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## **Global Fits of the MSSM with GAMBIT (15' + 5')**

*Thursday 4 August 2016 11:50 (20 minutes)*

The wide range of probes of physics beyond the standard model leads to the need for tools that combine experimental results to make the most robust possible statements about the validity of theories of new physics and the preferred regions of their parameter space. In this talk, I will introduce a new code for such analyses: GAMBIT, the Global and Modular BSM Inference Tool. GAMBIT is a flexible and extensible framework for global fits of essentially any BSM theory. The code currently incorporates direct, indirect, solar and relic density searches for dark matter, limits on production of new particles from the LHC and LEP, complete flavor constraints from LHCb, LHC Higgs production and decay measurements, and various electroweak precision observables. I will discuss both the code's capabilities and results of scans of the parameter space of the MSSM.

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