

Session Program

8-12 Sept 2025



ACAT 2025

Plenary

Hamburg, Germany

Monday 8 September

09:15

Plenary

Session | **Location:** ESA A | **Conveners:** chair: Chiara Signorile, co-chair: Jennifer Ngadiuba

09:15–09:30 **Opening**

Speaker

Gregor Kasieczka

09:30–10:00

Advances in Model-Agnostic Searches for New Physics at the Large Hadron Collider

Speaker

Mikael Kuusela

10:00–10:30

Computational Tools for Dark Matter in Particle Physics and Astrophysics

Speakers

Genevieve Belanger, Genevieve Belanger

10:30–11:00

Transformers for scattering amplitudes computation

Speaker

LANCE Dixon

11:00

11:30

Plenary

Session | **Location:** ESA A | **Conveners:** co-chair: Fons Rademakers, chair: David Britton

11:30–12:00

The Next Generation Trigger Project at CERN

Speaker

Cristina Botta

12:00–12:30

Foundation models for physics

Speaker

Sascha Caron

12:30–13:00

Fast Machine Learning for Science

Speaker

Shih-Chieh Hsu

13:00

Tuesday 9 September

09:45

Plenary

Session | **Location:** ESA A | **Conveners:** co-chair: Mikael Kuusela, chair: Gang Chen

09:45–10:00 **Updates from organizers**

Speaker

Gregor Kasieczka

10:00–10:30 **ML for unfolding**

Speakers

Tilman Plehn, Tilman Plehn

10:30–11:00 **DUNE: algorithmic and computing challenges**

Speakers

Dr Michael Hudson Kirby, Michael Hudson Kirby

11:00

11:30

Plenary

Session | **Location:** ESA A | **Convener:** chair: Doris Kim

11:30–12:00 **SONIC: A Portable framework for as-a-service ML serving**

Speaker

Yuan-Tang Chou

12:00–12:30 **AI for accelerator control**

Speaker

Daniel Ratner

12:30

Wednesday 10 September

09:15

Plenary

Session | **Location:** ESA A | **Convener:** chair: Daniel Maitre

09:15–09:30 **Updates from organizers**

Speaker

Gregor Kasieczka

09:30–10:00 **Modern tools for precision collider physics**

Speaker

Simone Zoia

10:00–10:30

Optimising the CMS GPU Reconstruction: scheduling, efficiency, stability

Speaker

Dr Andrea Bocci

10:30–11:00 **The FAIR Universe Project**

Speaker

Sascha Diefenbacher

11:00

Thursday 11 September

09:15

Plenary

Session | **Location:** ESA A | **Conveners:** co-chair: Jennifer Ngadiuba, chair: Ian Fisk

09:15–09:30 **Updates from organizers**

Speaker

Gregor Kasieczka

09:30–10:00 **Quantum Computing in Nuclear Physics**

Speaker

Paul Stevenson

10:00–10:30 **The Edge SpAlce project**

Speaker

Sioni Paris Summers

10:30–11:00 **Foundation time series models for forecasting epidemics**

Speaker

Eugenio Valdano

11:00

11:30

Plenary

Session | **Location:** ESA A | **Conveners:** co-chair: Maciej Mikolaj Glowacki, chair: Axel Naumann

11:30–12:00 **Progress in ML for anomaly detection**

Speaker

David Shih

12:00–12:30 **Optimizing ML models for hardware-aware deployment**

Speaker

Bo-Cheng Lai

12:30–13:00 **Practical Neural Simulation-Based Inference at the LHC**

Speaker

Jay Ajitbhai Sandesara

13:00

Friday 12 September

09:10

Plenary

Session | **Location:** ESA A | **Conveners:** chair: Jennifer Ngadiuba, co-chair: Chiara Signorile

09:10–10:00 **Raisoning Language Models**

Speaker

Maciej Besta

10:00–10:30

CaloDiT and CaloDiM: Fast, Accurate and Adaptable Generative Models for Calorimeter Shower Simulation

Speaker

Peter McKeown

10:30–11:00 **Poster prizes**

11:00

11:30

Plenary

Session | **Location:** ESA A | **Convener:** chair: David Britton

11:30–11:50 **Track 1 Summary**

Speaker

Nick Smith

11:50–12:10 **Track 2 summary**

Speaker

Thea Aarrestad

12:10–12:30 **Track 3 summary**

Speaker

Tianji Cai

12:30–12:40 **Closing remarks**

Speaker

David Britton

13:00