Session Program

25–29 May 2026

28th Conference on Computing in High Energy and Nuclear Physics (CHEP 2026)

Track 3 - Offline data processing

Chulalongkorn University

Monday 25 May

13:45

Track 3 - Offline data processing: Calorimeters and Particle ID

Session | **Location:** Chulalongkorn University

13:45–14:03

RICH ring reconstruction based on Graph Neural Networks for the CBM experiment

Speaker
Martin Beyer

14:03–14:21

TICL: The Iterative CLustering Framework for the CMS Phase-2 Event Reconstruction

Speaker
Wahid Redjeb

14:21–14:39

GNN-based end-to-end reconstruction in the CMS Phase 2 High-Granularity Calorimeter

Speaker
Jose Daniel Gaytan Villarreal

14:39–14:57

dN/dx reconstruction with deep learning for high-granularity TPCs

Speaker
Dr Guang Zhao

14:57–15:15

Using Graph Neural Networks for the segmentation of overlapping objects in high granularity calorimeters

Speaker
Matthieu Martin Melennec

15:15

16:15

Track 3 - Offline data processing: Tracking 1

Session | **Location:** Chulalongkorn University

16:15–16:33

Using Line Segment Tracking to enable ML-based Track Reconstruction in CMS

Speaker
Aashay Arora

16:33–16:51

Hybrid Track Candidate Finder Combining the Hough Transform and Neural Networks for Fast Charged-Particle Reconstruction

Speakers
Carlo Varni, Krzysztof Cieśla, Marcin Wolter, Tomasz Bold

16:51–17:09

Boosting the ATLAS Event Reconstruction Efficiency via an Improved Track-Overlay

Speaker
Marilena Bandieramonte

17:09–17:27
Graph Neural Network Based End-to-End Track Reconstruction with Drift Chamber and CGEM at BESIII

Speakers
Yunhe Yang, Xinyu Zhuang

17:27–17:45 **Track Reconstruction for the COMET Drift Chamber**

Speaker

17:45–18:03
Efficient Graph Segmentation via Global Path Inference and Learned Edge Embeddings for Scalable GNN-based Tracking

Speaker
Jay Chan

18:03

Tuesday 26 May

13:45

Track 3 - Offline data processing: New Approaches

Session | **Location:** Chulalongkorn University

13:45–14:03 **Probe-aware Self-supervised Holographic Reconstruction Network**

Speaker
Jiarui Hu

14:03–14:21 **Exercising the novel and promising Mojo language in HEP frameworks**

Speaker
Axel Naumann

14:21–14:39
Machine-Learning Methods for Detector Optimization in HIBEAM/NNBAR

Speaker
Lucas Astrand

14:39–14:57
CMS Tracker Data Quality Certification enhanced with Machine Learning tools

Speaker
Richa Sharma

15:15

13:45

Track 3 - Offline data processing: Reconstruction 1

Session | **Location:** Chulalongkorn University

13:45–14:03 **Reprocessing All IceCube Data - It Should be Easy, Right?**

Speaker
David Schultz

14:03–14:21
Advancing IACT Data Analysis: A Status Update on the CTLearn Framework

Speaker
Prof. Daniel Nieto

14:21–14:39 **End-to-End Reconstruction with Transformers**

Speaker
Max Hart

14:39–14:57 **Novel technique to improve anti-neutron reconstruction at Belle II**

Speakers
Sanjeeda Bharati Das, Sanjeeda Bharati Das

14:57–15:15
Key techniques for performance optimization of astronomical satellite data processing

Speaker
Shuang Wang

15:15

16:15

Track 3 - Offline data processing: Core Software and Frameworks 1

Session | **Location:** Chulalongkorn University

16:15–16:33

Evaluating Error-Bounded Lossy Compression on HEP Data with LossBench

Speaker
Amy Byrnes

16:33–16:51

Exploring lossy storage for analysis data with ROOT's RNTuple

Speaker
Florine Willemijn de Geus

16:51–17:09

Efficient Data Layouts and heterogeneous data handling in CMSSW

Speaker
Felice Pantaleo

17:09–17:27

Modernizing the ATLAS Persistency Framework for the HL-LHC

Speaker
Marcin Nowak

17:27–17:45

Lossy data compression for simulated CMS pileup datasets

Speaker
Tomas Raila

17:45–18:03

Usage of GPUs for ALICE Run 3 Offline Reconstruction in the GRID

Speaker
David Rohr

18:03

16:15

Track 3 - Offline data processing: Reconstruction 2

Session | **Location:** Chulalongkorn University

16:15–16:33

Optimal use of timing measurement in vertex reconstruction at CMS

Speaker
Prabhat Solanki

16:33–16:51

Minimising Event Size, Maximising Physics: Inclusive Particle Isolation for LHCb's Run 3

