

Quantum Gases 2018: Novel Correlation Effects



Organized by

Institute for Advanced Study, Tsinghua University, Beijing, China

Organizers | Tin-Lun (Jason) Ho
| Hui Zhai

Aug 22-24, 2018, Tsinghua University, Beijing, China

会议地点 | 清华大学西阶梯教室（大礼堂西侧，紧邻科学馆）

Conference Venue | Xi Jie Hall in Tsinghua Campus (West of Auditorium, next to Science Building)

Aug 22

08:30-08:50 ○ Registration

08:50-09:00 ○ Opening

● *Section: Mixture and Quantum Droplet*

09:00-10:00 ○ Christophe Salomon (ENS)

One, Two, Three, Many: the Lifetime of an Ultracold Bose-Fermi Mixture

10:00-10:30 ○ Break

10:30-11:30 ○ Matthias Wenzel (Stuttgart)

Dipolar Quantum Droplets Made of Ultracold Dysprosium Atoms

11:30-12:30 ○ Luca Tanzi (LENS/ICFO)

Quantum Liquid Droplets in a Mixture of Bose-Einstein Condensates

● *Section: Time-Dependent Interaction*

14:30-15:30 ○ Cheng Chin (Chicago)

Bose Fireworks

15:30-16:00 ○ Break

16:00-17:00 ○ Kuiyi Gao (Bonn)

Non-Equilibrium Dynamics in a Strongly Interacting Fermionic Superfluid

● Discussion

17:00-18:00 ○ Quantum Droplet and Time-Dependent Modulation of Interactions

Aug 23

● *Section: Strong Interactions*

09:00-10:00 ○ Eugene Demler (Harvard)

Exploring Polarons with Ultracold Atoms: from Spectroscopy to Quantum Microscopes

10:00-10:30 ○ Break

10:30-11:30 ○ Zoran Hadzibabic (Cambridge)

Bose Gases Quenched to Unitarity

11:30-12:30 ○ Selim Jochim (Heidelberg)

Probing Many Body Physics in a 2D Fermi Gas

● *Section: Fermi Microscope on Hubbard Model*

14:30-15:30 ○ Waseem Bakr (Princeton)

Quantum Gas Microscopy of Atomic Fermi-Hubbard Systems

15:30-16:00 ○ Break

16:00-17:00 ○ Lawrence Cheuk (Harvard)

Spin Transport in a Fermionic Mott Insulator

17:00-18:00 ○ Hui Zhai (Tsinghua)

On the Equivalence between Spin and Charge Transport in the Fermi Hubbard Model

Aug 24

● *Section: Many Body Localization and Fermi Microscope*

09:00-10:00 ○ Ulrich Schneider (Cambridge)

Ultracold Atoms in Quasiperiodic Potentials: From Many-Body Localization to Fractal Structures

10:00-10:30 ○ Break

10:30-11:30 ○ Christie Chiu (Harvard)

Ultracold-Atom Quantum Simulation: from Many-body Localization to Doped Antiferromagnets

11:30-12:30 ○ Antonio Rubio Abadl (Munich)

Probing Many-body Localization in 2D using Quantum-Gas Microscopy

● *Section: Optical Lattices*

14:30-15:30 ○ Joseph Thywissen (Toronto)

Transport of Fermions in an Optical Lattice

15:30-16:00 ○ Break

16:00-17:00 ○ Aki Goban (JILA)

New Development in Optical Lattice Clock and Quantum Many-body Physics

● Discussion

17:00-18:00 ○ New Topics and Future Perspective of Cold Atom Physics

Chair by Tin-Lun Ho (Ohio-State/Tsinghua)

● Concluding Remark

18:00-18:10 ○ by Tin-Lun Ho (Ohio-State/Tsinghua)