Session Program

May 8 – 12, 2023

26TH INTERNATIONAL CONFERENCE ON COMPUTING IN HIGH ENERGY & NUCLEAR PHYSICS (CHEP2023)

Track 3 - Offline Computing

Norfolk Waterside Marriott
235 East Main Street Norfolk, VA 23510

Mon, May 8

11:00 AM

Track 3 - Offline Computing: Reconstruction

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Dr Srpimanobhas, Norraphat, Bandieramonte, Marilena

11:00 – 11:15 AM **Machine learning for ambiguity resolution in ACTS**

Speaker
Allaire, Corentin

11:15 – 11:30 AM **Generalizing mkFit and its Application to HL-LHC**

Speaker
Tadel, Matevz

11:30 – 11:45 AM
traccc - a close to single-source track reconstruction demonstrator for CPU and GPU

Speaker
Krasznahorkay, Attila

11:45 AM – 12:00 PM **GPU-based algorithms for primary vertex reconstruction at CMS**

Speaker
Erice Cid, Carlos Francisco

12:00 – 12:15 PM **The Exa.TrkX Project**

Speaker
Calafiura, Paolo

12:15 – 12:30 PM **Faster simulated track reconstruction in the ATLAS Fast Chain**

Speaker
Dr Leight, William

12:30 PM

2:00 PM

Track 3 - Offline Computing: Physics performance (part I)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Dr Srpimanobhas, Norraphat, Yang, Tingjun

2:00 – 2:15 PM **Investigating mixed-precision for AGATA pulse-shape analysis**

Speaker
Molina, Roméo

2:15 – 2:30 PM
Kiwaku, a C++20 library for multidimensional arrays, applied to ACTS tracking

Speaker
Mr Joube, Sylvain

2:30 – 2:45 PM
A physical dimensions aware evaluator for High Energy Physics applications

Speaker
Clemencic, Marco

2:45 – 3:00 PM
Physics Performance of the ATLAS GNN4ITk Track Reconstruction Chain

Speaker
Ju, Xiangyang

3:00 – 3:15 PM **Calibration Data Flow and Performance at Belle II**

Speaker
Prim, Markus

3:15 – 3:30 PM **EIC Software Overview**

Speaker
Lawrence, David

3:30 PM

Tue, May 9

11:00 AM

Track 3 - Offline Computing: Physics performance (part 2)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Dr Srpimanobhas, Norraphat, Yang, Tingjun

11:00 – 11:15 AM

Algorithms: Framework- and Experiment-independent algorithms at EPIC

Speaker
Joosten, Sylvester

11:15 – 11:30 AM

Performance of track reconstruction at STCF using ACTS

Speaker
Li, Teng

11:30 – 11:45 AM

Flexible, robust and minimal-overhead Event Data Model for track reconstruction in ACTS

Speaker
Dr Gessinger, Paul

11:45 AM – 12:00 PM

Multithreading ATLAS offline software: a retrospective

Speaker
Snyder, Scott

12:00 – 12:15 PM

Machine Learning Tools for the CMS Tracker Data Quality Monitoring and Certification

Speaker
Benelli, Gabriele

12:30 PM

2:00 PM

Track 3 - Offline Computing: Data preparation (part I)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Bandieramonte, Marilena, Dr Srpimanobhas, Norraphat

2:00 – 2:15 PM

CMS Tier0 data processing during the detector commissioning in Run-3

Speaker
Amado, Jhonatan

2:15 – 2:30 PM

JUNO Offline Software for Data Processing and Analysis

Speaker
HUANG, Xingtao

2:30 – 2:45 PM

Repurposing of the Run 2 CMS High Level Trigger Infrastructure as an Cloud Resource for Offline Computing

Speaker
Mascheroni, Marco

2:45 – 3:00 PM **Offline Data Processing Software for the Super Tau Charm Facility**

Speaker
Li, Teng

3:00 – 3:15 PM **Status of DUNE Offline Computing**

Speaker
Kirby, Michael

3:15 – 3:30 PM **DUNE Database Development**

Speaker
Dr Vizcaya Hernandez, Ana Paula

3:30 PM

4:30 PM

Track 3 - Offline Computing: Simulation (part 2)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Yang, Tingjun, Bandieramonte, Marilena

4:30 – 4:45 PM **EvtGen – recent developments and prospects**

Speaker
Abudinén, Fernando

4:45 – 5:00 PM
Introducing HIJING++: the Heavy Ion Monte Carlo Generator for the High-Luminosity LHC Era

Speaker
Krasznahorkay, Attila

5:00 – 5:15 PM
Surface-based GPU-friendly geometry modeling for detector simulation

Speaker
Gheata, Andrei

5:15 – 5:30 PM
Accelerated demonstrator of electromagnetic Particle Transport (AdePT) status and plans

Speaker
Gheata, Andrei

5:30 – 5:45 PM
A parameter optimisation toolchain for Monte Carlo detector simulation

Speaker
Volkel, Benedikt

5:45 – 6:00 PM
Optimizing Geant4 Hadronic Model Parameters Through Global Fits to Thin Target Data

Speaker
Yarba, Julia

6:15 PM

Thu, May 11

11:15 AM

Track 3 - Offline Computing: Simulation (part 3)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Bandieramonte, Marilena, VALLECORSA, SOFIA

11:15 – 11:30 AM **Analysis Tools in Geant4**

Speaker
HRIVNACOVA, Ivana

11:30 – 11:45 AM **Geant4 electromagnetic physics for Run3 and Phase2 LHC**

Speaker
Dr Sawkey, Daren

11:45 AM – 12:00 PM **Refined drift chamber simulation in the CEPC experiment**

Speaker
Dr Fang, Wenxing

12:00 – 12:15 PM **Simulation of the MoEDAL-MAPP experiment at the LHC**

Speaker
Kalliokoski, Matti

12:15 – 12:30 PM
Recent Developments in the FullSimLight Simulation Tool from ATLAS

Speaker
Mr Khan, Raees

12:30 – 12:45 PM **Full Simulation of CMS for Run-3 and Phase-2**

Speaker
Srimanobhas, Phat

12:45 PM

2:00 PM

Track 3 - Offline Computing: Data Preparation (part 2)

Session |
Location: Norfolk Waterside Marriott, Hampton Roads Ballroom VI, 235 East Main Street Norfolk, VA 23510 |
Conveners: Espinal, Xavier, Yang, Tingjun

2:00 – 2:15 PM
Framework for custom event sample augmentations for ATLAS analysis data

Speaker
van Gemmeren, Peter

2:15 – 2:30 PM
Optimizing ATLAS data storage: the impact of compression algorithms on ATLAS physics analysis data formats

Speaker
Dr Marcon, Caterina

2:30 – 2:45 PM

Towards a distributed heterogeneous task scheduler for the ATLAS offline software framework

Speaker
Esseiva, Julien

2:45 – 3:00 PM

Current Status and Future Developments for Automation of Data Calibration and Processing Procedures at the Belle II Experiment

Speaker
Dossett, David

3:00 – 3:15 PM **RenderCore – a new WebGPU-based rendering engine for ROOT-EVE**

Speaker
Tadel, Matevz

3:15 – 3:30 PM

Potentiality of automatic parameter tuning suite available in ACTS track reconstruction software framework

Speaker
Garg, rocky

3:30 PM