

# Curriculum Vitae

## Kuei Sun

### Theoretical Condensed Matter / AMO Physics

Washington State University Tri-Cities  
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### Appointments

- Since 2023 **Washington State University**  
**Richland, Washington, USA**  
Associate Professor (Career Track)
- 2022–2023 **The University of Texas at Dallas**  
**Richardson, Texas, USA**  
Associate Professor of Instruction
- 2016–2022 Assistant Professor of Instruction
- 2014–2015 Postdoctoral Fellow
- 2010–2014 **University of Cincinnati**  
**Cincinnati, Ohio, USA**  
Postdoctoral Fellow

### Education

- 2004–2010 **University of Illinois at Urbana-Champaign**  
**Urbana, Illinois, USA**  
Ph.D. in Physics  
Advisor: Professor Smitha Vishveshwara  
Thesis: *Condensation and pairing in inhomogeneous cold atomic and electronic systems*
- 1997–2001 **National Taiwan University**  
**Taipei, Taiwan**  
B.S. in Physics

### Awards and Honors

- May 2012 • Junior Scientist Travel Award, Institute for Complex Adaptive Matter (ICAM)
- May 2007 • Excellence in Teaching Award, University of Illinois at Urbana-Champaign
- Mar 2001 • Presidential Award of National Taiwan University

### Teaching Experience

- Since 2023 **Washington State University**
- *Physics for Scientists and Engineers I & II*
  - Taught calculus-based introductory physics to engineering majors (4 semesters, 228 students).
  - Integrated active learning techniques, including media-rich lectures, demonstrations, group work, and peer instruction.

- Provided targeted support for non-traditional, first-generation, and financially limited students.
- Expanded the structured computer-based exam bank to over 1000 questions.
- Course evaluation average: **4.39/5** (over 3 semesters) (department mean: 3.73/5).
- *General Physics I & II*
  - Taught algebra-based physics for biology and health-science majors (4 semesters, 149 students).
  - Emphasized collaborative learning and mentored peer-learning assistants.
  - Provided targeted support for non-traditional, first-generation, and financially limited students.
  - Course evaluation average: **4.30/5** (over 3 semesters) (department mean: 3.73/5).
- *Physics Lab 1 & 2*
  - Supervised physics labs for STEM / health-science majors (18 sections, 352 students across 4 semesters).
  - Led a team of lab instructors and teaching assistants.
  - Led instructor team and developed 20 new experiments in mechanics, E&M, thermal physics, and optic.

2016–2023

**The University of Texas at Dallas**

- *College Physics II*
  - Taught introductory electromagnetism, optics, and atomic physics for biology/health-science majors (11 semesters, over 1100 students).
  - Blended in-person and online formats; produced 23 instructional videos.
  - Developed a over-600-question computer-based exam bank.
  - Course evaluation average: **4.38/5** (over 5 semesters).
- *Physical Measurement Lab*
  - Upper-division lab for physics majors (6 semesters, 80 students).
  - Emphasized modern instrumentation, data analysis, and academic presentation.
  - Guided student-led research projects.
  - Course evaluation average: **4.47/5** (over 5 semesters).
- *Physics Lab I*
  - Introductory mechanics lab for STEM and pre-med students (over 500 sections, 14,000 students across 21 semesters)
  - Designed in-person and online experients.
  - Led 30 TAs supporting 2,000 students annually.
- *Physics Lab II*
  - Supervised introductory electromagnetism labs (32 sections, 950 students)

**Departmental/School Service**

**Washington State University**

- Since 2025
  - STEM Transfer Partnerships (STP) Committee
    - Provided support for 2-year and 4-year partnership teams for STEM transfer students.
- 2024
  - Faculty Search Committee
    - Participated in the search for an Assistant Professor (Career Track) in Biology.
- Since 2023
  - Undergraduate Curriculum Committee
    - Oversaw undergraduate curricula and academic activities.

