ACAT 2022

Monday 24 October 2022

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (14:30 - 16:10)

-Conveners: Sophie Berkman; Adriano Di Florio

time	[id] title	presenter
14:30	[5] Long Short-Term Memory Networks and Bayesian Inference for Time-evolving Systems: an Industrial Case	Prof. PAGANO, Davide
14:50	[171] Affine Parametric Neural Networks for High-Energy Physics	ANZALONE, Luca
15:10	[22] Learning full-likelihoods of LHC results with Normalizing Flows.	REYES-GONZÁLEZ, Humberto
15:30	[152] Hunting for signals using Gaussian Process regression	GANDRAKOTA, Abhijith
15:50	[68] End-to-end multi-particle reconstruction in high occupancy imaging calorimeters with graph neural networks	ZEHETNER, Philipp

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (16:40 - 18:00)

-Conveners: Adriano Di Florio; Enrico Guiraud

time	[id] title	presenter
16:40	[99] Performance study of the CLUE algorithm with the alpaka library	DI PILATO, Tony
17:00	[6] Neural Estimation of Energy Mover’s Distance for Clustering	KITOUNI, Ouail
17:20	[132] Particle Transformer for Jet Tagging	QIAN, Sitian
17:40	[133] Boost-Invariant Polynomials: an efficient and interpretable approach to jet tagging	Mr BATATIA, Ilyes Mr MUNOZ, Jose M

Tuesday 25 October 2022

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (14:30 - 16:10)

-Conveners: Tony Di Pilato; Sophie Berkman

time	[id] title	presenter
14:30	[26] Simultaneous track finding and track fitting by the Deep Neural Network at BESIII	ZHANG, Yao
14:50	[52] Hierarchical Graph Neural Networks for Particle Track Reconstruction	LIU, Ryan
15:10	[72] Particle Tracking with Noisy Intermediate-Scale Quantum Computers	Mr SCHWÄGERL, Tim
15:30	[73] Standalone track reconstruction in LHCb's SciFi detector for the GPU-based High Level Trigger	HENNEQUIN, Arthur
15:50	[125] Navigation, field integration and track parameter transport through detectors using GPUs and CPUs within the ACTS R&D project	SALZBURGER, Andreas YEO, Beomki NIERMANN, Joana

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (16:40 - 18:00)

-Conveners: Claudio Caputo; Gregor Kasieczka

time	[id] title	presenter
16:40	[169] A method for inferring signal strength modifiers by conditional invertible neural networks	FARKAS, Mate Zoltan
17:00	[222] Constraining Cosmological Parameters from Dark Matter Halo Abundance using Simulation-Based Inference	REZA, Moonzarin
17:20	[203] First performance measurements with the Analysis Grand Challenge	SHADURA, Oksana
17:40	[208] The Federation - A novel machine learning technique applied on data from the Higgs Boson Machine Learning Challenge	MUCHA, Maximilian

Wednesday 26 October 2022

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (11:30 - 13:00)

-Conveners: Felice Pantaleo; Dalila Salamani

time	[id] title	presenter
11:30	[110] Efficient search for new physics using Active Learning in the ATLAS Experiment	RIECK, Patrick
11:50	[229] Temporal Variational Autoencoders and Simulation-based inference for interpolation of light curves of Gravitationally Lensed Quasars	DANILOV, Egor
12:10	[230] Galaxy survey data reduction with deep learning	ERIKSEN, Martin
12:30	[119] Automatic differentiation of binned likelihoods with RooFit and Clad	SINGH, Garima VASILEV, Vassil

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (14:15 - 15:55)

-Conveners: Davide Valsecchi; Thomas Owen James

time	[id] title	presenter
14:15	[189] RDataFrame: a flexible and scalable analysis experience	PADULANO, Vincenzo Eduardo
14:35	[148] A multi-purposed reconstruction method based on machine learning for atmospheric neutrino at JUNO	LI, Teng
14:55	[10] A Machine Learning Method for calorimeter signal processing in sPHENIX	POTEKHIN, Maxim
15:15	[28] Flow-Unet for High Dimensional Image Semantic Segmentation	Mr HU, Yu Ms QIU, Xiaomeng
15:35	[241] Hybrid Quantum-Classical Networks for Reconstruction and Classification of Earth Observation Images	CHANG, Su Yeon

Thursday 27 October 2022

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (14:30 - 16:10)

-Conveners: Erica Brondolin; Patrick Rieck

time	[id] title	presenter
14:30	[144] Optimization and deployment of ML fast simulation models	DRAGULA, Maciej RAIKWAR, Piyush
14:50	[111] Full Quantum GAN Model for High Energy Physics Simulations	REHM, Florian
15:10	[120] Accurate dE/dx simulation and prediction using ML method in the BESIII experiment	FANG, Wenxing
15:30	[16] Evolutionary algorithms for hyperparameter optimization in machine learning for application in high energy physics	TANI, Laurits
15:50	[242] Pruning and resizing deep neural networks for FPGA implementation in trigger systems at collider experiments	MASCIONE, Daniela

Track 2: Data Analysis - Algorithms and Tools - Sala Europa (16:40 - 18:00)

-Conveners: Jennifer Ngadiuba; Piyush Raikwar

time	[id] title	presenter
16:40	[69] Automatic data processing for prompt calibration of the CMS ECAL	PIGAZZINI, Simone
17:00	[141] Gaussian process for calibration and control of GlueX Central Drift Chamber	MCSPADDEN, Diana
17:20	[78] An Autoencoder-based Online Data Quality Monitoring for CMS ECAL	HARILAL, Abhirami
17:40	[204] Control of cryogenic dark matter detectors through deep reinforcement learning	WAGNER, Felix