Contribution ID: **115** Type: **not specified**

The leptoquark Hunter's guide: Pair production

Thursday, 20 September 2018 14:15 (20 minutes)

Leptoquarks occur in many new physics scenarios and could be the next big discovery at the LHC. I will discuss a model-independent search strategy covering all possible leptoquarks is possible and has not yet been fully exploited. To be systematic we organize the possible leptoquark final states according to a leptoquark matrix with entries corresponding to nine experimentally distinguishable leptoquark decays: any of {light-jet, b-jet, top} with any of {neutrino, e/μ, τ}. The 9 possibilities can be explored in a largely model-independent fashion with pair-production of leptoquarks at the LHC. I will review the status of experimental searches for the 9 components of the leptoquark matrix. Based on current limits, I will derive bounds on a complete set of Minimal Leptoquark models which span all possible flavor and gauge representations for scalar and vector leptoquarks.

Presenter: ZHONG, Yi-Ming

Session Classification: WG6: High-pT flavor physics: H f'f decays, single top production, direct measurement of Vtd, Vts, Vtb, rare top decays, CPV at high p_T