**The University of Texas at Dallas**

- 2020
  - Instructional Faculty Salary Committee
  - Conducted a survey on salary information for instructional faculty in science at peer institutions.
- 2019
  - Faculty Search Committee
  - Participated in the search for an Assistant Professor of Instruction in Physics.
- 2018–2023
  - Physics Department TA Award Committee Chair
  - Chaired the committee responsible for judging and awarding outstanding physics teaching assistants annually
- 2016–2023
  - Supervisor of teaching assistants
  - Allocated and optimized TA resources for departmental teaching assignments
  - Monitored TA performance and provided training in teaching, writing, and communication skills.
- 2016–2023
  - Undergraduate Curriculum Committee
  - Oversaw undergraduate curricula, including the renovation of existing courses and the proposal of new courses.

**Teaching Expertise**

- Introductory physics / labs with in-person and online instruction
- Modern physics
- Quantum physics / mechanics
- Electromagnetism
- Quantum physics / mechanics
- Quantum information / computation
- Statistical physics / mechanics
- Solid-state physics
- Thermodynamics
- Solid-state physics
- Superconductivity and superfluidity

**Research Interest**

- Ultracold quantum gases
- Superconductivity and superfluidity
- Electronic transport in nano-scale devices
- Bose-Einstein condensates
- Topological quantum materials
- Majorana fermions in condensed matter

**Journal Referee**

- Physical Review Letters
- Physical Review B
- Scientific Reports
- Physics Letter A
- Journal of Physics Communications
- Physical Review A
- Physical Review Materials
- Europhysics Letters
- Journal of Physics A
- Journal of Physics: Condensed Matter

**Publications**

**960** total citations; **h-index: 18** (from [Google Scholar](#))

- 28.** *A scattering treatment on relativistic electronic transports in normal metal-superconductor junctions of Dirac materials*  
 Ju-w. Ding, **K. Sun**<sup>\*</sup>, Z.-q. Bao, and C.-G. Duan,  
[J. Phys.: Condens. Matter 37, 245701 \(2025\)](#)

27. *Charge transport spectra in superconductor-InAs/GaSb-superconductor heterostructures*,  
**K. Sun**, Z.-q. Bao, W. Yu, S. D. Hawkins, J. F. Klem, W. Pan, and X. Shi,  
[Nanotechnology](#) **33**, 085703 (2022).
26. *Vortex-antivortex physics in shell-shaped Bose-Einstein condensates*,  
 K. Padavić, **K. Sun**<sup>\*</sup>, C. Lannert, and S. Vishveshwara,  
[Phys. Rev. A](#) **102**, 043305 (2020); arXiv:2005.13030.
25. *Experimental realization of a long-lived striped Bose-Einstein condensate induced by momentum-space hopping*,  
 T. M. Bersano, J. Hou, S. Mossman, V. Gokhroo, X.-W. Luo, **K. Sun**, C. Zhang,  
 and P. Engels  
[Phys. Rev. A](#) **99**, 051602(R) (2019); arXiv:1809.01208.
24. *Static and Dynamic Properties of Shell-shaped Condensates*,  
**K. Sun**, K. Padavić, F. Yang, C. Lannert, and S. Vishveshwara,  
[Phys. Rev. A](#) **98**, 013609 (2018); arXiv:1712.04428.
23. *Time-reversal-invariant spin-orbit-coupled bilayer Bose-Einstein Condensates*,  
 M. Maisberger, L.-C. Wang, **K. Sun**, Y. Xu, and C. Zhang,  
[Phys. Rev. A](#) **97**, 053624 (2018); arXiv:1710.08323.
22. *Momentum-space Aharonov-Bohm interferometry in Rashba spin-orbit coupled Bose-Einstein condensates*,  
 J. Hou, X.-W. Luo, **K. Sun**, and C. Zhang,  
[EPL](#) **123**, 10005 (2018); arXiv:1710.06403.
21. *Momentum Space Josephson Effects*,  
 J. Hou, X.-W. Luo, **K. Sun**, T. Bersano, V. Gokhroo, S. Mossman, P. Engels,  
 and C. Zhang,  
[Phys. Rev. Lett.](#) **120**, 120401 (2018) (Editor's suggestion); arXiv:1710.06369.
20. *Superfluid-Quasicrystal in a Bose-Einstein Condensate*,  
 J. Hou, H. Hu, **K. Sun**, and C. Zhang,  
[Phys. Rev. Lett.](#) **120**, 060407 (2018); arXiv:1708.08898.
19. *Spin-tensor-momentum-coupled Bose-Einstein condensates*,  
 X.-W. Luo, **K. Sun**, and C. Zhang,  
[Phys. Rev. Lett.](#) **119**, 193001 (2017); arXiv:1705.03920.
18. *Adiabatically tuning quantized supercurrents in an annular Bose-Einstein condensate*,  
 J. Hou, X.-W. Luo, **K. Sun**, and C. Zhang,  
[Phys. Rev. A](#) **96**, 011603(R) (2017); arXiv:1705.00229.
17. *Physics of hollow Bose-Einstein condensates*,  
 K. Padavić, **K. Sun**<sup>\*</sup>, C. Lannert, and S. Vishveshwara,  
[EPL](#) **120**, 20004 (2017); arXiv:1612.05809.
16. *Engineering of many-body Majorana states in a topological insulator/s-wave superconductor heterostructure*,  
 H.-H. Hung, J. Wu, **K. Sun**, and C.-K. Chiu,  
[Sci. Rep.](#) **7**, 3499 (2017); arXiv:1605.04645.
15. *On the new Continuous Matrix Product Ansatz*,  
 S. S. Chung, S. Bauman, **K. Sun**, and C. J. Bolech,  
[J. Phys.: Conf. Ser.](#) **702**, 012004 (2016).
14. *Interacting spin-orbit-coupled spin-1 Bose-Einstein condensates*,  
**K. Sun**, C. Qu, Y. Xu, Y. Zhang, and C. Zhang,  
[Phys. Rev. A](#) **93**, 023615 (2016); arXiv:1510.03787.

