ACAT 2024

Monday, 11 March 2024

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (14:30 - 16:10)

 -Conveners: Abhijith Gandrakota; Javier Mauricio Duarte

time	[id] title	presenter
14:30	[88] Application of ACTS for gaseous tracking detectors	Dr LIN, Tao
14:50	[43] Line Segment Tracking: Improving the Phase 2 CMS High Level Trigger Tracking with a Novel, Hardware-Agnostic Pattern Recognition Algorithm	VOURLIOTIS, Manos
15:10	[115] Leveraging Large-Scale Pretraining for Efficient Jet Classification: An Evaluation of Transfer Learning, Model Architectures, Dataset Scaling, and Domain Adaptation in Particle Physics	ZHAO, Zihan
15:30	[111] High Pileup Particle Tracking with Learned Clustering	LIERET, Kilian
15:50	[163] Tracking and vertexing downstream the LHCb magnet at the first stage of the trigger.	SVINTOZELSKYI, Volodymyr

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (16:50 - 18:10)

 -Conveners: Nhan Tran; Javier Mauricio Duarte

time	[id] title	presenter
16:50	[110] Wire-Cell: A High Quality Automated LArTPC Reconstruction for Neutrino Experiments	YU, Haiwang
17:10	[83] Reconstruction of atmospheric neutrinos and muons using Machine Learning-based methods in JUNO	MA, Wing Yan
17:30	[32] Reconstructing Particle Tracks in One Go with a Recursive Graph Attention Network	CHAN, Jay
17:50	[86] Track reconstruction for future colliders with quantum algorithms	OKAWA, Hideki

Tuesday, 12 March 2024

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (11:30 - 13:10)

  -Conveners: Joosep Pata; Yihui Ren

time	[id] title	presenter
11:30	[87] Towards the construction of Foundational Models at the LHC	HARRIS, Philip Coleman
11:50	[3] Leveraging Language Models for Particle Reconstruction	JU, Xiangyang
12:10	[46] Finetuning Foundation Models for Joint Analysis Optimization	VIGL, Matthias
12:30	[94] Beyond Language: Foundation Models for Collider Physics Data	HALLIN, Anna
12:50	[117] Denoising Graph Super-Resolution with Diffusion Models and Transformers for Improved Particle Reconstruction	KAKATI, Nilotpal

Wednesday, 13 March 2024

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (14:30 - 16:10)

-**Conveners: Haiwang Yu; Yihui Ren**

time	[id] title	presenter
14:30	[21] A Deep Generative Model for Hadronization	CHAN, Jay
14:50	[126] Reducing Systematic Differences between Data and Simulation with Generative Models	TORBUNOV, Dmitrii
15:10	[80] Boosting statistical anomaly detection via multiple test with NPLM	Dr GROSSO, Gaia
15:30	[52] Machine learning-based particle identification of atmospheric neutrinos in JUNO	LIU, Jiaxi
15:50	[79] Generic representations of jets at detector-level with self-supervised learning	RIECK, Patrick

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (16:50 - 18:10)

-**Conveners: Gage DeZoort; Aleksandra Ciprijanovic**

time	[id] title	presenter
16:50	[121] The Neural Network First-Level Hardware Track Trigger of the Belle II Experiment	KIESLING, Christian
17:10	[184] Fast and Robust ML for uncovering BSM physics	GANDRAKOTA, Abhijith
17:30	[123] To be or not to be Equivariant?	BOGATSKIY, Alexander HOFFMAN, Timothy
17:50	[20] An empirical performance-portability evaluation for Lorentz Vectors computations via SYCL	DESSOLE, Monica

Thursday, 14 March 2024

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (14:30 - 16:10)

   -Conveners: Lukas Alexander Heinrich; Lindsey Gray

time	[id] title	presenter
14:30	[178] Offline filter of data with abnormal high voltage at BESIII drift chamber	WU, Linghui
14:50	[1] Deep Learning-Based C14 Pile-Up Identification in the JUNO Experiment	FANG, Wenxing
15:10	[91] Common Analysis Tools in CMS	TEDESCHI, Tommaso
15:30	[16] Consistent multi-differential histogramming and summary statistics with YODA2	GUTSCHOW, Christian
15:50	[103] From Amsterdam to ACAT 2024: The Evolution and Convergence of Declarative Analysis Language Tools and Imperative Analysis Tools	WATTS, Gordon

Track 2: Data Analysis - Algorithms and Tools - Lecture Hall 2 (16:50 - 18:10)

   -Conveners: Lindsey Gray; Lukas Alexander Heinrich

time	[id] title	presenter
16:50	[37] Implementing an emissions model for dual phase xenon TPCs with probabilistic programming	Dr QIN, Juehang
17:10	[5] AI-based Data Popularity, Placement Optimization for a Novel Multi-tiered Storage System at BNL/SDCC Facility	HUANG, Qiulan
17:30	[188] The SciDAC QuantOM Framework: A Composable Workflow	LERSCH, Daniel
17:50	[104] dilax: Differentiable Binned Likelihoods in JAX	FACKELDEY, Manfred Peter