

Kevin P. Nuckolls

Curriculum vitae, August 2023

EDUCATION

- Ph.D. in Physics, *Department of Physics, Princeton University; Princeton, NJ* 2017-2023
Faculty Advisor: Professor Ali Yazdani
Thesis: “Electronic Correlations, Topology, and Unconventional Superconductivity in Twisted Bilayer Graphene”
- Bachelor of Arts, *University of California, Berkeley; Berkeley, CA* 2013-2017
Majors: Physics (Magna Cum Laude) and Applied Mathematics (Summa Cum Laude)
Thesis Advisor: Professor Alex Zettl

APPOINTMENTS

- Pappalardo Postdoctoral Fellow in Physics, *Massachusetts Institute of Technology* 07/2023 - present
Graduate Research Assistant, *Princeton Nanoscale Microscopy Laboratory* 07/2017 – 05/2023
Graduate Teaching Assistant, *Physics 105: Honors Mechanics* 09/2018 – 01/2019
MCAT Physics Instructor, *The Princeton Review* 06/2016 – 05/2017

HONORS AND AWARDS

- Pappalardo Postdoctoral Fellowship in Physics, *Massachusetts Institute of Technology* 2022
Harvard Quantum Initiative (HQI) Prize Postdoctoral Fellowship (*declined*), *Harvard University* 2022
Charlotte Elizabeth Procter Honorary Fellowship, *Princeton University Graduate School* 2022
Kusaka Memorial Prize in Physics, *Department of Physics, Princeton University* 2022
5 Sigma Physicist Award for Outstanding Advocacy, *American Physical Society (APS)* 2020
Finalist, National Defense Science and Engineering Graduate (NDSEG) Fellowship 2018
Summer Undergraduate Research Fellowship, *College of Letters and Sciences, UC Berkeley* 2016
Dean’s Honor List (x 5), *College of Letters and Sciences, UC Berkeley* 2015 - 2017
Berkeley Physics Undergraduate Research Scholarship (x 7), *UC Berkeley* 2014 - 2017

SELECTED PUBLICATIONS

(* = Equal Contributions)

1. **Nuckolls, K. P.***, Lee, R. L.*, Oh, M.*, Wong, D.*, Soejima, T.* *et al.* Quantum textures of the many-body wavefunctions in magic-angle graphene. *arXiv:2303.00024 (to appear in Nature)* (2023).
2. Oh, M.*, **Nuckolls, K. P.***, Wong, D.* *et al.* Evidence for unconventional superconductivity in twisted bilayer graphene. *Nature* **600**, 240-245 (2021).
3. **Nuckolls, K. P.***, Oh, M.*, Wong, D.* *et al.* Strongly correlated Chern insulators in magic-angle twisted bilayer graphene. *Nature* **588**, 610-615 (2020).
4. Wong, D.*, **Nuckolls, K. P.***, Oh, M.* *et al.* Cascade of electronic transitions in magic-angle twisted bilayer graphene. *Nature* **582**, 198-202 (2020).
5. Wong, D.*, Jeon, S.*, **Nuckolls, K. P.***, Oh, M.* *et al.* A modular ultra-high vacuum millikelvin scanning tunneling microscope. *Review of Scientific Instruments* **91**, 2, 023703 (2020).

SERVICE

Academic Committees:

Graduate Student Observer, Executive Committee	03/2021 - 06/2023
<i>Forum on Industrial and Applied Physics, American Physical Society</i>	
Graduate Student Representative	09/2017 - 05/2023
<i>Princeton Physics Department Graduate Student Committee</i>	
Member-at-Large, Executive Committee	01/2019 - 01/2022
<i>Forum on Graduate Student Affairs, American Physical Society</i>	
Organizing Committee Member	01/2019 - 08/2019
<i>Princeton Summer School on Condensed Matter Physics</i>	

Journal Reviewer:

Nature Communications

MENTORSHIP, OUTREACH, AND SCIENCE ADVOCACY

Volunteer Physics Lecturer	06/2021
<i>STEM Boot Camp, Warrior-Scholar Project</i>	
Graduate Student Mentor	09/2018 - 05/2021
<i>Princeton Society for Physics Students Mentorship Program</i>	
Member and STEM Education Policy Advocate	09/2017 - 05/2019
<i>Princeton Citizen Scientists</i>	
Graduate Student Research Mentor	06/2019 - 08/2019
<i>Research Experience for Undergraduates (REU), Princeton Center for Complex Materials</i>	

INVITED TALKS

1. Quantum Textures of the Many-Body Wavefunctions in Magic-Angle Graphene 2023
Condensed Matter Theory Special Seminar, Columbia University (virtual), August 2th
2. Quantum Textures of the Many-Body Wavefunctions in Magic-Angle Graphene 2023
Thouless Institute for Quantum Matter (TIQM) Seminar, University of Washington, July 13th
3. Quantum Textures of the Many-Body Wavefunctions in Magic-Angle Graphene 2023
Princeton Center for Complex Materials (PCCM) Seminar, Princeton University, April 6th
4. Correlations, Topology, and Unconventional Superconductivity in Twisted Bilayer Graphene 2022
Harvard Quantum Initiative (HQI) QuantumFest, Harvard University, December 15th
5. Correlations, Topology, and Unconventional Superconductivity in Twisted Bilayer Graphene 2022
Special Condensed Matter Seminar, Massachusetts Institute of Technology, October 14th
6. Spectroscopic Evidence for Unconventional Superconductivity in Twisted Bilayer Graphene 2022
Correlated Electron Systems, Gordon Research Seminar, June 25th
7. Spectroscopic Evidence for Correlated Chern Insulators and Unconventional Superconductivity in Magic-Angle Graphene 2022

APS March Meeting Invited Session, American Physical Society, March 17th

8. Spectroscopic Evidence for Unconventional Superconductivity in Twisted Bilayer Graphene 2021
ARO MURI Collaboration Meeting, December 14th
9. Correlated Chern Insulators and Unconventional Pairing in Twisted Bilayer Graphene 2021
EPiQS Postdoc Symposium, Gordon and Betty Moore Foundation, May 24th
10. Strongly Correlated Topological Insulators in Magic-Angle Twisted Bilayer Graphene 2021
Princeton Quantum Initiative (PQI) Seminar, Princeton University, February 26th

CONTRIBUTED TALKS

1. Imaging Magic-Angle Twisted Bilayer Graphene 2023
APS March Meeting; Las Vegas, NV, March 6-10th
2. Spectroscopic Signatures of Unconventional Pairing in Magic-Angle Twisted Bilayer Graphene 2021
Thomas Young Center Moiré-Twistronics Workshop, Virtual National Graphene Institute, August 9-13th
3. Strongly Correlated Chern Insulators in Magic-Angle Twisted Bilayer Graphene 2021
APS March Meeting, Virtual, March 15-19th
4. Strongly Correlated Chern Insulators in Magic-Angle Twisted Bilayer Graphene 2020
Spectroscopy on Strongly Correlated Electron Systems, Virtual Workshop University of Cambridge, October 27-29th
5. A Modular Design for Ultra-High Vacuum Millikelvin STM Systems 2019
APS March Meeting; Boston, MA, March 4-8th
6. Electrical Transport Characterization of Graphene Aerogel Systems 2016
Summer Undergraduate Research Fellowship Conference, UC Berkeley, August 18th

POSTER PRESENTATIONS

1. Spectroscopic Evidence for Unconventional Superconductivity in Twisted Bilayer Graphene 2022
Correlated Electron Systems, Gordon Research Conference, June 29th
2. Cascade of Electronic Transition in Magic-Angle Twisted Bilayer Graphene 2020
Emergent Phenomena in Moiré Materials; ICFO, July 6-17th

PROFESSIONAL AFFILIATIONS

Member, *American Physical Society*

EXTRACURRICULAR ACTIVITIES

Trombonist, *Princeton University Orchestra, Princeton Camerata,* 2017 - 2022
and Princeton University Trombone Quartet