Speaker
Ching-Hua Li

16:51–17:09

Towards more precise data analysis with Machine-Learning-based particle identification with missing data

Speaker
Lukasz Graczykowski

17:09–17:27

Machine Learning-Based Offline Search for Long-Lived Particles in the LHCb Muon System

Speaker
Valerii Kholoimov

17:45–18:03
Exploiting precise timing information for improving the event reconstruction at the CMS experiment and at future colliders

Speaker
Aurora Perego

18:03

Wednesday 27 May

13:45

Track 3 - Offline data processing: Tracking 2

Session | **Location:** Chulalongkorn University

13:45–14:03 **Memory Layouts in the ALICE Track Reconstruction**

Speaker
Dr Oliver Gregor Rietmann

14:03–14:21 **Forward decay chain reconstruction with displaced vertices inside intense magnetic fields**

Speaker
Izaac Sanderswood

14:21–14:39 **ACTS Integration for ATLAS Phase-II Track Reconstruction**

Speaker
Noemi Calace

14:39–14:57 **First functional prototype for the reconstruction of charged particle tracks using machine learning in the ATLAS experiment at the HL-LHC**

Speaker
Jan Stark

14:57–15:15 **Self-distillation of Reusable Sensor-level Representations for High Energy Physics**

Speaker
Sam Young

15:15

16:15

Track 3 - Offline data processing: Core Software and Frameworks 2

Session | **Location:** Chulalongkorn University

16:15–16:33 **The development and upgrades of BESIII Offline Software**

Speaker
Prof. Ziyan Deng

16:33–16:51 **Offline Data Processing for JUNO's first-year commissioning and physics data taking**

Speaker
Tao Lin

16:51–17:09 **RNTuple Integration in the Flexible Object Read/write Model for DUNE**

Speaker
Andrew Paul Olivier

17:09–17:27 **L'Arlesienne de ROOT: How to lift a 30 years old limit in the heart of ROOT I/O.**

Speaker
Philippe Canal

17:27–17:45 **Status of the ROOT Project: not only LHC, not only HENP!**

Speaker
Danilo Piparo

17:45–18:03 **Recent developments in Key4hep**

Speaker
Juan Miguel Carceller

18:03

Thursday 28 May

13:45

Track 3 - Offline data processing: Tracking 3

Session | **Location:** Chulalongkorn University

13:45–14:03

Offline quality track reconstruction on heterogeneous hardware with ACTS/traccc

Speaker
Fabrice Le Goff

14:03–14:21

ColliderML: the High-Luminosity benchmark dataset

Speaker
Anna Zaborowska

14:21–14:39

3+1D GPU reconstruction of the Inner Tracking System (ITS2) for ALICE Run 3

Speaker
Felix Schlepper

14:39–14:57

Multi-Modal Graph Neural Network Tracking for Belle II with an ONNX-based Integration

Speaker
Giacomo De Pietro

14:57–15:15

Track Reconstruction with a Heterogeneous and Geometry-Agnostic Framework for HEP Experiments

Speaker
Adriano Di Florio

15:15

16:15

Track 3 - Offline data processing: Core Software and Frameworks 3

Session | **Location:** Chulalongkorn University

16:15–16:33

Accelerating ML Inference on heterogeneous architectures using SOFIE and alpaka

Speaker
Sanjiban Sengupta

16:33–16:51

Leveraging Inference as a Service technology for executing ML models by the Derived AOD production applications of the ATLAS experiment

Speaker
Vakho Tsulaia

16:51–17:09

Accelerating GNN Inference for the GNN4ITk Pipeline in ATLAS

Speaker
Jay Chan

17:09–17:27
Redesigning the ATLAS In-File Metadata and Navigational Infrastructure for HL-LHC

Speaker
Nathan Jihoon Kang

17:27–17:45 **Robust by Design: A Meta-Algorithm for Stable Deep Learning**

Speaker
Dr Alexey Boldyrev

17:45–18:03 **CUDA Acceleration of Awkward Array Using Python CCCL**

Speakers
Maksym Naumchyk, Maksym Naumchyk

18:03