



# SQAI-NCTS Workshop on Tensor Network and Quantum Embedding

## Monday, 25 March 2024

**Invited talks: Ji-Yao Chen - Room 1220, 2F, Faculty of Science Bldg. 4 (10:00 - 11:00)**

-Conveners: Wei-Lin Tu

time	[id] title	presenter
10:00	[78] Tensor networks: from ground states to excitations and back	Prof. CHEN, Ji-Yao

**Invited talks: Garnet Kin-Lic Chan - Room 1220, 2F, Faculty of Science Bldg. 4 (11:20 - 12:20)**

-Conveners: Wei-Lin Tu

time	[id] title	presenter
11:20	[92] From tensor networks to quantum embedding to correlated materials	CHAN, Garnet Kin-Lic

**Invited talks: Pochung Chen - Room 1220, 2F, Faculty of Science Bldg. 4 (14:00 - 15:00)**

-Conveners: Yi-Ping Huang

time	[id] title	presenter
14:00	[89] Tensor network based finite-size scaling for 2D classical models.	Prof. CHEN, Pochung

**Invited talks: Naoki Kawashima - Room 1220, 2F, Faculty of Science Bldg. 4 (15:30 - 16:30)**

-Conveners: Tsuyoshi Okubo

time	[id] title	presenter
15:30	[84] Compression of Tensor Networks	KAWASHIMA, Naoki

**Invited talks: Ian McCulloch - Room 1220, 2F, Faculty of Science Bldg. 4 (16:50 - 17:50)**

-Conveners: Tsuyoshi Okubo

time	[id] title	presenter
16:50	[86] Environment expansion for matrix product states	MCCULLOCH, Ian

# Tuesday, 26 March 2024

## Invited talks: Tao Xiang - Room 1220, 2F, Faculty of Science Bldg. 4 (10:00 - 11:00)

-Conveners: Chia-Min Chung

time	[id] title	presenter
10:00	[83] Tensor Network Renormalization and its Applications	XIANG, Tao

## Invited talks: Hiroshi Shinaoka - Room 1220, 2F, Faculty of Science Bldg. 4 (11:20 - 12:20)

-Conveners: Chia-Min Chung

time	[id] title	presenter
11:20	[76] Exploiting hidden low-rank structures in physics	SHINAOKA, Hiroshi

## Invited talks: Ying-Jer Kao - Room 1220, 2F, Faculty of Science Bldg. 4 (14:00 - 15:00)

-Conveners: Yi-Ping Huang

time	[id] title	presenter
14:00	[87] Hybrid Classical-Quantum Architectures for Quantum Machine Learning	KAO, Ying-Jer

## Invited talks: Lei Wang - Room 1220, 2F, Faculty of Science Bldg. 4 (15:30 - 16:30)

-Conveners: Yusuke Nomura

time	[id] title	presenter
15:30	[91] CrystalFormer	WANG, Lei

## Invited talks: Thomas Ayrál - Room 1220, 2F, Faculty of Science Bldg. 4 (16:50 - 17:50)

-Conveners: Yusuke Nomura

time	[id] title	presenter
16:50	[93] Can tensor networks help quantum computers solve quantum many-body problems?	AYRAL, Thomas

# Friday, 29 March 2024

## Invited talks: Mingpu Qin - NSSOL Learning Studio (E285), 2F, Faculty of Science Bldg. 1 (10:00 - 11:00)

-Conveners: Wei-Lin Tu

time	[id] title	presenter
10:00	[82] Fully-augmented Matrix Product States: algorithm, application, and parent Hamiltonian	QIN, Mingpu

## Invited talks: Didier Poilblanc - NSSOL Learning Studio (E285), 2F, Faculty of Science Bldg. 1 (11:20 - 12:20)

-Conveners: Wei-Lin Tu

time	[id] title	presenter
11:20	[94] Chiral spin liquids with PEPS: should we fear the no-go theorem	POILBLANC, Didier

## Invited talks: Keisuke Fujii - NSSOL Learning Studio (E285), 2F, Faculty of Science Bldg. 1 (14:00 - 15:00)

-Conveners: Satoshi Morita

time	[id] title	presenter
14:00	[79] Quantum Machine Learning: interplay between implicit and explicit quantum models	Prof. FUJII, Keisuke

## Invited talks: Miles Stoudenmire - NSSOL Learning Studio (E285), 2F, Faculty of Science Bldg. 1 (15:30 - 16:30)

-Conveners: Satoshi Morita

time	[id] title	presenter
15:30	[95] Complex Time Evolution for Time-Dependent Correlations	STOUDENMIRE, Miles