Session Program

27–29 Oct 2025

Artificial Intelligence for the Electron Ion Collider (AI4EIC) 2025

AI/ML for Accelerators

Monday 27 October

10:00

AI/ML for Accelerators
Session

10:00–10:25

Explainable and Differential Reinforcement Learning for Multi Objective Optimization in Particle Accelerators

Speaker

Kishansingh Rajput

10:25–10:50

Differentiable beam dynamics codes, their use in AI-ML for accelerators and potential applications to the EIC

Speaker

Chenran Xu

10:50–11:15

Symplectic machine learning model for fast simulation of space-charge effects

Speaker

Jinyu Wan

11:15–11:30 **Coffee Break**

11:30–11:55

Use of AI/ML for higher brightness and higher polarization of hadron beams

Speaker

Eiad Hamwi

11:55–12:15

Framework for the Development of Virtual Accelerator Models for Machine Learning Applications

Speaker

Adwaith Ravichandran

12:15–12:35

Machine-Learning–Accelerated Bayesian Uncertainty Quantification for Digital Twin Modeling and Control of the AGS Booster

Speaker

Christopher Kelly

12:35–12:55

Machine Learning Approaches to Improved Ion Profile Monitor Measurements

Speaker

Christopher Hall

12:55–13:15 **Use of Generative AI and LLMs for Accelerator Design**

Speaker

Onur Gilanliogullari

13:15