New particles and interactions at the LHC

new gauge bosons:

Z' and its Higgs particle

(with Felix Yu)

vectorlike fermions:
new electroweak multiplets
(with Claudius Krause)

Heavy neutrinos near the weak scale

Anomaly-free chiral sets of fermions

with D. Costa and P. Fox, Phys. Rev. Lett. - Oct 2019 "General solution to the U(1) anomaly equations"

we are now trying to extend our results to larger gauge groups.