13. *Multiple signatures of topological transitions for interacting fermions in chain lattices*,  
Y.-H. Chan, C.-K. Chiu, and **K. Sun**<sup>†</sup>,  
*Phys. Rev. B* **92**, 104514 (2015); arXiv:1506.07860.
12. *Quantum phases of Bose-Einstein condensates with synthetic spin-orbital-angular-momentum coupling*,  
C. Qu, **K. Sun**, and C. Zhang,  
*Phys. Rev. A* **91**, 053630 (2015); arXiv:1502.08052.
11. *General framework for transport in spin-orbit coupled superconducting heterostructures: Non-uniform spin-orbit coupling and spin-orbit-active interfaces*,  
**K. Sun** and N. Shah,  
*Phys. Rev. B* **91**, 144508 (2015); arXiv:1501.05699.
10. *Matrix Product Ansatz for Fermi Fields in One-Dimension*,  
S. S. Chung, **K. Sun**, and C. J. Bolech,  
*Phys. Rev. B* **91**, 121108(R) (2015); arXiv:1501.00228.
9. *Spin-orbital-angular-momentum coupling in Bose-Einstein condensates*,  
**K. Sun**, C. Qu, and C. Zhang,  
*Phys. Rev. A* **91**, 063627 (2015); arXiv:1411.1737.
8. *Tuning between singlet, triplet and mixed pairing states in an extended Hubbard chain*,  
**K. Sun**, C.-K. Chiu, H.-H. Hung, and J. Wu,  
*Phys. Rev. B* **89**, 104519 (2014); arXiv:1311.2033.
7. *Bose-Hubbard model with occupation-parity couplings*,  
**K. Sun** and C. J. Bolech,  
*Phys. Rev. B* **89**, 064506 (2014); arXiv:1309.3709.
6. *Pair tunneling, phase separation and dimensional crossover in imbalanced fermionic superfluids in a coupled array of tubes*,  
**K. Sun** and C. J. Bolech,  
*Phys. Rev. A* **87**, 053622 (2013); arXiv:1211.5162.
5. *Transport in multi-terminal superconductor-ferromagnet junctions having spin-dependent interfaces*,  
**K. Sun**, N. Shah, and S. Vishveshwara,  
*Phys. Rev. B* **87**, 054509 (2013)(Editor's suggestion); arXiv:1209.4478.
4. *Oscillatory pairing amplitude and magnetic compressible-incompressible transitions in imbalanced fermionic superfluids in optical lattices of elongated tubes*,  
**K. Sun** and C. J. Bolech,  
*Phys. Rev. A* **85**, 051607(R) (2012); arXiv:1112.1622.
3. *Anomalous polarization-dependent transport in nanoscale double barrier superconductor/ferromagnet/superconductor junctions*,  
M. Colci, **K. Sun**, N. Shah, S. Vishveshwara, and D. J. Van Harlingen,  
*Phys. Rev. B* **85**, 180512(R) (2012); arXiv:1111.5415.
2. *Oscillatory pairing of fermions in spin-split traps*,  
**K. Sun**, J. S. Meyer, D. E. Sheehy, and S. Vishveshwara,  
*Phys. Rev. A* **83**, 033608 (2011); arXiv:1009.4476.
1. *Probing condensate order in deep optical lattices*,  
**K. Sun**, C. Lannert, and S. Vishveshwara,  
*Phys. Rev. A* **79**, 043422 (2009); arXiv:0811.2798.

