

Many-body quantum physics with machine learning

Report of Contributions

Contribution ID: 1

Type: **not specified**

REGISTRATION

Monday, 4 September 2023 09:00 (30 minutes)

Contribution ID: 2

Type: **not specified**

Welcome ECT* Director

Monday, 4 September 2023 09:30 (5 minutes)

Presenter: AARTS, Gert

Contribution ID: 3

Type: **not specified**

Electron gas and hydrogen: from ground state energies to excitation spectra

Monday, 4 September 2023 11:00 (1 hour)

Presenter: HOLZMANN, Markus

Contribution ID: 4

Type: **not specified**

Learning ground states of gapped quantum Hamiltonians with Kernel Methods

Monday, 4 September 2023 12:00 (30 minutes)

Presenter: GIULIANI, Clemens

Contribution ID: 5

Type: **not specified**

Neural Quantum States for Mixed States and their sample complexity

Monday, 4 September 2023 14:00 (1 hour)

Presenter: VICENTINI, Filippo

Contribution ID: 6

Type: **not specified**

Liquid-Solid Phase Transition in 2D He-4 With Neural Quantum States

Monday, 4 September 2023 15:00 (30 minutes)

Presenter: LINTEAU, David

Contribution ID: 7

Type: **not specified**

Discussion session

Monday, 4 September 2023 16:00 (2 hours)

Contribution ID: 8

Type: **not specified**

A simple NQS on a discretized lattice space

Tuesday, 5 September 2023 09:30 (1 hour)

Presenter: BARBIERI, Carlo

Contribution ID: 9

Type: **not specified**

Neural Network Quantum States for spinless fermions

Tuesday, 5 September 2023 11:00 (1 hour)

Presenter: KEEBLE, James

Contribution ID: **10**

Type: **not specified**

Anti-symmetrized neural quantum states

Tuesday, 5 September 2023 12:00 (30 minutes)

Presenter: ROZALÉN, Javier

Contribution ID: 11

Type: **not specified**

Ultracold atoms with neural network quantum states

Tuesday, 5 September 2023 14:00 (1 hour)

Presenter: Dr KIM, Jane (OSU)

Contribution ID: 12

Type: **not specified**

Transfer learning for many-body physics

Tuesday, 5 September 2023 15:00 (30 minutes)

Presenter: AZZAM, Amir

Contribution ID: **13**

Type: **not specified**

Discussion session

Tuesday, 5 September 2023 16:00 (2 hours)

Contribution ID: 14

Type: **not specified**

Neural Quantum States for Neutron Stars

Wednesday, 6 September 2023 09:30 (1 hour)

Presenter: FORE, Bryce

Contribution ID: 15

Type: **not specified**

Natural Quantum Monte Carlo Computation of Excited States

Wednesday, 6 September 2023 11:00 (1 hour)

Presenter: PFAU, David

Contribution ID: 16

Type: **not specified**

Neural Network Applications in Pionless EFT

Wednesday, 6 September 2023 12:00 (30 minutes)

Presenter: PARNES, Elad

Contribution ID: 17

Type: **not specified**

ML applied to the analysis of quantum phases in a quantum simulation of the Agassi model

Wednesday, 6 September 2023 14:00 (1 hour)

Presenter: PÉREZ-FERNANDEZ, Pedro

Contribution ID: **18**

Type: **not specified**

Unbiasing time-dependent Variational Monte Carlo by projected quantum evolution

Wednesday, 6 September 2023 15:00 (30 minutes)

Presenter: SINIBALDI, Alessandro

Contribution ID: **19**

Type: **not specified**

Discussion session

Wednesday, 6 September 2023 16:00 (2 hours)

Contribution ID: 20

Type: **not specified**

Optimising Fermionic Neural Networks with Decision Geometry

Thursday, 7 September 2023 09:30 (1 hour)

Presenter: DRISSI, Mehdi

Contribution ID: 21

Type: **not specified**

Self-learning projective quantum Monte Carlo simulations guided by neural network states

Thursday, 7 September 2023 11:00 (1 hour)

Presenter: PILATI, Sebastiano

Contribution ID: 22

Type: **not specified**

Evolution optimization in Digital-Analog Quantum Simulations

Thursday, 7 September 2023 12:00 (30 minutes)

Presenter: SAIZ-CASTILLO, Alvaro

Contribution ID: 23

Type: **not specified**

Simulating Quantum Field Theories with Neural Network Representation

Thursday, 7 September 2023 14:00 (1 hour)

Presenter: LUO, Di

Contribution ID: 24

Type: **not specified**

Machine learning flow-based models for nuclear many-body calculations with quantified uncertainties

Thursday, 7 September 2023 15:00 (30 minutes)

Presenter: WEN, Pengsheng (Texas A&M University)

Contribution ID: 25

Type: **not specified**

Discussion session

Thursday, 7 September 2023 16:00 (2 hours)

Many-body quan... / Report of Contributions

TBA

Contribution ID: 26

Type: **not specified**

TBA

Presenter: TBC

Many-body quan... / Report of Contributions

TBA

Contribution ID: 27

Type: **not specified**

TBA

Presenter: TBA

Contribution ID: 28

Type: **not specified**

Data-driven discovery of relevant information in quantum simulators

Friday, 8 September 2023 11:00 (1 hour)

Presenter: VERDEL ARANDA, Roberto (The Abdus Salam International Centre for Theoretical Physics (ICTP))

Contribution ID: 29

Type: **not specified**

Exploring self-bound Hypernuclear states with Neural Quantum States

Friday, 8 September 2023 12:00 (30 minutes)

Presenter: DI DONNA, Andrea

Contribution ID: **30**

Type: **not specified**

Workshop Introduction

Monday, 4 September 2023 09:35 (55 minutes)

Presenter: RIOS HUGUET, Arnau

Contribution ID: **31**

Type: **not specified**

Improving qubit readout with autoencoders

Friday, 8 September 2023 10:00 (30 minutes)

Presenter: Dr LUCHI, Piero (Trento)