

# 2024 QFort Workshop

04.15 - 04.17 ● Conference Center, B1, Main Library, NCKU

## Program

16 Apr., 2024 Tuesday		
Time	Speaker	Title
08:50-09:10	Registration	
Quantum theory <b>Chairman: Prof. Shin-Liang Chen (NCHU)</b>		
09:10-09:50	Franco Nori (Riken, Japan)	Machine Learning Techniques Applied to Quantum Physics
09:55-10:25	Yuan-Chung Cheng (NTU)	New Approaches for Quantum Dissipative Dynamics and Spectroscopy of Condense-Phase Molecular Systems
10:25-10:50	Tea Break	
Device physics <b>Chairman: Prof. Luke Smith (NCKU)</b>		
10:50-11:30	Koji Ishibashi (Riken, Japan)	Superconductor/topological insulator Josephson junctions
11:35-12:05	Frank Kao (NCKU)	Traditional Si MOS Devices Working at Cryogenic Temperatures for Novel Applications
12:05-13:30	Group Photo + Lunch	
Quantum computation <b>Chairman: Prof. Min-Hsiu Hsieh (Hon Hai Research Institute)</b>		
13:30-14:10	Harry Buhrman (Quantinuum, UK/ Univ. of Amsterdam, the Netherlands)	Quantum Position Verification, Quantum Nonlocal Computation, and Surprising Connections with Holography and classical cryptography
14:15-14:45	Han-Hsuan Lin (NTHU)	On the Impossibility of General Parallel Fast-forwarding of Hamiltonian Simulation
14:45-15:10	Tea Break	
Optical quantum technologies <b>Chairman: Prof. Paul-Antoine Moreau (NCKU)</b>		
15:10-15:40	Che-Ming Li (NCKU)	Quantification of Photon Fusion for Genuine Multiphoton Quantum Correlations
15:45-16:15	Yi-Hsin Chen (NSYSU)	Enhancing Rydberg blockade radii by tuning the Förster resonance through electric fields
16:20-16:50	Pin-Chieh Wu (NCKU)	Metasurfaces Redefining Wavefront Engineering: From Hyperspectral Imaging to Topological Photonics