Session Program

24–28 Aug 2026

EuCAIFCon 2026

Patterns & Anomalies

Kirchhoff Institute for Physics (KIP), Foyer
Im Neuenheimer Feld 227 69120 Heidelberg Germany

Monday 24 August

16:00

Patterns & Anomalies

Session | **Location:** 3.404 | **Convener:** Ramon Winterhalder

16:00–16:08

Unsupervised Machine Learning for Model-Independent Searches at the LHC

Speakers

Antonio D'Avanzo, Elvira Rossi, Francesco Cirotto, Francesco Conventi, Graziella Russo

16:10–16:18

Searching Everything, Everywhere, All at Once

Speaker

Theresa Reisch

16:20–16:28

Anomaly detection for multi-jet resonances

Speaker

Chitrakshee Yede

16:30–16:38

Anomaly detection with normalizing flows for model-agnostic new physics searches

Speaker

Rafał Masełek

16:50–16:58

HAXAD: Anomaly Detection in the Higgs Peak

Speaker

Dennis Noll

17:00–17:08

Towards a Statistical Interpretation of the Normalized Autoencoder

Speaker

Jonathan Ostertag-Henning

17:10–17:18

Unsupervised Anomaly Detection for LHC Collision Data Using a Transformer-Based Autoencoder.

Speaker

ASRITH KRISHNA RADHAKRISHNAN

17:20–17:28

Kitchen Sink Anomaly Detection

Speaker

Lukas Lang

17:30

Tuesday 25 August

11:00

Patterns & Anomalies

Session | **Location:** 3.404 | **Convener:** Sebastian Dittmeier

11:00–11:08

4D particle tracking in the NA62 GigaTracker with transformer-based architectures

Speaker
Leonardo Plini

11:10–11:18

Machine Learning-Based Suppression of Secondary Hit Background in Low-Resistive RPCs

Speaker
Dr Zubayer Ahammed

11:20–11:28

PID Reconstruction in Gaseous Detectors for Future e+e- Experiments

Speaker
Guang Zhao

11:30–11:38

GBDT based unified PID scheme for the CBM experiment

Speaker
Pavish Subramani

11:50–11:58

Generative and geometric learning for comprehensive collider event reconstruction

Speaker
Ethan Simpson

12:00–12:08

Encoding locality and geometry in a Transformer encoder for muon triggers

Speaker
Nadezhda Dobreva

12:10–12:18

Can multi-modality improve IACTs event reconstruction in heterogeneous observing conditions?

Speaker
Thomas Vuillaume

12:20–12:28

Recent Results from Anomaly Detection Searches on CMS

Speaker
Jovin Drews

12:30

Wednesday 26 August

16:00

Patterns & Anomalies

Session | **Location:** 3.404 | **Convener:** Dennis Noll

16:00–16:08

Anomaly-detection of gravitational waves through the 4th observing run of the LIGO detectors

Speakers
Gianluca Inguglia, Huw Haigh, Ulyana Dupletsa

16:10–16:18

Anomaly detection for generic-transient gravitational waves

Speaker
Prof. Elena Cuoco

16:20–16:28

DeepExtractor: Glitch Mitigation and Template Free Searches with Model-Agnostic Reconstruction using Deep Learning

Speaker
Tom Dooney

16:30–16:38

Anomaly Detection for Faint Galactic Substructure with EagleEye

Speaker
Sven Põder

16:40–16:48

Exploiting the Latent Space of Convolutional Autoencoders to identify low-energy recoil signals in a dual-phase LAr TPC

Speaker
Gioacchino Alex Anastasi

17:30

Thursday 27 August

11:00

Patterns & Anomalies

Session | **Location:** 3.404 | **Convener:** Nicole Hartman

11:00–11:08 **Multi-task, Multi-modal Transformers for Jet Flavour Tagging in ATLAS**

Speaker
Alexander Froch

11:10–11:18 **Lorentz Local Canonicalization: How to Make Any Network Lorentz-Equivariant**

Speaker
Sebastian Pitz

11:20–11:28 **Virtues and Vices of Equivariant Transformers**

Speaker
Jonas Spinner

11:30–11:38 **Gauge equivariant transformer for lattice gauge theories**

Speaker
Fracesco Passante

11:50–11:58 **Towards a comprehensive high-z quasar selection: multimodal self-supervised learning on Euclid data**

Speaker
Tatsuyuki Sekine

12:00–12:08 **SURFing to the Fundamental Limit of Jet Tagging**

Speaker
Ranit Das

12:10–12:18 **Multiclass classification without labels (multiCWoLa)**

Speakers
Johann Ioannou-Nikolaides, Raphaël Bonnet-Guerrini

12:20–12:28 **A Machine-Learning Analysis of the Higgs Boson in the H → ZZ∗ →4ℓ Channel**

Speaker
Mane Papoyan

12:30