

Session Program

20-22 Aug 2025



HAMLET

How to Apply Machine Learning to
Experimental & Theoretical

August 20 - 22, 2025
Copenhagen, Denmark

PHYSICS

HAMLET-PHYSICS 2025 Conference/Workshop

Plenary

Lundbeck Auditorium

Wednesday 20 August

09:20

09:40

Plenary: Intro

Session | **Location:** Lundbeck Auditorium

11:05

Plenary: Physics Theory

Session | **Location:** Lundbeck Auditorium

11:05–11:30

Machine Learning and Quantum Field Theory: a two-way dialogue

Speaker

Pietro Butti

11:30–11:55

Machine learning for analytic calculations in theoretical physics

Speaker

Matthias Wilhelm

11:55

13:30

Plenary: Foundation Model

Session | **Location:** Lundbeck Auditorium

13:30–13:55

PolarBERT, a foundation model for the IceCube Neutrino Observatory

Speaker

Inar Timiryasov

13:55

15:25

Plenary: Particle Physics Applications

Session | **Location:** Lundbeck Auditorium

15:25–15:50

When MAGIC met IceCube: Doing Gamma-Ray Astronomy with Neutrino Event Reconstruction

Speaker

Jarred Green

15:50–16:15

Imaging Electron Beams with Virtual Diagnostics

Speaker

Johan Lundquist

16:45

16:15–16:45

Lightning talks

Thursday 21 August

09:10

Plenary: AI for Society

Session | **Location:** Lundbeck Auditorium

09:10–09:35

The Quantum Technology ecosystem: A data-driven analysis of policy trajectories and the labor market

Speaker

Simon Richard Goorney

09:50

09:35–09:50

Machine Unlearning

Speaker

Vinay Chakravarthi Gogineni

11:10

Plenary: Nuclear & Quantum

Session | **Location:** Lundbeck Auditorium

11:10–11:35

Development of innovative methods for fission trigger construction

Speaker

Brigitte PERTILLE RITTER

11:35–12:00

Neural networks as trace-preserving quantum channels

Speaker

Dr Muhammad Faryad

12:00

13:30

Plenary: Imaging and Environment

Session | **Location:** Lundbeck Auditorium

13:30–13:55

Global glacier ice thickness inversion with supervised learning

Speaker

Dr Niccolo Maffezzoli

13:55–14:20

AI-enhanced High Resolution Functional Imaging Reveals Trap States and Charge Carrier Recombination Pathways in Perovskite

Speaker

QI SHI

14:20

Friday 22 August

09:05

Plenary: Physics AI in Practice

Session | **Location:** Lundbeck Auditorium

09:05–09:35

Past Experiences with Machine Learning

Speaker

Troels Petersen

09:35

09:35

Plenary: Condensed Matter and Materials

Session | **Location:** Lundbeck Auditorium

09:35–10:00

Learning from Noisy Spectra: AI-Assisted Characterization of Quantum Materials via Raman Data

Speaker

YAPING QI

10:00–10:25

Achieving sub-temporal resolution in the analysis of two-state single-molecule trajectories

Speaker

Tobias Ambjörnsson

10:25

11:50

Plenary: Plenary 6

Session | **Location:** Lundbeck Auditorium

11:50–12:00

Summary

12:00