<sup>†</sup>Corresponding or co-first author.

## Presentations

- Mar 2017 **35.** *Topological transition and topological number in an interacting number-conserving Bose-Fermi mixture in one-dimensional lattices* ([abstract](#)), APS March meeting, New Orleans, Louisiana.
- May 2016 **34.** *Spin-1 Bose gases with synthetic spin-orbit coupling*, Seminar, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan.
- Mar 2016 **33.** *Stripe phase and double-roton excitations in interacting spin-orbit-coupled spin-1 Bose-Einstein condensates* ([abstract](#)), APS March meeting, Baltimore, Maryland.
- Mar 2016 **32.** *Gravitational effects on collective modes of superfluid shells* ([abstract](#)), APS March meeting, Baltimore, Maryland.
- Jun 2015 **31.** *Synthetic spin and orbital angular momentum coupling in quantum gases* ([abstract](#)), APS DAMOP meeting, Columbus, Ohio.
- May 2015 **30.** *Synthetic spin and orbital angular momentum coupling in ultracold atoms*, Seminar, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan.
- May 2015 **29.** *Ferromagnetic and spin-orbit effects in superconducting heterostructures*, Condensed-matter Seminar, Institute of Physics, Academia Sinica, Taiwan.
- Mar 2015 **28.** *Multiple signatures of topological phase transitions in a finite superconducting nanowire with intrinsic interactions* ([abstract](#)), APS March Meeting, San Antonio, Texas.
- Mar 2015 **27.** *Interface effects and electronic transport in superconducting heterostructures with spin-orbit coupling* ([abstract](#)), APS March Meeting, San Antonio, Texas.
- Mar 2015 **26.** *Bose-Einstein condensates with spin and orbital angular momentum coupling* ([abstract](#)), APS March Meeting, San Antonio, Texas.
- Dec 2014 **25.** *Spin-related Superfluid Phases in Ultra-cold Quantum Gases*, AMO Seminar, C.N. Yang Institute for Theoretical Physics, Stony Brook, New York.
- Mar 2014 **24.** *Spin-orbit effects on electronic transport in superconductor/normal metal heterostructures* ([abstract](#)), APS March Meeting, Denver, Colorado.
- Mar 2014 **23.** *Bose-Hubbard model with ferromagnetic-like occupation-parity couplings and its realization in imbalanced fermionic superfluids in tubular optical lattices* ([abstract](#)), APS March Meeting, Denver, Colorado.
- Feb 2014 **22.** *Oscillatory pairing and effective Bose-Hubbard physics in fermi gases in tubular lattices*, DARPA OLE review meeting, Arlington, Virginia.
- Jan 2014 **21.** *New aspects in quantum gases: geometry, topology, force and transport*, Invited talk, Institute of Atomic and Molecular Science, Academia Sinica, Taiwan.
- Jan 2014 **20.** *Exploring collective phenomena in quantum gases*, Condensed Matter Seminar, University of Cincinnati; invited talk, Institute of Atomic and Molecular Science, Academia Sinica, Taiwan.
- Dec 2013 **19.** *Searching for superconducting states with an oscillatory pairing order in cold atomic gases*, Physics Colloquium, National Sun Yet-sen University, Taiwan.
- Dec 2013 **18.** *Competitive pairing effects and emergent topological states in an extended Hubbard chain*, Condensed Matter Seminar, National Chung Cheng University, Taiwan.

