

## Special Session: International Year of Quantum Science and Technology

**Date: October 21**

| chair       | Qingyu Cai                                                |                                                                                                |
|-------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 14:00-14:25 | Yanhong Xiao<br>Fudan University                          | Steady state spin squeezing and continuous quantum-enhanced metrology                          |
| 14:25-14:50 | Yoon-Ho Kim<br>POSTECH                                    | Toward Quantum-Inspired Classical Optical Technologies                                         |
| 14:50-15:15 | Yong Xu<br>Tsinghua University                            | Deep learning density functional theory and beyond                                             |
| 15:15-15:30 | Guoyi Zhu<br>HKUST<br>(Guangzhou)                         | Nishimori transition across the error threshold for constant-depth quantum circuit             |
| 15:30-15:50 | Break                                                     |                                                                                                |
| chair       | Ling-Na Wu                                                |                                                                                                |
| 15:50-16:15 | André Eckardt<br>TU Berlin                                | Non-trivial exchange statistics in one dimension: The anyon-Hubbard model and beyond           |
| 16:15-16:40 | Yong Xu<br>Tsinghua University                            | Disorder-induced average topological phase in Rydberg atom array                               |
| 16:40-17:05 | Kenji Toyoda<br>Osaka University                          | Quantum propagation of a vibrational excitation in a harmonically confined trapped-ion crystal |
| 17:05-17:20 | Hao Song<br>ITP, CAS                                      | Topological theory of high-efficiency quantum low-density parity-check codes                   |
| 17:20-17:35 | Shusheng Tan<br>National University of Defense Technology | Wave-Particle Mechanics: The Quantum Theory for Complete Description of Microscopic Systems    |