#### **Session Program**

8-13 Jun 2025



# Fifth MODE Workshop on Differentiable Programming for Experiment Design

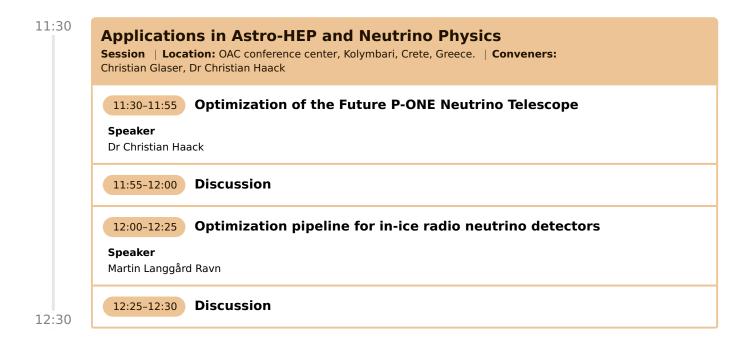
# **Applications in Astro-HEP and Neutrino Physics**

OAC conference center, Kolymbari, Crete, Greece.

## Monday 9 June

18:00	Applications in Astro-HEP and Neutrino Physics Session   Location: OAC conference center, Kolymbari, Crete, Greece.   Conveners: Christian Glaser, Dr Christian Haack
	18:00-18:25 Array Optimization for the Tau Air-Shower Mountain-Based Observatory Speaker Jeffrey Lazar
	18:25-18:30 Discussion
	18:30-18:55 Advancing Detector Calibration and Event Reconstruction in Water Cherenkov Detectors through Differentiable Simulation
	<b>Speaker</b> Omar Alterkait
	18:55-19:00 Discussion

### Wednesday 11 June



## Thursday 12 June

9:00	Applications in Astro-HEP and Neutrino Physics
	Session   Location: OAC conference center, Kolymbari, Crete, Greece.   Conveners: Dr Christian Haack, Christian Glaser
	09:00-09:25
	A Differentiable Interferometer Simulator for the Computational Design of
	Gravitational Wave Dectectors
	<b>Speaker</b> Jonathan Klimesch
	09:25-09:30 Discussion
	09:25-09:30 Discussion
	09:30-09:55 Image reconstruction with proton computed tomography
	Speaker Zsofia Jolesz
	09:55-10:00 Discussion
	10:00-10:25
	Point-spread function design in optical microscopy by end to end optimization
	<b>Speaker</b> Yoav Shechtman
	10:25-10:30 Discussion
10:30	10:25-10:30 Discussion
16:30	Applications in Astro-HEP and Neutrino Physics
	Session   Location: OAC conference center, Kolymbari, Crete, Greece.   Conveners: Christian Glaser, Dr Christian Haack
	16:30-16:55
	Experimental validation of a DDPG-based approach for Fabry-Perot optical cavity locking control
	Speaker
	Mr Andrea Svizzeretto
	16:55-17:00 Discussion
	17:00-17:25 Artificial Scientific Discovery for New Quantum Experiments
	Speaker
	Dr Xuemei Gu
17.00	17:25-17:30 Discussion
17:30	