**

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Many standard model extensions, including composite Goldstone Higgs models, predict vectorlike fermionic top-partners at the TeV scale. The intensive search programmes by ATLAS and CMS focus on decays into a 3rd generation quark and an electroweak boson ( $W$ ,  $Z$ ,  $h$ ). However, underlying models of partial compositeness contain additional light scalars (pNGBs) to which top-partners commonly decay.

In this talk, I discuss current LHC bounds on composite pNGBs and vector-like quarks in their presence, and outline opportunities for new searches at LHC run III (and beyond).