

Program (tentative)

40min for each talk (30min + 10min Q&A)

Total 29 speakers

Day 1 (September 30, 2019): 8 talks

9:30 - 9:40, Masahito Ueda (University of Tokyo)
Opening remarks

Session 1, Chair: Masahito Ueda (University of Tokyo)

9:40 - 10:20, Xiaopeng Li (Fudan University)
“Towards Optimal Quantum Simulations”

10:20 - 11:00, Daisuke Yamamoto (Aoyama Gakuin University)
“Simulating frustrated quantum magnetism using negative-temperature Bose gases in triangular optical lattices”

11:00 - 11:40, Zhiyuan Yao (Tsinghua University)
“Quenching a Quantum Ising model with Z_2 gauge field”

11:40 - 13:20 Lunch

Session 2, Chair: Keisuke Totsuka (Kyoto University)

13:20 - 14:00, Hui Zhai (Tsinghua University)
“Information Scrambling in Quantum Neural Network”

14:00 - 14:40, Koki Ono (Kyoto University)
“Quantum simulation using itinerant 1S_0 atoms and localized 3P_0 atoms in a state-dependent optical lattice”

14:40 - 15:10, Coffee break

Session 3, Chair: Masaki Tezuka (Kyoto University)

15:10 - 15:50, Shimpei Goto (Kindai University)
“Kondo dynamics in ultracold alkali-earth-like atoms at finite temperatures”

15:50 - 16:30, Chao Gao (Zhejiang Normal University)
“Scale Invariance meets Non-Equilibrium: Universality & Quantum Fractal”

16:30 - 17:10, Chang Liu (Tsinghua University)
“Realizing the Hayden-Preskill Protocol with Coupled Dicke Models”

Day 2 (October 1, 2019): 7 talks and a poster session

Session 4, Chair: Kenichi Kasamatsu (Kindai University)

9:50 - 10:30, Shuhei Yoshida (NEC)
“Impurity-induced multibody resonances in a Bose gas”

10:30 - 10:50, Coffee break

Session 5, Chair: Masatoshi Sato (Kyoto University)

10:50 - 11:30, Yu Chen (Capital Normal University)
“Non-Hermitian Linear Response Theory”

11:30 - 12:10, Zhong Wang (Tsinghua University)
“Non-Hermitian skin effect, non-Bloch bands, and generalized bulk-boundary

correspondence”

12:10 - 12:50, Masaya Nakagawa (University of Tokyo)
“Non-Hermitian Kondo/Hubbard physics in ultracold atoms”

12:50 - 14:30 Lunch

Session 6, Chair: Tomoki Ozawa (RIKEN)

14:30 - 15:10, Zhenhua Yu (Sun Yat-Sen University)
“Interaction effects on PT-symmetry breaking transition in atomic gases”

15:10 - 15:50, Wei Yi (University of Science and Technology of China)
“Non-Hermitian Bulk-Boundary Correspondence in Quantum-Walk Dynamics”

15:50 - 16:10, Coffee break

Poster Session 1, 16:10 - 17:40

18:00 - 20:00, Information exchange dinner (for all the participants)

Day 3 (October 2, 2019): 7 talks and a poster session

Session 7, Chair: Daisuke Yamamoto (Aoyama Gakuin University)

9:10 - 9:50, Shintaro Taie (Kyoto University)
TBA

9:50 - 10:30, Wei Zhang (Renmin University)
“Flat-band Ferromagnetism of SU(N) Hubbard Model on Tasaki Lattices”

10:30 - 10:50, Coffee break

Session 8, Chair: Yoshiro Takahashi (Kyoto University)

10:50 - 11:30, Gyu-Boong Jo (Hong-Kong University of Science and Technology)
“Quantum simulation with ytterbium atoms: from topological matter to SU(N) fermions”

11:30 - 12:10, Keisuke Totsuka (Kyoto University)
“Symmetry-protected topological phases with ultra-cold SU(N) fermions”

12:10 - 13:50 Lunch

Session 9, Chair: Shunsuke Furukawa (Keio University)

13:50 - 14:30, Tomoki Ozawa (RIKEN)
“Probing topology and geometry through periodic shaking in ultracold atomic gases and beyond”

14:30 - 15:10, Manuel Valiente (Tsinghua University)
“Super Hamiltonian in superspace for incommensurate superlattices and quasicrystal”

15:10 - 15:50, Yadong Wu (Tsinghua University)
“Machine Learning for Quantum Experiments”

15:50 - 16:10, Coffee break

Poster Session 2, 16:10 - 17:40

Day 4 (October 3, 2019): 7 talks

Session 10, Chair: Hui Zhai (Tsinghua University)

- 9:10 - 9:50, Takashi Mukaiyama (Osaka University)
“Collisional properties of Fermi gases with p-wave interactions”
- 9:50 - 10:30, Shizhong Zhang (Hong Kong University)
“Role of effective range in the p-wave Fermi gas: Energetics and dynamics”
- 10:30 - 11:00, Coffee break
- Session 11, Chair: Zhenhua Yu (Sun Yat-Sen University)
- 11:00 - 11:40, Peng Zhang (Renmin University)
“Analytical solution for the spectrum of two ultracold atoms in a completely anisotropic confinement”
- 11:40 - 12:20, Yusuke Nishida (Tokyo Institute of Technology)
“Conformality, bulk viscosity, and contact correlation”
- 12:20 - 13:00, Juan Yao (Pengcheng Laboratory)
“d-wave three-body problem and speeding up the calculation with active learning”
- 13:00 - 14:40 Lunch
- Session 12, Chair: Yusuke Nishida (Tokyo Institute of Technology)
- 14:40 - 15:20, Emi Yukawa (RIKEN)
“Morphological superfluid in a nonmagnetic spin-2 Bose-Einstein condensate”
- 15:20 - 16:00, Zhigang Wu (Southern University of Science and Technology)
“Two-fluid hydrodynamics of two-dimensional atomic superfluids across the BKT transition”
- 16:00 - 16:10, Hui Zhai (Tsinghua University)
Closing remarks