Session Program

8-11 Apr 2025



5th ICFA Beam Dynamics Mini-Workshop on Machine Learning for Particle Accelerators

Surrogate Modelling and Digital Twins

CERN, 80/1-001 - Globe of Science and Innovation - 1st Floor Esplanade des Particules 1, 1211 Meyrin, Switzerland

Thursday 10 April

Su	Irrogate Modelling and Digital Twins
Ses	ssion Location: CERN, 503/1-001 - Council Chamber Convener: Francesco Maria Velotti
1	1:00-11:20
Gr	aph Learning for Explainable Operation of Particle Accelerators- 15'+5'
Sp	Deaker
Ch	nris Tennant
1	1:20-11:40
Co	pmpensating hysteresis for the CERN SPS main magnets with transformers-
15	i'+5'
Sp	beaker
Ar	Iton Lu
1	1:40-12:00
Im	proving fast beam transport simulations using transfer learning- 15'+5'
Sr	peaker
Pa	ul Stanik III
1	2:00-12:20
Op	otimizing High-Energy Beam Transport with Al: Advances in IFMIF-DONES
De	esign- 15'+5'
Sp	peakers
Ga	alo Gallardo Romero, Guillermo Rodríguez Llorente
Ses	Irrogate Modelling and Digital Twins sion Location: CERN, 503/1-001 - Council Chamber Convener: Mr Jiao Yi
1	5:30-15:50
En	d-to-end differentiable digital twin for the IOTA/FAST facility- 15'+5'
Sp	beaker
Ni	kita Kuklev
1	5:50-16:10 An Online Virtual Model for the ATLAS Ion Linac at Argonne- 15'+5'
Ac	Jwaith Ravichandran
1	^{6:10-16:30}
MI	L-Based Multi-Fidelity Model Calibration Toward Precision Control of Electron
Be	eams- 15'+5'
Sp	beaker
Er	ic Cropp
	6:30-16:50 Aveloning Radiation-Tolerant Transverse Ream Imaging Using Synthetic Data and
M	ultimode Fiber- 15'+5'

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