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## Global fits of BSM physics models with Gambit

*Wednesday 13 March 2019 18:00 (20 minutes)*

The Gambit collaboration is a new effort in the world of global BSM fitting – the combination of the largest possible set of observational data from across particle, astro, and nuclear physics to gain a synoptic view of what experimental data has to say about models of new physics. Using a newly constructed, open source code framework, Gambit have released several state-of-the-art scans of large BSM-model parameter spaces, which have revealed structures masked by the Simplified Model approach that dominates LHC collaborations' in-house data interpretations. I will present the publicly available Gambit framework for marshalling physics calculations and assembling composite likelihoods – including its use of OpenMP and MPI parallelisation, and novel scanning algorithms – as well as headline results from Gambit's programme of BSM data recasting.

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**Session Classification:** Track 2: Data Analysis - Algorithms and Tools

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