Contribution ID: 49

Type: On-site planned, but remote also possible

Generative Adversarial Networks for Fast Calorimeter Shower Simulations

Simulation of Calorimeters is a computational-costly process. Different strategies to replace these simulations with generative models are currently developed. This is especially important for the High Luminosity LHC and the coming high granularity upgrade of the CMS forward calorimeter. The summer student will have opportunities to learn about generative modelling and calorimetry.

We will explore different strategies to use Generative Adversarial Networks with different complexities.

Field

B1: Particle physics analysis (software-oriented)

DESY Place

Hamburg

DESY Division

FH

DESY Group

CMS

Special Qualifications:

- Experience in programming is essential
- Exposure to Deep Learning considered an asset

Primary author: KRUECKER, Dirk (CMS (CMS Fachgruppe Searches))

Co-authors: SCHNAKE, Simon Patrik (CMS (CMS Fachgruppe Searches)); MELZER-PELLMANN, Isabell (CMS (CMS-Experiment))