- Oct 2013 | 17. *Physics of lattice bosons in the presence of occupation parity coupling* (abstract), Annual Fall Meeting of the APS Ohio-Region Section, Cincinnati, Ohio.
- Mar 2013 | 16. *Tuning between s-wave and p-wave superconductors as well as emerging Majorana fermions in extended Hubbard lattices* (abstract), APS March Meeting, Baltimore, Maryland.
- Mar 2013 | 15. *Adiabatic evolution of the Fulde-Ferrell-Larkin-Ovchinnikov state of imbalanced fermionic-atom superfluids in an optical lattice of coupled tubes* (abstract), APS March Meeting, Baltimore, Maryland.
- Jan 2013 | 14. *Oscillatory superfluid pairing in imbalanced ultra-cold Fermions in highly anisotropic confinements*. Seminar, Institute of Atomic and Molecular Sciences, Academia Sinica, Taiwan.
- Feb 2012 | 13. *Tunneling-driven transitions in magnetization compressibility and density redistributions in a fermionic superfluid of cold atoms trapped in an array of one-dimensional tubes* (abstract), APS March Meeting, Boston, Massachusetts.
- Jan 2012 | 12. *Oscillatory Pairing of Fermionic Superfluids in Elongated Confinements*, Special Seminar, The Research Center for Applied Sciences, Academia Sinica, Taiwan.
- Apr 2011 | 11. *Inhomogeneous cold atomic and electronic systems with pairing states*, Professor Luming Duan's group meeting, U of Michigan, Ann Arbor, Michigan.
- Mar 2011 | 10. *Magnetization-dependent resistance of double ferromagnet-superconductor junctions* (abstract), APS March Meeting, Dallas, Texas.
- Sep 2010 | 9. *Oscillatory pairing of fermions in spin-split traps*. Professor Anthony J. Leggett's group meeting, University of Illinois at Urbana-Champaign, Urbana, Illinois.
- May 2010 | 8. *Quantum degenerate phases in cold atomic gases*. Condensed Matter Seminar, University of Cincinnati, Cincinnati, Ohio.
- Mar 2010 | 7. *Inhomogeneous superfluid phases of spatially separated trapped fermions* (abstract), APS March Meeting, Portland, Oregon.
- Jan 2010 | 6. *Atoms in optical lattices*, Professor Alan Asouru-Guzik's group meeting, Harvard University, Cambridge, Massachusetts.
- Jan 2010 | 5. *Cold atomic gases*, Physics Colloquium, National Chung Cheng University, Taiwan.
- Jul 2009 | 4. *Cold atoms in 3D optical lattices*, Physics group meeting, Louisiana State University, Baton Rouge, Louisiana.
- Feb 2009 | 3. *Condensate properties of bosons in optical lattices*, Professor Anthony J. Leggett's group meeting, University of Illinois at Urbana-Champaign, Urbana, Illinois.
- Mar 2008 | 2. *Radio frequency spectra of interacting bosons in an optical lattice trap* (abstract), APS March Meeting, New Orleans, Louisiana.
- Nov 2007 | 1. *Exploring Condensates in Confined Geometries*, Professor Anthony J. Leggett's group meeting, University of Illinois at Urbana-Champaign, Urbana, Illinois.

