International Workshop on

Quantum Gases in Synthetic Gauge Fields

清华大学高等研究院主办

地点：清华大学第二教学楼（高等研究院科学馆南侧）

日程 Schedule

Aug 25, Wednesday	
Morning Chair: Erich Mueller (Cornell)	8: 30-8:45 Opening
	8: 45-9:45 Ian Spielman (NIST): Spin orbit coupling in a BEC
	9:45-10:00 Break
	10:00-11:00: Tin-Lun Ho (Ohio-State): Macroscopic Quantum Phenomena of Quantum Gases in Abelian and Non-abelian Gauge fields
	11:00-12:00: Discussion-I: Superfluids in Synthetic Magnetic Field
	Lunch Break
Afternoon Chair: Nigel Cooper (Cambridge)	2:00-3:00: Gordon Baym (UIUC) Cold atoms, Quantum Chromodynamics, and Gauge Fields
	3:00-3:15: Break
	3:15-4:15: Xiao-Gang Wen (MIT/Tsinghua): Introduction to Quantum Hall Effects
	4:15-5:15: Discussion-II: Quantum Hall physics in cold atoms

Aug 26, Thursday	
Morning: Chair: Mehmet Oktel (Bilkent)	9:00-10:00: Kenneth Günter (ENS): Schemes to Generate Abelian Gauge Fields for Cold Atoms
	10:00-10:30: Julius Ruseckas (Vilnius): Light-induced Abelian and non-Abelian Gauge Potentials for Cold Atoms
	10:30-10:45: Break
	10:45-11:45: Discussion-III: Scheme of generating abelian/non-abelian gauge fields
	Lunch Break
Afternoon Chair: Hui Zhai (Tsinghua)	2:00-3:00: Mehmet Oktel (Bilkent): Ultracold Atoms in Rotating Optical Lattices
	3:00-3:30: C. Morais Smith (Utrecht) Creating Staggered Magnetic Fields in Optical Lattices - New Insights into High-Tc Superconductivity
	3:30-3:45: Break
	3:45-4:45: Erich Mueller (Cornell): Artificial Gauge Fields in Lattices
	4:45-5:45: Discussion-IV: Optical lattices with Synthetic Gauge Field

Aug 27, Friday	
Morning: Chair: Ian Spielman (NIST)	9:00-10:00 Nigel Cooper (Cambridge): Bose-Hubbard Models with Gauge Fields: Frustrated Quantum Spins
	10:00-10:30: Hui Zhai (Tsinghua): Bose-Einstein Condensate in a Non-abelian Gauge Field
	10:30-10:45: Break
	10:45-11:15: Congjun Wu (UCSD): Spontaneous Generation of a Half-quantum Vortex in Spin-orbit Coupled Bose-Einstein Condensates
	11:15-12:15: Discussion-V: Quantum gases in non-abelian gauge field
	Lunch Break
Afternoon Chair: Tin-Lun Ho (Ohio-State)	A satellite symposium on " new development in one-dimensional physics in cold atoms "
	2:00- 2:30 Chen-Ning Yang (Tsinghua) 1D many component Fermion and Bosons in the limit N goes to infinity.
	2:30- 3:00 Xiwen Guan (Australian National University) Quantum criticality of strongly attractive Fermi gas
	3:00-3:15 Break
	3:15-3:45: Zhong-Qi Ma (Institute of High Energy Physics, CAS) 1D Bosons or Fermions in a power trap with repulsive delta function interaction
	3:45-4:15: Shu Chen (Institute of Physics, CAS) Properties of the super Tonks-Girardeau gas
	4:15-4:30 Break
	4:30-5:00 Tin-Lun Ho (Ohio-State) Concluding remark of the workshop