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

Wednesday 17 April 2019 09:35 (20 minutes)

In this talk, I will present a Generative-Adversarial Network (GAN) based on convolutional neural networks that 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. 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.

Preferred contribution length

20 minutes

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