Contribution ID: **6** Type: **not specified**

How to GAN LHC Events

Wednesday 15 January 2020 14:55 (20 minutes)

Event generation for the LHC can be supplemented by generative adversarial networks, which generate physical events and avoid highly inefficient event unweighting. For top pair production we show how such a network describes intermediate on-shell particles, phase space boundaries, and tails of distributions. It can be extended in a straightforward manner to include for instance off-shell contributions, higher orders, or approximate detector effects.

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Session Classification: Generative Models