



Contribution ID: 90

Type: not specified

## Measurement of differential cross-sections in four lepton events in 13 TeV pp collisions with the ATLAS detector

*Thursday 10 September 2020 11:10 (20 minutes)*

I will present the unfolded measurements of four-lepton differential and integrated fiducial cross-sections, corresponding to events with two same-flavour, opposite-charge electron or muon pairs. The final-state has contributions from a number of interesting Standard Model processes that dominate in different four-lepton invariant mass regions, including single  $Z$  boson production, Higgs boson production and on-shell  $ZZ$  production, with a complex mix of interference terms, and possible contributions from beyond-the-Standard Model physics. The differential cross-sections include the four-lepton invariant mass inclusively, in slices of other kinematic variables, and in different lepton flavour categories. Also measured are di-lepton invariant masses, transverse momenta, and angular correlation variables, in four regions of four-lepton invariant mass, each dominated by different processes.

**Author:** HUANG, Joanna (University of London (GB))

**Presenter:** HUANG, Joanna (University of London (GB))

**Session Classification:** Student Talks