## Poster Presentations

- Jan 2015 14. *Quantum Phases in Spin and Orbital Angular Momentum Coupled Bose-Einstein Condensates*,  
ARO/AFOSR annual program review meeting, Rice University, Houston, Texas.
- Feb 2014 13. *FFLO State and Bose-Hubbard Physics in Imbalanced Fermi Gases in Coupled Tubes*,  
DARPA OLE review meeting, Arlington, Virginia.
- Feb 2014 12. *Topological Transitions Due to Competitive Pairing Effects in 1D Hubbard Model*,  
DARPA OLE review meeting, Arlington, Virginia.
- Jan 2014 11. *Tuning between singlet, triplet and mixed pairing states in an extended Hubbard chain*,  
Theory Winter School on Topological Phases of Condensed Matter, Tallahassee, Florida.
- Oct 2013 10. *Imbalanced fermionic superfluids and emerging bosonic phases in a 2D array of coupled tubes (abstract)*,  
Annual Fall Meeting of the APS Ohio-Region Section, Cincinnati, Ohio.
- Oct 2013 9. *Effects of spin-dependent interfaces on electronic transport in hetero-structure superconductor/ferromagnet junctions (abstract)*,  
Annual Fall Meeting of the APS Ohio-Region Section, Cincinnati, Ohio.
- May 2013 8. *Fermionic Superfluids in an Array of Coupled Tubes at 1D-3D Crossover*,  
DARPA OLE review meeting, San Francisco, California.
- Nov 2012 7. *Imbalanced Fermionic Superfluids at the Incipience of a 1D-3D Crossover*,  
DARPA OLE review meeting, Miami, Florida.
- Nov 2012 6. *Transport in multi-terminal superconductor-ferromagnet junctions with spin-dependent interfaces*,  
Workshop on topology, entanglement and strong correlations in Condensed Matter, University of Illinois at Urbana-Champaign, Urbana, Illinois.
- Aug 2012 5. *FFLO pairing and quantum phase transitions in a 2D array of coupled tubes*,  
Summer School on QMC, University of Illinois at Urbana-Champaign, Urbana, Illinois.
- May 2012 4. *Imbalanced fermionic superfluids in an array of tubes*,  
The International Conference on Frontiers of Cold Atoms and Related Topics, Hong Kong; DARPA OLE review meeting, Chicago, Illinois.
- Dec 2011 3. *FFLO pairing and transitions in magnetic compressibility in a 2D array of tubes*,  
DARPA OLE review meeting, Fort Lauderdale, Florida.
- Jun 2011 2. *Oscillatory pairing of fermions in spin-split traps*,  
DARPA OLE review meeting, Vail, Colorado.
- May 2008 1. *Characteristics of condensed bosons in the vicinity of Mott insulating states (abstract)*,  
APS DAMOP meeting, State College, Pennsylvania.

## Contributed Presentations

- Jun 2020 23. *Thermodynamics and vortex physics in shell-shaped Bose-Einstein condensates (abstract)*,  
APS DAMOP meeting, Portland, Oregon.
- Mar 2020 22. *Vortices in Rotating Bose-Einstein Condensate Shells (abstract)*,  
APS March meeting, Denver, Colorado.
- May 2019 21. *Vortex Physics in Hollow Bose-Einstein Condensates (abstract)*,  
APS DAMOP meeting, Milwaukee, Wisconsin.

