

Contribution ID: 238

Type: not specified

Poster session B

Thursday, 2 May 2024 12:00 (3 hours)

IDs Title Presenters

4 Analyzing ML-enabled Full Population Model for Galaxy SEDs with Unsupervised Learning and Mutual Information Sinan Deger

7 Quark/gluon discrimination and top tagging with dual attention transformer Daohan Wang

21 Learning the 'Match' Manifold to Accelerate Template Bank Generation Susanna Green

25 Optimal, fast, and robust inference of reionization-era cosmology with the 21cmPIE-INN Benedikt Schosser

40 Rapidly searching and producing Bayesian posteriors for neutron stars in gravitational wave data. Joe Bayley

41 Convolutional neural network search for long-duration transient gravitational waves from glitching pulsars Rodrigo Tenorio

44 GNN for Λ Hyperon Reconstruction in the WASA-FRS Experiment Snehankit Pattnaik

54 OmniJet: The first cross-task foundation model for particle physics Joschka Birk

55 Turning optimal classifiers into anomaly detectors Adrian Rubio Jimenez

58 Gradient-Annihilated PINNs for Solving Riemann Problems: Application to Relativistic Hydrodynamics Antonio Ferrer Sánchez

60 Increasing the model agnosticity of weakly supervised anomaly detection Marie Hein

67 Multi-class classification of gamma-ray sources and the nature of excess of GeV gamma rays near the Galactic center Dmitry Malyshev

69 Estimation of Machine Learning model uncertainty in particle physics event classifiers julia vazquez escobar

70 Robust Uncertainty Quantification in Parton Distribution Function Inference Mark Costantini

75 Symbolic regression for precision LHC physics Manuel Morales-Alvarado

78 Deep learning techniques in the study of the hypertriton puzzle Christophe Rappold

82 Next-Generation Source Analysis: AI Techniques for Data-Intensive Astronomical Observations Rodney Nicolaas

83 Flexible joint conditional normalizing flow distributions over manifolds: the jammy-flows toolkit Thorsten Glüsenkamp

85 Finetuning Foundation Models for Joint Analysis Optimization Lukas Heinrich

90 Calculating entanglement entropy with generative neural networks Dawid Zapolski

95 Energy-based graph autoencoders for semivisible jet tagging in the Lund representation Roberto Seidita

97 Fast and Precise Amplitude Surrogates with Bayesian and Symmetry Preserving Networks Víctor Bresó Pla

98 Galaxy redshift estimations with transfer and multi-task learning Martin Boerstad Eriksen

99 Quark/gluon tagging in CMS Open Data with CWoLa and TopicFlow Ayodele Ore

105 Generating Lagrangians for particle theories Eliel Camargo-Molina

106 Evaluating Generative Models with non-parametric two-sample tests Samuele Grossi

107 The flash-simulation of the LHCb experiment using the Lamarr framework Matteo Barbetti

110 Utilizing Artificial Intelligence Technologies for the Enhancement of X-ray Spectroscopy with Metallic-Magnetic Calorimeters Marc Oliver Herdrich

112 Applying hierarchical autoregressive neural networks for three-dimensional Ising model Mateusz Winiarski

117 End-to-End Object Reconstruction in a Sampling-Calorimeter using YOLO Pruthvi Suryadevara

118 Validating Explainable AI Techniques through High Energy Physics Data Mariagrazia Monteleone

126 Transformer-inspired models for particle track reconstruction Yue Zhao

127 Sensitivity of strong lenses to substructure with machine learning Conor O'Riordan

134 A fast convolutional neural network for online particle track recognition Viola Cavallini

139 A deep learning method for the gamma-ray identification with the DAMPE space mission Jennifer Maria Frieden

143 Flavour Tagging with Graph Neural Networks with the ATLAS experiment Walter Leinonen

145 A deep learning method for the trajectory reconstruction of gamma rays with the DAMPE space mission Parzival Nussbaum

146 Unsupervised tagging of semivisible jets with energy-based autoencoders in CMS Florian Eble

152 Precision-Machine Learning for the Matrix Element Method Theo Heimel

153 Unsupervised Classification of Radio Sources Through Self-Supervised Representation Learning Nicolas Baron Perez

163 Model selection with normalizing flows Rahul Srinivasan

164 Towards the first time ever measurement of the $gg \to ZH$ process at the LHC using Transformer networks Geoffrey Gilles

165 Next generation cosmological analysis with a re-usable library of machine learning emulators across a variety of cosmological models Dily Duan Yi Ong

172 LHC Event Generation with JetGPT Jonas Spinner

179 Machine-learning analysis of cosmic-ray nuclei data from the AMS-02 experiment Shahid Khan

182 b-hive: a modular training framework for state-of-the-art object-tagging within the python ecosystem at the CMS experiment Niclas Eich

183 FlashSim: an end-to-end fast simulation prototype using Normalizing Flow Francesco Vaselli

193 Improving Two-Neutron Detection Efficiency on the NEBULA Detector using XGBoost Algorithm Yutian Li

195 Reconstruction of Low Mass Vector Mesons via Dimuon decay channel using Machine Learning Technique for the CBM Experiment at FAIR Abhishek Kumar Sharma

201 Reconstructing the Neutron Star Equation of State with Bayesian deep learning Giulia Ventagli 202 A Neural-Network-defined Gaussian Mixture Model for particle identification in LHCb Edoardo Franzoso 204 Deep learning predicted elliptic flow of identified particles in heavy-ion collisions at the RHIC and LHC energies Gergely Gábor Barnaföldi

205 Anomaly detection search for BSM physics in ATLAS experiment at LHC Francesco Cirotto

208 Simulation Based Inference from the CD-EoR 21-cm signal Anchal Saxena

214 Deep support vector data description models on an analog in-memory computing platform for real-time unsupervised anomaly detection. Dominique Kosters

215 Application of science-informed AI in experimental particle physics and neuroscience Peter Levai

217 Tuning neural posterior estimation for gravitational wave inference Alex Kolmus

220 Using ML based Unfolding to reduce error on lattice QCD observables Simran Singh

221 Addressing Real-World Noise Challenges in Gravitational Wave Parameter Estimation with Truncated Marginal Neural Ratio Estimation Alexandra Wernersson

222 Fully Bayesian Forecasts with Neural Bayes Ratio Estimation Thomas Gessey-Jones

Session Classification: Poster session