Session Program

12–16 Sept 2022

Second MODE Workshop on Differentiable Programming for Experiment Design

Applications in AstroHEP

OAC conference center, Kolymbari, Crete, Greece.

Tuesday 13 September

16:00

Applications in AstroHEP
Session | **Location:** OAC conference center, Kolymbari, Crete, Greece. | **Convener:** Roberto Ruiz De Austri

16:00–16:20 **Experiment design for 21st Century astronomy**

Speaker
Emille Eugenia DE OLIVEIRA ISHIDA

16:20–16:25 **Discussion**

16:25–16:45 **Dark Matter direct detection experiments**

Speaker
Susana Cebrian

16:45–16:50 **Discussion**

16:50–17:10
Towards an End-to-End Optimization of IceCube-Gen2 Neutrino Observatory

Speaker
Christian Glaser

17:10–17:15 **Discussion**

17:15–17:35 **Challenges in Cosmic Microwave Background Data Analysis**

Speaker
Dr Belèn Barreiro

17:35–17:40 **Discussion**

17:40

Wednesday 14 September

09:00

Applications in AstroHEP
Session | **Location:** OAC conference center, Kolymbari, Crete, Greece. | **Convener:** Christian Glaser

09:00–09:20 **Optimization of the Future P-ONE Neutrino Telescope**

Speaker
Dr Christian Haack

09:20–09:25 **Discussion**

09:25–09:45 **The Einstein Telescope project**

Speaker
Giacomo Bruno

09:45–09:50 **Discussion**

09:50–10:10 **Normalizing flows for differentiable expectation values**

Speaker
Thorsten Glüsenkamp

10:10–10:15 **Discussion**

10:15–10:35

Muon identification and gamma/hadron discrimination using compact single-layered water Cherenkov detectors powered by Machine Learning techniques

Speaker
B.S. González

10:35–10:40 **Discussion**

10:40