Contribution ID: **217** Type: **Parallel Session talk**

A Generative-Adversarial Network Approach for the Simulation of QCD Dijet Events at the LHC

Thursday, August 8, 2019 11:00 AM (12 minutes)

Summary

A Generative-Adversarial Network (GAN) based on convolutional neural networks is used to simulate the production of pairs of jets at the LHC. The GAN is trained on events generated using MadGraph5 + Pythia8, and Delphes3 fast
detector simulation. We demonstrate that a number of kinematic distributions both at Monte Carlo truth level and after the detector simulation can be reproduced by the generator network with a very good level of agreement. Preprint arXiv:1903.02433 [hep-ex]

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