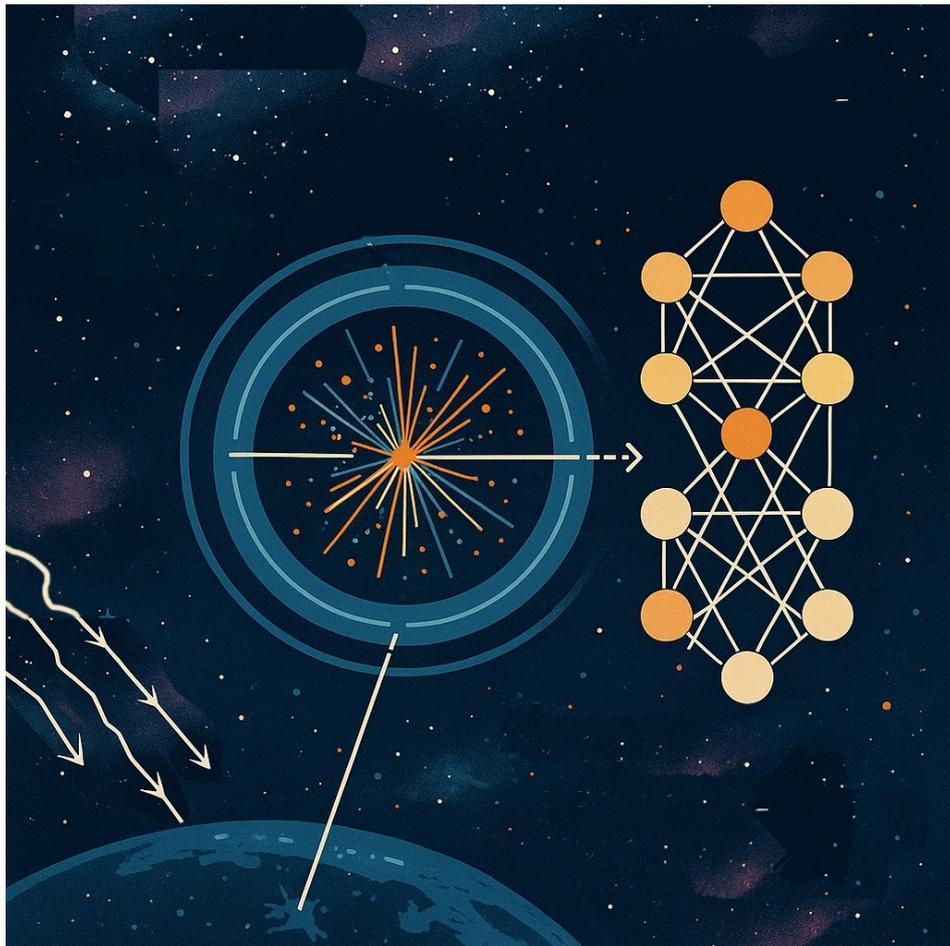


ZPW2026: Machine Learning Techniques for Particle Physics



Report of Contributions

Contribution ID: 1

Type: **not specified**

Registration

Monday, 5 January 2026 08:30 (1 hour)

Contribution ID: 2

Type: **not specified**

Welcome

Monday, 5 January 2026 09:30 (5 minutes)

Contribution ID: 3

Type: **not specified**

Optimal Transport: from A to B...and beyond

Monday, 5 January 2026 14:20 (30 minutes)

Presenter: Prof. FIGALLI, Alessio (ETH)

Session Classification: Session 3

Contribution ID: 4

Type: **not specified**

Data to theory: how to fuel BSM model building with anomaly detection

Monday, 5 January 2026 15:00 (30 minutes)

Presenter: PIERINI, Maurizio (CERN)

Session Classification: Session 3

Contribution ID: 5

Type: **not specified**

Coffee break

Monday, 5 January 2026 10:55 (30 minutes)

Contribution ID: 6

Type: **not specified**

Machine Learning in Lattice Field Theory

Monday, 5 January 2026 11:25 (30 minutes)

Presenter: DETMOLD, William

Session Classification: Session 2

Contribution ID: 7

Type: **not specified**

Lunch

Monday, 5 January 2026 12:45 (1h 25m)

Contribution ID: 8

Type: **not specified**

Experimental View on Deep Learning for Neutrino experiments

Monday, 5 January 2026 09:35 (30 minutes)

Presenter: SGALABERNA, Davide (ETH Zurich (CH))

Session Classification: Session 1

Contribution ID: 9

Type: **not specified**

Algorithmic View on Deep Learning for Accelerator Neutrino Experiments

Monday, 5 January 2026 10:15 (30 minutes)

Presenter: Dr ALONSO MONSALVE, Saul (ETH Zurich)

Session Classification: Session 1

Contribution ID: **10**

Type: **not specified**

Coffee break

Monday, 5 January 2026 15:30 (30 minutes)

Contribution ID: 11

Type: **not specified**

Can AI Enable Next Breakthroughs in Large-Scale Structure Cosmology?

