Session Program

20–26 Sept 2025

ICALEPCS 2025 - The 20th International Conference on Accelerator and Large Experimental Physics Control Systems

MOCG MC13 Artificial Intelligence and Machine Learning

Palmer House Hilton Chicago
17 East Monroe Street Chicago, IL 60603, United States of America

Monday 22 September

14:00

MOCG MC13 Artificial Intelligence and Machine Learning
Session |
Location: Palmer House Hilton Chicago, Grand Ballroom, 17 East Monroe Street Chicago, IL 60603, United States of America |
Conveners: Mike Fedorov, Mirjam Lindberg

14:00–14:15
Experience integrating online modeling / adaptive digital twin infrastructure and ML-based tuning for accelerator control at SLAC

Speaker
Sara Miskovich

14:15–14:30
Neural network-based model predictive control for energy efficient HVAC systems for CERN accelerators

Speaker
Diogo Monteiro

14:30–14:45
Optimization of the transfer line against collective effects using physics-constrained generative phase space reconstruction

Speaker
Seongyeol Kim

14:45–15:00   AI-driven autonomous tuning of radioactive ion beams

Speaker
Sergio Lopez-Caceres

15:00–15:15   Data-driven models for virtual diagnostics and control

Speaker
Brad Ratto

15:15–15:30   Automation of sample alignment for neutron scattering experiments

Speaker
Jonathan Edelen

15:30