

Session Program

14 November 2025

8th Round table on Deep Learning @ DESY

Session 1

DESY, Flash Seminar Room

Friday 14 November

09:30

Session 1: Session 1

Session | **Location:** DESY, Flash Seminar Room

09:30–09:40

Welcome

Speaker

Philipp Heuser

09:40–10:05

Setting the stage: User's intro to LLMs

Speaker

Henry Day-Hall

10:05–10:50

AI in Climate Research - How LLMs and its Platforms make a Difference

Speaker

Dr Christopher Kadow

10:50–11:00

Workshop idea: "How to use AI tools to make your research more efficient"

Speaker

Dwayne Spiteri

11:00

11:15

Session 1: Session 2

Session | **Location:** DESY, Flash Seminar Room

11:15–11:25

AI Copilot for FEL Experiments at European XFEL

Speaker

Mr Mahmoud Ajami

11:25–11:35

LLM-Powered Issue Analysis for High-Availability Laser Operations

Speakers

Afshin Karimi, Henrik Tuennermann

11:35–11:45

Agents of Discovery

Speaker

Tim Lukas

11:45–11:55

The Helmholtz Model Zoo: Enabling AI Model Sharing and Inference in the Helmholtz Cloud

Speaker

Hans William Werners

11:55–12:05

Early experiences with agentic generative AI for EuXFEL operations support

Speakers

Florian Sohn, Steffen Hauf

12:15

12:05-12:15

AI-assisted retrieval and visualization of control-system data from the InfluxDB time-series database at the European XFEL**Speaker**

Florian Sohn

12:45

Session 1: Session 3**Session** | **Location:** DESY, Flash Seminar Room

12:45-12:55

Automating beam alignment at the European XFEL**Speaker**

Sarlota Birnsteinova

12:55-13:05

Neural networks for FEL diffraction image separation**Speaker**

Nikita Morozov

13:05-13:15

A Differentiable Physics Model for Automated Inverse Design in Optics**Speaker**

Henrik Tuennermann

13:15-13:25

Differentiable Physics-Based Feedback for Adaptive Laser Pulse Shaping**Speaker**

Denis Ilia

13:25-13:35

CaloClouds3; Diffusion and Flows**Speaker**

Henry Day-Hall

13:35-13:45

CaloHadronic: a diffusion model for the generation of hadronic showers**Speaker**

Martina Mozzanica

13:45-13:55

PanShower: One model for all calorimeter showers**Speaker**

Thorsten Buss

13:55-14:05

OmniJet- α for Calorimeters**Speaker**

Henning Rose

14:05-14:15

Cross-Geometry Transfer Learning in Fast Electromagnetic Shower Simulation**Speaker**

Lorenzo Valente

14:15-14:25

Observable Optimization for Precision Theory: Machine Learning Energy Correlators

Speaker

Arindam Sonali Amar Bhattacharya

14:25–14:35

FSR recovery with a GNN-based supervised tagger

Speaker

Max Fuste Costa

14:35