- Oct 2017 | **20. Super-quasicrystal stripe phases in optical superlattices with Raman-assisted tunneling (abstract)**,  
Joint Fall 2017 Meeting of the Texas Section of the APS exas Section of the AAPT, and Zone 13 of the Society of Physics Students, Richardson, Texas.
- Jun 2017 | **19. Adiabatically tuning quantized supercurrents and superfluid hysteresis in spin-orbit coupled Bose-Einstein condensates (abstract)**,  
APS DAMOP meeting, Sacramento, California.
- Jun 2017 | **18. Spin-tensor-momentum-coupled Bose-Einstein condensates (abstract)**,  
APS DAMOP meeting, Sacramento, California.
- Jun 2017 | **17. Time-reversal invariant bilayer spin-orbit coupled Bose-Einstein condensates (abstract)**,  
APS DAMOP meeting, Sacramento, California.
- Jun 2017 | **16. Hollow shell geometry and topological change of spherical Bose-Einstein condensates (abstract)**,  
APS DAMOP meeting, Sacramento, California.
- Jun 2017 | **15. Time-reversal invariant bilayer 2D synthetic lattices (abstract)**,  
APS DAMOP meeting, Sacramento, California.
- Mar 2017 | **14. Physics of Hollow Bose-Einstein Condensates (abstract)**,  
APS March meeting, New Orleans, Louisiana.
- Mar 2016 | **13. Collective modes of trapped Bose-Einstein condensates undergoing adiabatic deformation from filled-sphere to thin-shell geometries (abstract)**,  
APS March meeting, Baltimore, Maryland.
- Aug 2015 | **12. General framework for transport in spin-orbit coupled superconducting heterostuctures: Non-uniform spin-orbit coupling and spin-orbit-active interfaces (abstract)**,  
XVIII International Conference on Recent Progress in Many-Body Theories, Niagara Falls, New York.
- Aug 2015 | **11. On the Continuous Matrix Product Ansatz for Fermions (abstract)**,  
XVIII International Conference on Recent Progress in Many-Body Theories, Niagara Falls, New York.
- Jun 2015 | **10. The Phases of an Interacting Spin-1/2 Fermi Gas as seen from a New Variational Ansatz (abstract)**,  
APS DAMOP meeting, Columbus, Ohio.
- Mar 2015 | **9. Spin-orbital angular momentum coupled Bose-Einstein condensate (abstract)**,  
Spring 2015 Joint Meeting of the Texas Section of the AAPT, Texas Section of the APS and Zone 13 of the Society of Physics Students, San Antonio, Texas.
- Mar 2015 | **8. Probing the Collective Modes of Spherical Shell-Shaped Condensates with Quench Numerics (abstract)**,  
APS March Meeting, San Antonio, Texas.
- Mar 2015 | **7. Matrix-product Ansatz for Fermions in a 1D Continuum (abstract)**,  
APS March Meeting, San Antonio, Texas.
- Mar 2015 | **6. Topological phase transitions of interacting Majorana fermions in an array of vortices (abstract)**,  
APS March Meeting, San Antonio, Texas.
- Mar 2014 | **5. Competitive pairing effects on interacting fermions: superconductivity, topology, and entanglement entropy (abstract)**,  
APS March Meeting, Denver, Colorado.
- Oct 2013 | **4. Efficient Variational Method for Approximating Ground States of 1D Systems (abstract)**,  
Annual Fall Meeting of the APS Ohio-Region Section, Cincinnati, Ohio.

- Jun 2013 3. *Parametric dimensional evolution of the Fulde-Ferrell-Larkin-Ovchinnikov state of imbalanced fermionic-atom superfluids in an optical lattice of coupled tubes* ([abstract](#)),  
APS DAMOP Meeting, Quebec City, Canada.
- Mar 2013 2. *Variational Matrix Product Ansatz for Interacting 1D Gases* ([abstract](#)),  
APS March Meeting, Baltimore, Maryland.
- Mar 2011 1. *Bosonic Hubbard-Holstein model and its realization in optical lattices* ([abstract](#)),  
APS March Meeting, Dallas, Texas.

### Other Conferences, Workshops, and Schools

- Jul 2025 • SMU QuarkNet Workshop, Southern Methodist University.
- Apr 2025 • STEM Transfer Partnerships 2.0 Convening, Bellingham, Washington.
- Jun 2017 • ARO Division Review Meeting, Cocoa Beach, Florida.
- Oct 2013 • Writing Effective Grants for External Funding Workshop, University of Cincinnati.
- Aug 2013 • Princeton Summer School on Condensed Matter Physics: Spin Liquid, Matrix Product State, and Entanglement, Princeton University.
- May 2013 • Great Lake Strings Conference, University of Kentucky.
- Oct 2012 • CinciNNI tri-state condensed matter forum, University of Cincinnati.
- Jul 2012 • Summer School on Quantum Monte Carlo: theory and fundamentals, University of Illinois at Urbana-Champaign.
- May 2012 • International Workshop on Ultracold Atoms and Molecules, Sun Moon Lake, Taiwan.
- Mar 2012 • CinciNNI tri-state condensed matter forum, University of Cincinnati.
- Nov 2011 • CinciNNI tri-state condensed matter forum, University of Cincinnati.
- Oct 2011 • Workshop on Topological Aspects of Quantum-coherent States in New Materials, University of Chicago.
- Jan 2011 • CinciNNI tri-state condensed matter forum, University of Cincinnati.
- Oct 2010 • CinciNNI tri-state condensed matter forum, University of Cincinnati.
- May 2010 • Urbana-Chicago Fest condensed matter symposium, University of Chicago.
- Nov 2009 • Midwest Cold Atom Workshop, University of Chicago.
- May 2009 • APS DAMOP meeting, University of Virginia.
- Oct 2007 • Conference of BCS Theory of Superconductivity @ 50, University of Illinois at Urbana-Champaign.