

ACAT 2022

Monday, 24 October 2022

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (14:30 - 16:10)

-Conveners: Barry Dillon; Domenico Pomarico

time	[id] title	presenter
14:30	[109] Speeding up Madgraph5_aMC@NLO through CPU vectorization and GPU offloading: towards a first alpha release	VALASSI, Andrea
14:50	[188] Developments in Performance and Portability of BlockGen	WANG, Rui CHILDERS, Taylor
15:10	[179] Performance of modern color decompositions for standard candle LHC tree amplitudes	KNOBBE, Max
15:30	[98] Accelerating LHC event generation with simplified pilot runs and fast PDFs	GUTSCHOW, Christian

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (16:40 - 18:00)

-Conveners: Daniel Maitre; Marcello Maggi

time	[id] title	presenter
16:40	[239] Studying Hadronization by Machine Learning Techniques	BIRO, Gabor
17:00	[160] Invertible Networks for the Matrix Element Method	HEIMEL, Theo
17:20	[89] Quantum-Inspired Machine Learning	POMARICO, Domenico

Tuesday, 25 October 2022

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (14:30 - 16:10)

-Conveners: **Leonardo Cosmai; Ryan Moodie**

time	[id] title	presenter
14:30	[145] Loop integral computation in the Euclidean or physical kinematical region using numerical integration and extrapolation	Dr DE DONCKER, Elise
14:50	[158] Loop Amplitudes from Precision Networks	BUTTER, Anja
15:10	[250] Emulation of high multiplicity NLO k-factors	TRUONG, HENRY
15:30	[251] Anomaly searches for new physics at the LHC	DILLON, Barry
15:50	[29] First results of Local Unitarity at N3LO	Mr CAPATTI, Zeno

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (16:40 - 18:00)

-Conveners: **Domenico Elia; Anke Biekötter**

time	[id] title	presenter
16:40	[23] Bridge between Classical & Quantum Machine Learning	ARAZ, Jack Y.
17:00	[70] Conditional Born machine for Monte Carlo events generation	GROSSI, Michele
17:20	[55] Quantum neural networks force fields generation	KISS, Oriel Orphee Moira

Wednesday, 26 October 2022

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (11:30 - 12:50)

-Conveners: **Domenico Pomarico; Joshua Davies**

time	[id] title	presenter
11:30	[198] lips: complex phase space goes singular and p-adic	DE LAURENTIS, Giuseppe
11:50	[135] Two-loop five-point amplitudes in massless QCD with finite fields	MOODIE, Ryan

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (14:15 - 15:55)

-Conveners: **Domenico Colella; Andrea Valassi**

time	[id] title	presenter
14:15	[62] DMG4: a fully GEANT4-compatible package for the simulation of Dark Matter	SIEBER, Henri Hugo
14:35	[24] Run Dependent Monte Carlo at Belle II	MARTINI, Alberto
14:55	[249] Unweighted event generation for multi-jet production processes based on matrix element emulation	JANSSEN, Timo
15:15	[195] Conditional Normalizing Flow for Markov Chain Monte Carlo Sampling in the Critical Region of Lattice Field Theory	SINGHA, ankur

Thursday, 27 October 2022

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (14:30 - 16:10)

-Conveners: **Andrea Wulzer; Giuseppe DeLaurentis**

time	[id] title	presenter
14:30	[8] Optimally combining BSM searches using graph theory	YELLEN, James David
14:50	[173] Product Jacobi-Theta Boltzmann machines with score matching	PASQUALE, Andrea
15:10	[166] Theory prediction in PDF fitting	HEKHORN, Felix
15:30	[77] Integrations with a neural network	Dr MAITRE, Daniel

Track 3: Computations in Theoretical Physics: Techniques and Methods - Sala A+A1 (16:40 - 18:00)

-Conveners: **Adriano Di Florio; Juan Carlos Criado Álamo**

time	[id] title	presenter
16:40	[247] Quantum annealing applications in high-energy phenomenology	CRIADO, Juan Carlos
17:00	[167] Towards an automatized framework to perform quantum calibration	PASQUALE, Andrea
17:20	[54] Quantum computing of the 6Li nucleus via ordered unitary coupled cluster	KISS, Oriel Orphee Moira
17:40	[206] Preliminary Lattice Boltzmann Method Simulation using Intel® Quantum SDK	Mr SHINDE, Tejas