

Session Program

29 November 2021 to 3 December 2021



ACAT 2021

Track 2: Data Analysis - Algorithms and Tools

Virtual and IBS Science Culture Center, Daejeon, South Korea, Auditorium
55 EXPO-ro Yuseong-gu Daejeon, South Korea email: library@ibs.re.kr +82 42 878 8299

Monday 29 November

17:20

Track 2: Data Analysis - Algorithms and Tools: Data analysis with ML

Session |

Location: Virtual and IBS Science Culture Center, Auditorium, 55 EXPO-ro Yuseong-gu Daejeon, South Korea email: library@ibs.re.kr +82 42 878 8299 |

Conveners: Monique Werlen, Erica Brondolin, Monique Werlen, Junghwan Goh

17:20–17:40

Looking for new physics in the LHC hardware trigger with Deep Autoencoders

Speaker

Katya Govorkova

17:40–18:00

An Imperfect Machine to search for New Physics: a way to include systematic uncertainties

Speaker

Gaia Grosso

18:00–18:20

Supernova Light Curves Approximation based on Neural Network Models

Speaker

Mariia Demianenko

18:20–18:40

A First Application of Collaborative Learning In Particle Physics

Speaker

Mr Stefano Vergani

18:40–19:00

Self-Organizing-Maps in high energy particle physics

Speaker

Kai Habermann

19:00–19:20

Quantum Machine Learning in the Latent Space of HEP Events

Speaker

Kinga Anna Wozniak

19:20

Tuesday 30 November

17:00

Track 2: Data Analysis - Algorithms and Tools: Tracking, reconstruction, and simulation

Session |

Location: Virtual and IBS Science Culture Center, Daejeon, South Korea, Auditorium, 55 EXPO-ro Yuseong-gu Daejeon, South Korea email: library@ibs.re.kr +82 42 878 8299 |

Conveners: Noemi Calace, Junghwan Goh, Erica Brondolin

17:00–17:20

Meta-learning for multiple detector geometry modelling

Speaker

Dalila Salamani

17:20–17:40

Towards Reliable Neural Generative Modeling of Detectors

Speaker

Sergei Mokhnenko

17:40–18:00

Generating muonic forces carriers with classical and quantum neural networks (contribution ID 626)

Speaker

Oriel Orphee Moira Kiss

18:00–18:20

AtI Fast3: The next generation of fast simulation in ATLAS

Speaker

Joshua Falco Beirer

18:20–18:40

A novel ML approach for the reconstruction of particle showers with a tracking detector

Speaker

Paul de Bryas

18:40–19:00

Track reconstruction with quantum computers at LUXE

Speaker

Yee Chinn Yap

19:00

Wednesday 1 December

17:00

Track 2: Data Analysis - Algorithms and Tools: Efficient reconstruction, simulation, optimization, and analysis

Session |

Location: Virtual and IBS Science Culture Center, Daejeon, South Korea, Auditorium, 55 EXPO-ro Yuseong-gu Daejeon, South Korea email: library@ibs.re.kr +82 42 878 8299 |

Conveners: Kyungho Kim, Liliana Teodorescu, Liliana Teodorescu, Adrian Alan Pol

17:00-17:20

The Iterative Clustering framework for the CMS HGCAL Reconstruction

Speakers

CMS Collaboration, Felice Pantaleo

17:20-17:40

Hyperparameter Optimization of Data-Driven AI models on HPC Systems

Speaker

Eric Wulff

17:40-18:00

A vendor-agnostic, single code-based GPU tracking for the Inner Tracking System of the ALICE experiment

Speaker

Matteo Concas

18:00-18:20

Accelerating RooFit with GPUs

Speaker

Jonas Rembser

18:20-18:40

Using ROOT to analyse High-Frequency Finance Data

Speaker

Philippe Debie

18:40-19:00

Declarative interfaces for HEP data analysis: FuncADL and ADL/CutLang

Speakers

Burak Sen, Changgi Huh, Gokhan Unel, Gordon Watts, Harry Prosper, Mason Proffitt, Sezen Sekmen

19:00

Thursday 2 December

11:00

Track 2: Data Analysis - Algorithms and Tools: US-zone

Session |

Location: Virtual and IBS Science Culture Center, S303, 55 EXPO-ro Yuseong-gu Daejeon, South Korea email: library@ibs.re.kr +82 42 878 8299 |

Conveners: Kyungho Kim, Jennifer Ngadiuba, Aishik Ghosh

11:00–11:20

Precise simulation of drift chamber in the CEPC experiment

Speaker

Dr Wenxing Fang

11:20–11:40

Predicting Calibrations using AI for the Central Drift Chamber in GlueX at Jefferson Lab

Speaker

Torri Jeske

11:40–12:00

Event reconstruction in JUNO

Speaker

Wuming Luo

12:00–12:20

Application of the Quantum Kernel Algorithm on the Particle Identification at the BESIII Experiment

Speaker

Dr Teng LI

12:20–12:40

Machine learning for particle flow reconstruction at CMS

Speaker

Joosep Pata

12:40–13:00

Source-Agnostic Gravitational-Wave Detection with Recurrent Autoencoders

Speaker

Eric Anton Moreno

13:00