

Session Program

23-25 Sept 2024



Fourth MODE Workshop on Differentiable Programming for Experiment Design

Particle Physics

Valencia (Spain)

Monday 23 September

11:30

Particle Physics

Session | **Location:** Valencia (Spain) | **Conveners:** Emma Torro Pastor, Dr Pietro Vischia

11:30-11:50

Cheetah: Bridging the Gap Between Machine Learning and Particle Accelerator Physics with High-Speed, Differentiable Simulations

Speaker

Jan Kaiser

11:50-12:10

Identification of Particle Tracks in CMS with Neuromorphic Computing

Speaker

Dr Emanuele Coradin

12:10-12:30

Machine Learning approach to Beam Induced Background Shield at 3 TeV Muon Collider

Speaker

Luca Castelli

12:30-12:50

Stable neural network models for calorimeter optimization

Speaker

Alexey Boldyrev

12:50

Tuesday 24 September

11:30

Particle Physics

Session | **Location:** Valencia (Spain) | **Convener:** Dr Pietro Vischia

11:30–11:50

Magnet Design Optimization with Supervised Deep Neural Networks

Speaker

Florian Wolfgang Stummer

11:50–12:10

A Surrogate Model to Optimize Injection Efficiency in PSI muEDM Experiment

Speaker

Ritwika Chakraborty

12:10–12:30

Towards the optimization of a Muon Collider Calorimeter

Speaker

Federico Nardi

12:30–12:50

Studies on detector optimisation through end-to-end surrogate models including discrete parameters.

Speaker

Jan Kieseler

12:50