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Event Generation for the Large Hadron Collider

Tuesday 16 July 2013 10:50 (1h 30m)

Tests of the Standard Model and searches for new phenomena at the LHC depend heavily on computer simulations of signal and background processes. Monte Carlo event generators aim to simulate the final states of high-energy collisions in full detail, down to the level of individual stable particles. I will review the physics behind these programs, their main ingredients and theoretical status, with emphasis on recent work to improve their precision, especially for top-quark and Higgs physics. There will be extensive comparisons with the latest data and predictions for the next LHC run.

Presenter: Prof. WEBBER, Bryan (U. Cambridge)