Cosmology, Astrophysics, Theory and Collider Higgs 2024 (CATCH22+2) Contribution ID: 99 Type: not specified

## Indirect new physics constraints with 1,2 and 3 bosons

Sunday 5 May 2024 15:00 (20 minutes)

I will discuss the first combined interpretation of multiboson production at colliders in the Standard Model Effective Field Theory framework. We find that triboson measurements contribute signifincantly towards pinning down possible new interactions. We quantify how, in addition to the precise diboson measurements from the LEP and LHC experiments, they offer complementary and competitive indirect sensitivity to new physics to electroweak precision observables (EWPO), by lifting flat directions in the parameter space and improving the validity of the EFT expansion, even in the directions most strongly constrained by EWPO.

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Session Classification: Talks