

4th ICFA Beam Dynamics Mini-Workshop on Machine Learning Applications for Particle Accelerators

Thursday, March 7, 2024

Poster/Demos: Flash Talks (2:10 PM - 3:00 PM)

-Conveners: Jason St. John; Tia Miceli

[id] title	presenter	board
[95] Flash Talks for Poster/Demos 4th ICFA MaLAPA	Dr ST. JOHN, Jason MICELI, Tia	

Poster/Demos: Live Demos and Posters & Snacks (3:00 PM - 5:00 PM)

[id] title	presenter	board
[65] Integration of Multi-Objective Genetic Algorithm and neural networks in linac optimization.	KIM, Chanmi	
[61] Simulation methods of 3D coupled storage ring based on SLIM formalism	Mr ZHAO, Jingyuan	
[89] Online optimisations of lifetime and injection efficiency in the ESRF EBS storage ring	CARMIGNANI, Nicola	
[17] Machine Learning Based Response Matrix Correction	CHEN, liwei	
[32] Orbit correction by machine learning in TPS storage ring	CHIU, Mau-Sen	
[1] Comparing gradient-based and non-gradient modelling and optimisation methods for investigating synchrotron dynamics	WILKES, Seb	
[11] Online image-based beam-dump anomaly detection	MOREIRA HUHN, Francisco	
[72] Multiobjective Optimization of Cyclotron Cavity Model using Neural Network	SHALI, Ahsani Hafizhu	
[27] RL-Based Control Strategies for HIPI Accelerator	SU, Chunguang	
[39] Reinforcement Learning Based Radiation Optimization at a Linear Accelerator	XU, Chenran	
[33] Dynamic vacuum and temperature predictions for informed anomaly detection at the CERN-SPS	VELOTTI, Francesco	
[54] Trust Region Bayesian Optimization for Online Accelerator Control	ROUSSEL, Ryan	
[20] Anomaly Detection for Diode Failures	MALDONADO, Jennefer	
[14] Multi objective Bayesian optimization of ECR ion source at the Linear IFMIF Prototype Accelerator.	DE FRANCO, Andrea	
[67] Optimization of a Longitudinal Bunch Merge Gymnastic with Reinforcement Learning	MALDONADO, Jennefer	
[10] Distance Preserving Machine Learning for Uncertainty Aware Accelerator Capacitance Predictions	RAJPUT, Kishansingh	
[40] Improving Surrogate Model Performance for Sparse Outputs in the Spatial Domain	BAKER, Kathryn	

[31] Optimization design of photocathode injector assisted by deep Gaussian process	SUN, Zheng	
[56] Development of beam transport system optimization method using VAE and Bayesian optimization	MORITA, Yasuyuki	
[36] Experience with ML-driven applications at PETRA III	VEGLIA, Bianca	
[76] Rapid Tuning or Synchrotron Surrogate Model at the Recycler Ring	Dr ST. JOHN, Jason	
[77] Analysis and Improvement of Generalisability of Anomaly Detection Methods	ROMANOVSKI, Mihnea	
[48] The Reinforcement Learning for Autonomous Accelerators International Collaboration	SANTAMARIA GARCIA, Andrea	
[94] Simultaneous corrections of nonlinear errors in the LHC triplets using machine learning	FOL, Elena	
[86] Application of Machine Learning to Accelerator Operations at SACLA/SPring-8.	MAESAKA, Hirokazu	
[92] End-to-end Simulations and ML infrastructure for Light Sources	EDELEN, Jonathan	
[90] Improving Accelerator Surrogate Models with a Knowledge of Physics	PIERCE, Christopher	
[15] Reshaping SRF Cavity Resonance Management with Smart Techniques	WNAG, Faya	
[50] Reinforcement Learning for Intensity Tuning at Large FEL Facilities	KAISER, Jan	
[73] Research on Recognition of Quench and Flux Jump Based on Machine Learning	NIU, Bao	
[98] Towards Natural Language-driven Autonomous Particle Accelerator Tuning	KAISER, Jan	
[101] Bayesian Optimal Experimental Design for AGS Booster Magnet Misalignment Estimation	LIN, Weijian	