Session Program

18–24 Aug 2024

XVIth Quark Confinement and the Hadron Spectrum

Statistical Methods for Physics Analysis in the XXI Century

Cairns, Queensland, Australia
Cairns Convention Centre

Monday 19 August

16:00

Statistical Methods for Physics Analysis in the XXI Century: H1b (Parallel H)

Session | **Location:** M6 | **Convener:** Enrico Rinaldi

16:00–16:20 **Sampling methods for high energy physics & particle astrophysics**

Speaker
Dr William Handley

16:20–16:40

Improved estimate of systematic uncertainty of distributions with finite samples

Speaker
Alexander Lincoln Read

16:40–17:00 **Calibrating Tension Statistics with Neural Ratio Estimation**

Speaker
Harry Bevins

17:00–17:30 **End-To-End Optimization of the Layout of the SWGO Experiment**

Speaker
Tommaso Dorigo

17:30–18:00

Can we do beyond Wilks theorem for significance calculation? Estimating p-values with importance sampling

Speaker
Francisco Matorras

18:00

Wednesday 21 August

16:30

Statistical Methods for Physics Analysis in the XXI Century: H3b (Parallel H)

Session | **Location:** M6 | **Convener:** Yung-Kyun Noh

16:30–17:00 **Quantum Parton Shower with Kinematics**

Speaker
Masahito Yamazaki

17:00–17:30

Rebuilding Dense Matter EoSs from Neutron Star Observations with Deep Learning

Speaker
Dr Lingxiao Wang

17:30–17:50 **Implementation of amplitude analysis and machine learning at BESIII**

Speaker
Xiao-Rui Lyu

17:50–18:10 **A quantum computing study of the static potential in (2+1)D QED**

Speaker
Enrico Rinaldi

18:10–18:30

GAMBIT - the Global and Modular beyond-Standard Model Inference Tool

Speaker
Martin John White

18:30

Thursday 22 August

11:00

Statistical Methods for Physics Analysis in the XXI Century: H4a (Parallel H)

Session | **Location:** M6 | **Convener:** Tommaso Dorigo

11:00–11:20

Digital Quantum Simulation for Energy Spectroscopy of Schwinger Model

Speaker
Prof. Masazumi Honda

11:20–11:40

NuCLR: Nuclear Co-Learned Representations

Speaker
Sokratis Trifinopoulos

11:40–12:00

Use of a Gaussian Process to precisely estimate the trials factor for a resonance search

Speaker
Alexander Lincoln Read

12:00–12:30

Response Matrix Estimation in Unfolding Differential Cross Sections

Speaker
Mikael Kuusela

12:30–13:00

Machine Learning Methods in Lattice QCD

Speaker
Akio Tomiya

13:00