

Shih-Kuang Tung

Department of Physics, National Tsing Hua University

101 Section 2 Kuang Fu Road, Hsinchu, Taiwan 30013

Office: (03) 5162582

zekest@phys.nthu.edu.tw

Ph.D. in Physics, JILA (University of Colorado at Boulder and NIST)

2010

Thesis: Probing an Interacting Bose Gas in a Quasi-Two-Dimensional Trap

Advisor: Prof. Eric Cornell

Appointments

- Assistant professor, National Tsing Hua University (Taiwan), 2016 – present
 - Postdoctoral researcher, Northwester University (USA), advisor: Brian Odom 2014 – 2016
 - Postdoctoral researcher, The University of Chicago (USA), advisor: Cheng Chin 2010 – 2014
-

Publications

1. W.-X. Li, Y.-D. Chen, Y.-T. Sun, S. Tung, and Paul S. Julienne, *Feshbach resonances in an ultracold ${}^7\text{Li}$ - ${}^{133}\text{Cs}$ Bose-Bose mixture* Phys. Rev. A **106**, 023317 (2022).
2. Y.-D. Chen, W.-X. Li, M.-E. Chou, C.-S. Kuo, C.-S. Li, and S. Tung, *Lithium-cesium slow beam from a two-dimensional magneto-optical trap*, Phys. Rev. A **103**, 023102 (2021).
3. S. Tung, K. Jiménez-García, J. Johansen, C. Parker, and C. Chin, *Geometric Scaling of Efimov States in a ${}^6\text{Li}$ - ${}^{133}\text{Cs}$ Mixture*, Phys. Rev. Lett., **113**, 240402 (2014).
4. L.-C. Ha, C.-L. Hung, X. Zhang, U. Eismann, S. Tung, and C. Chin, *Strongly Interacting Two-Dimensional Bose Gases*, Phys. Rev. Lett., **110**, 145302 (2013).
5. S. Tung, C. Parker, J. Johansen, C. Chin, Y. Wang, and P. Julienne, *Ultracold Mixture of ${}^6\text{Li}$ and ${}^{133}\text{Cs}$ Atoms with Tunable Interactions*, Phys. Rev. A., **87**, 010702(R) (2013).
6. X. Zhang, C.-L. Hung, S. Tung, and C. Chin, *Observation of Quantum Criticality with Ultracold Atoms in Optical Lattices*, Science **335**, 1070 (2012).
7. C.-L. Hung, X. Zhang, L.-C. Ha, S. Tung, N. Gemelke, and C. Chin, *Extracting Density-Density Correlations from In-Situ Images of Atomic Quantum Gases*, New. J. Phys. **13**, 075019 (2011).
8. X. Zhang, C.-L. Hung, S. Tung, N. Gemelke, and C. Chin, *Exploring Quantum Criticality Based on Ultracold Atoms in Optical Lattices*, New. J. Phys. **13**, 045011 (2011).
9. S. Tung, G. Lamporesi, D. Lobser, L. Xia, E. A. Cornell, *Observation of Presuperfluid Regime in a Two-Dimensional Bose Gas*, Phys. Rev. Lett. **105**, 230408 (2010).
10. V. Schweikhard, S. Tung, S, and E. A. Cornell, *Vortex Proliferation in the Berezinskii-Kosterlitz-Thouless Regime on a Two-Dimensional Lattice of Bose-Einstein Condensates*, Phys. Rev. Lett. **99**, 030401 (2007).
11. S. Tung, V. Schweikhard, and E. A. Cornell, *Observation of Vortex Pinning in Bose-Einstein Condensates*, Phys. Rev. Lett. **97**, 240402 (2006).
12. I. Coddington, P. C. Haljan, P. Engels, V. Schweikhard, S. Tung, and E. A. Cornell, *Experimental Studies of Equilibrium Vortex Properties in a Bose-Condensed Gas*, Phys. Rev. A **70**, 063607 (2004).
13. V. Schweikhard, I. Coddington, P. Engels, S. Tung, and E. A. Cornell, *Vortex-Lattice Dynamics in Rotating Spinor Bose-Einstein Condensates*, Phys. Rev. Lett., **89**, 210403 (2004).

Invited talks

1. 02/2016, Physics Colloquium, North Carolina State University, Raleigh NC, *What can we learn from quantum 3-body systems of ultracold atoms? Simplicity to Complexity.*
2. (Plenary) 05/2015, 21st International Conference on Few-body Problems in Physics (Fb21), Chicago IL, *Geometric scaling of Efimov states in ultracold ^6Li - ^{133}Cs mixtures.*
3. 05/2015, Physics Division Seminar, Argonne National Laboratory, Lemont IL, *Few-Body Physics in Ultracold Atoms: Observation of Geometric Scaling Symmetry in Li-Cs-Cs Efimov States.*
4. 02/2015, Physics & Astronomy Colloquium, CSULB, Long Beach CA, *Few-body Physics in Ultracold Atoms: Observation of Geometric Scaling Symmetry in Li-Cs-Cs Efimov States.*
5. 05/2014, AMO Seminar, Northwestern University, Evanston IL, *Observation of a Discrete Scaling Symmetry in LiCsCs Efimov states.*
6. 04/2014, QIBEC Seminar, National Institute of Standards and Technology, Gaithersburg MD, *Observation of Geometric Scaling of Efimov States in a Fermi-Bose Li-Cs Mixture.*
7. 02/2014, QI/AMO Seminar, University of Illinois Urbana-Champaign, Urbana IL, *Evidence of Discrete Scaling Symmetry in Three-body Collisions.*
8. 11/2012, JILA Seminar, JILA, Boulder CO, *Feshbach Resonances in An Ultracold Mixture of ^6Li and ^{133}Cs Atoms and Prospects for Three-Body Universality.*

Awards and Honor

1. Young Scholars' Creativity Award, Foundation for the Advancement of Outstanding Scholarship (2017)