# THE THIRD BEIJING-TOKYO WORKSHOP ON ULTRACOLD ATOMIC GASES

清华大学

TSINGHUA UNIVERSITY

**ORGANIZERS /**

**Hui Zhai ,** Tsinghua University
**Masahito Ueda ,** University of Tokyo
**Shunsuke Furukawa ,** University of Tokyo

**LOCATION /**

清华大学高等研究院三楼报告厅
Room 322, Science Building, Institute for Advanced Study, Tsinghua University

## 8/25 Saturday

| Time | Speaker | |
|---|---|---|
| 09:00-09:40 | **Pascal Naidon** RIKEN — Impurities in a BEC: Bose Polarons and Tetramers | |
| 09:40-10:20 | **Xiaoling Cui** IOP, CAS — Quantum Droplet induced by Spin-Orbit Coupling | |
| 10:20-10:40 | Break | |
| 10:40-11:20 | **Kohei Kawabata** University of Tokyo — Topological Classification of Non-Hermitian Insulators and Superconductors | |
| 11:20-12:00 | **Zhong Wang** IASTU — Non-Bloch Bulk-boundary Correspondence of Non-Hermitian Systems | |
| 12:00-14:00 | Lunch Break | |
| 14:00-14:40 | **Shunsuke Furukawa** University of Tokyo — Quantum Hall states with Symmetry-Enriched Edge Modes in Multicomponent Bose Gases | |
| 14:40-15:20 | **Wei Yi** USTC — Fixed Points and Emergent Topological Phenomena in a Parity-Time-Symmetric Quantum Quench | |
| 15:20-15:50 | Break | |
| 15:50-16:30 | **Ryusuke Hamazaki** University of Tokyo — Operator Noncommutativity and Irreversibility in Quantum Chaos | |
| 16:30-17:10 | **Yu Chen** Capital Normal U — Hall Conductance and Constraints on Non-Hermitian Topological Models | |

## 8/26 Sunday

| Time | Speaker | |
|---|---|---|
| 09:00-09:40 | **Ce Wang** IASTU — Discovering Wave-function with an Auto-interpreted Recurrent Neural Network | |
| 09:40-10:20 | **Hiroki Saito** Univ. of Electro-Communications — Quantum Many-body Problems and Neural Networks | |
| 10:20-10:40 | Break | |
| 10:40-11:20 | **Yadong Wu** IASTU — Machine Learning for Quantum Few- and Many-Body Problems | |
| 11:20-12:00 | **Naoto Tsuji** RIKEN — Out-of-Time-Order Fluctuation Theorem | |
| 12:00-14:00 | Lunch Break | |
| 14:00-14:40 | **Zhigang Wu** SUSTC — Dynamics and Density Correlations in Jet Emissions of a Driven Condensate | |
| 14:40-15:20 | **Shunji Tsuchiya** Chuo Univ — Hidden Discrete Symmetries and Higgs Modes in Fermi Superfluids and Superconductors | |
| 15:20-15:50 | Break | |
| 15:50-16:30 | **Ren Zhang** Xian Jiaotong U — Towards Quantum Simulation of Kondo Physics with Ultracold Alkaline Earth Atoms | |
| 16:30-17:10 | **Ippei Danshita** Kindai Univ. — Quench Dynamics of the Bose-Hubbard model: Digital Classical Simulation versus Analog Quantum Simulation | |