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 AtlFast3: 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