

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

Monday, May 8, 2023

Track 9 - Artificial Intelligence and Machine Learning: Applications 1 - Hampton Roads VII (11:00 AM - 12:30 PM)

-Conveners: Jana Schaarschmidt; SOFIA VALLECORSA

time	[id] title	presenter
11:00	A43] MLHad: Simulating Hadronization with Machine Learning	WILKINSON, Michael
11:15	A26] SYMBA: Symbolic Computation of Squared Amplitudes in High Energy Physics with Machine Learning	Mr ALNUQAYDAN, Abdulhakim
11:30	A42] On Estimating Gradients of Discrete Stochastic Programs for Detector Design Optimization	HEINRICH, Lukas
11:45	A01] Multi-Module based VAE to predict HVCM faults in the SNS accelerator	Mr ALANAZI, Yasir
12:00	P12] Resilient Variational Autencoder for Unsupervised Anomaly Detection at the SLAC Linac Coherent Light Source	HUMBLE, Ryan
12:15	P32] Machine Learning for Etch-Pit Identification at MoEDAL	HAYS, Jonathan

Track 9 - Artificial Intelligence and Machine Learning: Applications 2 - Hampton Roads VII (2:00 PM - 3:30 PM)

-Conveners: Sandro Wenzel; Stefano Dal Pra

time	[id] title	presenter
2:00 P	M51] Deep Learning for Amplitude Analysis in Spectroscopy	Dr PHELPS, William
2:15 P	M76] Machine learning based compression for scientific data	GALLÉN, Axel EKMAN, Alexander
2:30 P	M39] Pion/Kaon Identification at STCF DTOF Based on Classical/Quantum Convolutional Neural Network	LI, Teng
2:45 P	M13] Particle identification with machine learning in ALICE Run 3	KABUS, Maja
3:00 P	M76] Flashsim: a ML based simulation for analysis datatiers	VASELLI, Francesco
3:15 P	M24] FastCaloGAN: a fast simulation of the ATLAS Calorimeter with GANs	GIANNELLI, Michele Faucci

Tuesday, May 9, 2023**Track 9 - Artificial Intelligence and Machine Learning: Reconstruction - Hampton Roads VII (11:00 AM - 12:30 PM)****-Conveners: Jana Schaarschmidt; Sandro Wenzel**

time	[id] title	presenter
11:00	A108 A deep-learning reconstruction algorithm for cluster counting	Dr WU, Linghui
11:15	A309 Scalable, End-to-End, Machine-Learning-Based Data Reconstruction Chain for Particle Imaging Detectors	DRIELSMA, Francois
11:30	A115 HyperTrack: neural combinatorics for high energy physics	MIESKOLAINEN, Mikael
11:45	A103 Implicit Neural Representation as a Differentiable Surrogate for Photon Propagation in a Monolithic Neutrino Detector	TSANG, Patrick
12:00	P11 Neutrino interaction vertex-finding in a DUNE far-detector using Pandora deep-learning	CHAPPELL, Andrew
12:15	P10 Graph Neural Network for 3D Reconstruction in Liquid Argon Time Projection Chambers	HEWES, V

Track 9 - Artificial Intelligence and Machine Learning: Tracking - Hampton Roads VII (2:00 PM - 3:30 PM)**-Conveners: SOFIA VALLECORSIA; Sandro Wenzel**

time	[id] title	presenter
2:00 P	M100 End-to-End Geometric Representation Learning for Track Reconstruction	CALAFIURA, Paolo
2:15 P	M121 An Object Condensation Pipeline for Charged Particle Tracking	LIERET, Kilian
2:30 P	M140 BESIII track reconstruction algorithm based on machine learning	JIA, Xiaoqian
2:45 P	M12 Track Identification for CLAS12 using Artificial Intelligence	GAVALIAN, Gagik
3:00 P	M150 Novel fully-heterogeneous GNN designs for track reconstruction at the HL-LHC	Mr CAILLOU, Sylvain
3:15 P	M102 Advances in developing deep neural networks for finding primary vertices in proton-proton collisions at the LHC	GARG, Rocky SOKOLOFF, Michael

Track 9 - Artificial Intelligence and Machine Learning: Analysis - Hampton Roads VII (4:30 PM - 6:00 PM)**-Conveners: Jana Schaarschmidt; SOFIA VALLECORSIA**

time	[id] title	presenter
4:30 P	M148 Uncertainty Aware Machine Learning Models for Particle Physics Applications	RAJPUT, Kishansingh
4:45 P	M181 Exploring Interpretability of Deep Neural Networks in Top Tagging	ROY, Avik
5:00 P	M159 Fast Inclusive Flavor Tagging at LHCb	PROUVE, Claire
5:15 P	M127 Using a Neural Network to Approximate the Negative Log Likelihood Distribution	LIU, Shenghua
5:30 P	M136 Efficient search for new physics using Active Learning in the ATLAS Experiment	BHATTI, Zubair
5:45 P	M126 A method for inferring signal strength modifiers by conditional invertible neural networks	FARKAS, Máté Zoltán

Thursday, May 11, 2023**Track 9 - Artificial Intelligence and Machine Learning: General Methods and Tools - Hampton Roads VII (11:15 AM - 12:45 PM)****-Conveners: Jana Schaarschmidt; Stefano Dal Pra**

time	[id] title	presenter
11:15 AM	[M4] JetNet library for machine learning in high energy physics	PAREJA, Carlos
11:30 AM	[M16] Artificial Intelligence and Machine Learning for EPIC: an Overview	FANELLI, Cristiano
11:45 AM	[M18] New developments of TMVA/SOFIE: Code Generation and Fast Inference for Graph Neural Networks	MONETA, Lorenzo
12:00 PM	[M6] Embedded Continual Learning for HEP	BARBONE, Marco
12:15 PM	[M] FAIR AI Models in High Energy Physics	LI, Haoyang
12:30 PM	[M2] Symbolic Regression on FPGAs for Fast Machine Learning Inference	Mr TSOI, Ho Fung

Track 9 - Artificial Intelligence and Machine Learning: Online Applications - Hampton Roads VII (2:00 PM - 3:30 PM)**-Conveners: Jana Schaarschmidt; SOFIA VALLECORSA; Stefano Dal Pra**

time	[id] title	presenter
2:00 PM	[M8] Machine Learning for Real-Time Processing of ATLAS Liquid Argon Calorimeter Signals with FPGAs	VOIGT, Johann
2:15 PM	[M18] Applications of Lipschitz neural networks to the Run 3 LHCb trigger system	DELANEY, Blaise
2:30 PM	[M6] The Deployment of Realtime ML in Changing Environments	BROWN, Christopher
2:45 PM	[M29] Improved Clustering in the Belle II Electromagnetic Calorimeter with Graph Neural Networks	HAIDE, Isabel
3:00 PM	[M170] Development of a Deep-learning based Full Event Interpretation (DFEI) algorithm for the future LHCb trigger	Mr ESCHLE, Jonas
3:15 PM	[M48] Acceleration of a CMS DNN based Algorithm	BARBONE, Marco