Contribution ID: **42** Type: **not specified**

Generative Models for Calorimeter Shower Simulation (ILD)

Tuesday 26 November 2019 15:30 (25 minutes)

In this talk, we demonstrate the usage of Generative Adversarial Networks (GANs) and Variational Auto-Encoders (VAEs) for modeling the electromagnetic showers in the context of proposed International Large Detector (ILD), in the central region of Silicon-Tungsten (Si-W) Electromagnetic Calorimeter. After successful completion of the training processes, the properties of synthesized showers are compared to the showers from a full detector simulation using Geant4. Our results demonstrate the potential of using such networks for fast calorimeter simulation for ILD detector in the future and open the possibility to complement current simulation techniques.

Primary author: Mr EREN, Engin (DESY)

Presenter: Mr EREN, Engin (DESY)

Session Classification: Computing