

## Second MODE Workshop on Differentiable Programming for Experiment Design



Contribution ID: 82

Type: Talk

### Adaptive Experimentation to assist the detector design of the future Electron Ion Collider

*Wednesday, 14 September 2022 18:10 (20 minutes)*

The Electron Ion Collider (EIC), the future ultimate machine to study the strong force, is a large-scale experiment with an integrated detector that covers the central, far-forward, and far-backward regions. EIC is utilizing AI starting from the design phase in order to deal with compute intensive simulations and a design made by multiple sub-detectors – each characterized by multiple design parameters and driven by multiple design criteria.

In this context, AI offers state of the art solutions to design the experiment in a more efficient way. This talk provides an overview of the recent progress made during the EIC detector proposal; it will also cover how this work could further progress in the near future.

**Presenter:** FANELLI, Cristiano (William & Mary)

**Session Classification:** Applications in Nuclear Physics

**Track Classification:** Nuclear Physics