Contribution ID: **121**   Type: **not specified**

Experimental highlights: The State of ML in LHC Science

Monday 4 November 2024 11:30 (40 minutes)

Informed by the many fields in which machine learning (ML) has made impacts, the coming years promise to see exciting improvements in the discovery and measurement power of LHC experiments. But stepping back from the many exploratory studies ongoing, there are already dozens of concrete and rigorous public LHC results leveraging advanced ML. This review will examine common themes of those results across simulation, offline reconstruction, BSM searches and precision analysis, and simulation-based inference. We thus find experiments converging towards similar techniques for some applications and diverging on others, with longstanding challenges in production-ready ML addressed even as others arise.

Track

Presenter: MURNANE, Daniel Thomas (Niels Bohr Institute, University of Copenhagen)

Session Classification: Plenary talks