

# Searches for electroweak SUSY production in channels with Higgs, Z, and W bosons at CMS

*Friday, 5 December 2014 15:30 (30 minutes)*

Searches for supersymmetry (SUSY) are presented based on the electroweak pair production of neutralinos and charginos, leading to decay channels with Higgs, Z, and W bosons and undetected lightest SUSY particles (LSPs) using 8 TeV collected in 2012 with the CMS detector at the LHC. Neutralino pair production leading to hh, hZ, and ZZ states with missing transverse energy ( $E_T^{miss}$ ) is considered, as well as chargino-neutralino pair production, leading to hW states with  $E_T^{miss}$ . The decays of a Higgs boson to a bottom-quark pair, to a photon pair, and to final states with leptons are considered in conjunction with hadronic and leptonic decay modes of the Z and W bosons.

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**Session Classification:** Parallel Session