Wednesday, 7 January 2026 09:00 (30 minutes)

Presenter: KACPRZAK, Tomasz

Session Classification: Session 9

Contribution ID: 12

Type: **not specified**

Simulation-based inference for gravitational-wave data analysis

Wednesday, 7 January 2026 09:40 (30 minutes)

Presenter: LEYDE, Konstantin

Session Classification: Session 9

Contribution ID: **13**

Type: **not specified**

TBA

Contribution ID: 14

Type: **not specified**

Diffusion Models for Lattice Field Theory

Monday, 5 January 2026 12:05 (30 minutes)

Presenter: Prof. AARTS, Gert (Swansea University)

Session Classification: Session 2

Contribution ID: 15

Type: **not specified**

Variance reduction with Normalizing Flows - Application to NNLO QCD phase space integration

Tuesday, 6 January 2026 09:00 (30 minutes)

Presenter: PONCELET, Rene (IFJ PAN Krakow)

Session Classification: Session 5

Contribution ID: 16

Type: **not specified**

Learning reliable amplitude surrogates

Tuesday, 6 January 2026 09:40 (30 minutes)

Presenter: ELMER, Nina (University of Cambridge)

Session Classification: Session 5

Contribution ID: 17

Type: **not specified**

Coffee break

Tuesday, 6 January 2026 10:20 (30 minutes)

Contribution ID: **18**

Type: **not specified**

Neural Network Tools for Amplitudes

Tuesday, 6 January 2026 10:50 (30 minutes)

Presenter: Mr MAITRE, Daniel Pierre

Session Classification: Session 6

Contribution ID: 19

Type: **not specified**

Quantum computation of perturbative QFTs

Tuesday, 6 January 2026 11:30 (30 minutes)

Presenter: CHAWDHRY, Herschel (Florida State University)

Session Classification: Session 6

Contribution ID: **20**

Type: **not specified**

Lunch

Tuesday, 6 January 2026 12:10 (1h 20m)

Contribution ID: 21

Type: **not specified**

Uncertainty Quantification in PDF Determinations

Tuesday, 6 January 2026 16:00 (30 minutes)

Presenter: DEL DEBBIO, Luigi (The University of Edinburgh (GB))

Session Classification: Session 8

Contribution ID: 22

Type: **not specified**

OmniLearn: A Method to Simultaneously Facilitate All Jet Physics Tasks and beyond

Tuesday, 6 January 2026 14:10 (30 minutes)

Presenter: MIKUNI, Vinicius Massami (Lawrence Berkeley National Lab. (US))

Session Classification: Session 7

Contribution ID: **23**

Type: **not specified**

Coffee break

Tuesday, 6 January 2026 15:30 (30 minutes)

Contribution ID: 24

Type: **not specified**

AI for Discovery

Tuesday, 6 January 2026 14:50 (30 minutes)

Presenter: KASIECZKA, Gregor (Hamburg University (DE))

Session Classification: Session 7

Contribution ID: 25

Type: **not specified**

On Foundation models for Fundamental Science [Title to be confirmed]

Tuesday, 6 January 2026 13:30 (30 minutes)

Presenter: KAGAN, Michael (SLAC National Accelerator Laboratory (US))

Session Classification: Session 7

Contribution ID: 26

Type: **not specified**

On Deep Full Event Reconstruction

Monday, 5 January 2026 16:40 (30 minutes)

Presenter: GARCIA PARDINAS, Julian (Massachusetts Inst. of Technology (US))

Session Classification: Session 4

Contribution ID: 27

Type: **not specified**

Unfolding, Precision, and Machine Learning

Tuesday, 6 January 2026 16:40 (30 minutes)

Presenter: CORMIER, Kyle (CERN)

Session Classification: Session 8

Contribution ID: 28

Type: **not specified**

Particle flow reconstruction with a learnable, differentiable, efficient ML mode

Monday, 5 January 2026 16:00 (30 minutes)

Presenter: PATA, Joosep (National Institute of Chemical Physics and Biophysics (EE))

Session Classification: Session 4

Contribution ID: **29**

Type: **not specified**

Coffee break

Wednesday, 7 January 2026 10:20 (30 minutes)

Contribution ID: **30**

Type: **not specified**

On Detector Design with Artificial Intelligence

Wednesday, 7 January 2026 11:30 (30 minutes)

Presenter: QASIM, Shah Rukh (University of Zurich (CH))

Session Classification: Session 10

Contribution ID: **31**

Type: **not specified**

On Detector Design with Differential Methods

Wednesday, 7 January 2026 10:50 (30 minutes)

Presenter: KIESELER, Jan (KIT - Karlsruhe Institute of Technology (DE))

Session Classification: Session 10

Contribution ID: **32**

Type: **not specified**

Lunch

Wednesday, 7 January 2026 12:10 (1h 30m)

Contribution ID: **33**

Type: **not specified**

TBA

Contribution ID: **34**

Type: **not specified**

TBA

Contribution ID: 35

Type: **not specified**

Closing remarks

Contribution ID: **36**

Type: **not specified**

TBA

Contribution ID: 37

Type: **not specified**

TBA

Contribution ID: **38**

Type: **not specified**

Dinner

Tuesday, 6 January 2026 18:00 (3 hours)

Restaurant Zum Alten Löwen, Universitätstrasse 111, 8006 Zürich.

Directions: [Directions on Google Maps](#)

Bus line 33 or tram lines no. 9 & 10,

Rigiblick cable car stop.