

Session Program

12-16 Sept 2022



Second MODE Workshop on Differentiable Programming for Experiment Design

Progress in Computer Science

OAC conference center, Kolymbari, Crete, Greece.

Tuesday 13 September

18:20

Progress in Computer Science

Session | **Location:** OAC conference center, Kolymbari, Crete, Greece. | **Convener:** Nicolas Gauger

18:20–18:40 **Differentiable Programming on relational languages.**

Speaker

Paul Peseux

18:40–18:45 **Discussion**

18:45–19:05

In-Situ Range Verification for Particle Therapy Based on Secondary Charged Particles

Speaker

Alexander Schilling

19:05–19:10 **Discussion**

19:10–19:30

Towards Neural Charged Particle Tracking in Proton Computed Tomography with Reinforcement Learning

Speaker

Tobias Kortus

19:30–19:35 **Discussion**

19:35–19:55 **Towards Algorithmic Differentiation of GATE/Geant4**

Speaker

Max Aehle

19:55–20:00 **Discussion**

20:00

Wednesday 14 September

16:40

Progress in Computer Science
Session | **Location:** OAC conference center, Kolymbari, Crete, Greece. | **Convener:** Nicolas Gauger

16:40–17:00 **Automatic Differentiation in ROOT**

Speaker
 Garima Singh

17:00–17:05 **Discussion**

17:05–17:25

Differentiable Programming and the IRIS-HEP Analysis Grand Challenge

Speaker
 Gordon Watts

17:25–17:30 **Discussion**

17:30–17:50

Speeding up differentiable programming with a Computer Algebra System

Speaker
 Mr Remco de Boer

17:50–17:55 **Discussion**

17:55

Thursday 15 September

11:10

Progress in Computer Science

Session | **Location:** OAC conference center, Kolymbari, Crete, Greece. | **Convener:** Nicolas Gauger

11:10-11:30

Quantification of Uncertainties in a Model-Based Iterative Reconstruction Algorithm for Proton Computed Tomography

Speaker

Lisa Kusch

11:30-11:35

Discussion

11:35-11:55

Synthesization of Fast Gradients with Enzyme

Speaker

William Moses

11:55-12:00

Discussion

12:00