

EDUCATION

- Expected 2026* **Stanford University**, Stanford, CA
Ph.D., Physics
- 2020* **Columbia University**, New York, NY
B.A., Physics with minor in Mathematics, *magna cum laude*
- 2013* **Defense Language Institute Foreign Language Center**, Monterey, CA
A.A., Pashto-Afghan Studies

HONORS & AWARDS

- 2022-present* National Science Foundation Graduate Research Fellow
- 2022-2024* LSST Discovery Alliance Data Science Fellow
- 2020-2022* Stanford Department of Physics Fellow
- 2020-2022* Stanford Enhancing Diversity in Graduate Education Fellow
- 2018-2019* Barrie & Emmanuel Roman Scholar
- 2018* Columbia University School of General Studies Honor Society

COLLABORATION/GROUP MEMBERSHIP

- 2022-present* CMB×LSS Group @ SLAC/Stanford
- 2021-present* Dark Energy Survey (DES) Collaboration
- 2020-present* Vera C. Rubin Observatory, Legacy Survey of Space and Time
Dark Energy Science Collaboration (LSST DESC)
- 2019-2020* General Antiparticle Spectrometer (GAPS) Collaboration
- 2018-2020* Nuclear Spectroscopic Telescope Array (NuSTAR) @ Columbia

PUBLICATIONS

PEER-REVIEWED

- 2024* **T. Schutt**, A. S. Maniyar, E. Schaan, W. R. Coulton, N. Mishra, “A new ‘temperature inversion’ estimator to detect CMB patchy screening by large-scale structure”, *PRD*, 109, 10353 (2024). [\[ADS\]](#)
- W. R. Coulton, **T. Schutt**, A. S. Maniyar, E. Schaan, *et al.*, “The Atacama Cosmology Telescope: Detection of Patchy Screening of the Cosmic Microwave Background”, submitted for publication. [\[arXiv\]](#)
- 2023* J. H. Esteves, Y. Utsumi, A. Snyder, **T. Schutt**, *et al.*, “Photometry, Centroid and Point-Spread Function Measurements in the LSST Camera Focal Plane Using Artificial Stars”, *PASP*, 135, 115003 (2023). [\[ADS\]](#)

- 2021 K. Mori, C. J. Hailey, **T. Schutt**, *et al.*, “The X-ray binary population in the Galactic Center revealed through multi-decade observations”, *ApJ*, 921, 148 (2021). [\[ADS\]](#)
- 2020 K. Mori, H. An, Q. Feng, K. Malone, R. R. Prado, **T. Schutt**, *et al.*, “Multiwavelength Observations of 2HWC J1928+177: Dark Accelerator or New TeV Gamma-Ray Binary?”, *ApJ*, 897, 129 (2020). [\[ADS\]](#)
- 2019 K. Mori, C. J. Hailey, S. Mandel, **T. Schutt**, *et al.*, “*NuSTAR* and *Chandra* observations of new X-ray transients in the central parsec of the Galaxy”, *ApJ*, 885, 142 (2019). [\[ADS\]](#)

CONFERENCE PROCEEDINGS

- 2024 A. Roodman, A. Rasmussen, A. Bradshaw, E. Charles, J. Chiang, S. W. Digel, R. Dubois, A. S. Johnson, S. Kahn, S. Liang, S. Marshall, H. Neal, A. A. Plazas, K. Reil, E. Rykoff, R. Schindler, **T. Schutt**, Y. Utsumi, *et al.*, “LSST camera verification testing and characterization”, *Proc. SPIE* 13096, Ground-based and Airborne Instrumentation for Astronomy X, 130961S (2024). [\[SPIE\]](#)

TALKS & POSTERS

* indicates an invited talk.

- 2024 New Physics from Old Light: Illuminating the Universe with CMB Secondaries: *Detecting Patchy Screening of the Cosmic Microwave Background*, 2024 Sep 19.
- Stanford Intro & Graduate Observational Astrophysics, Guest Lecture: *Discovering the Dark Universe with LSSTCam and the Vera C. Rubin Observatory*, 2024 Jun 3.
- DES Collaboration Meeting, Plenary Session: *Point-spread function modeling for Y6 galaxy shear estimation*, 2024 May 29.
- * Duke University Cosmology Seminar: *Detecting Patchy Screening of the Cosmic Microwave Background*, 2024 Feb 22.
- Stanford University, KIPAC Tea Talk: *Detecting Patchy Screening of the Cosmic Microwave Background*, 2024 Feb 9.
- 2023 * Princeton Survey Science Meeting: **T. Schutt**, M. Yamamoto & N. Weaverdyck, *DES Y6: Systematic characterization and control of PSFs, cosmic shear and galaxy clustering*, 2023 Nov 13.
- DES Collaboration Meeting, Plenary Session: M. Yamamoto & **T. Schutt**, *Overview of the Y6 Shear Catalogs*, 2023 Oct 11.
- * Cosmopalooza 2023: *Building the World’s Largest Weak Lensing Shape Catalogs*, 2023 Oct 5 (virtual). [\[recording\]](#)
- DESC ShearFest 2023: *Color-dependent PSFs: Lessons from DES Y6*, 2023 Jul 20.
- Rubin/LSST@SLAC: *Color-dependent PSFs: Lessons from DES Y6*, 2023 Feb 24.
- 2022 Rubin Project & Community Workshop, Graduate Student Poster Session: *LSST Camera Characterization: Instrumentation, Image Analysis and Irregularities*, 2022 Aug 8.
- DES Collaboration Meeting, Plenary Session: M. Gatti, **T. Schutt**, M. Yamamoto, *DES Year 6 Shear Measurement Development*, 2022 May 24.
- Stanford University, KIPAC Tea Talk: *PSF systematics in DES Y6 & LSST weak lensing analyses*, 2022 Feb 11.

- 2018 Columbia Astronomy Department Weekly Talks: *Spatial distribution of black hole X-ray binaries in the central parsec of the Milky Way Galaxy*, 2018 Sep 11.
Columbia University AstroFest, Poster Session: **T. Schutt**, K. Mori, C. J. Hailey, *Spatial distribution of black hole X-ray binaries in the central parsec of the Milky Way Galaxy*, 2018 Sep 7.

TEACHING EXPERIENCE & TRAINING

- Spring 2024 **Teaching Assistant & Guest Lecturer**, Graduate Observational Astrophysics & Introduction to Observational Astrophysics (combined courses), Stanford University.
- Winter 2024 **Participant**, IDEAL Pedagogy Learning Community, Stanford's Center for Teaching and Learning.
- Spring 2023 **Teaching Assistant**, Introduction to Observational Astrophysics, Stanford University.
- Fall 2022 **Teaching Assistant**, Classical Mechanics Lab, Stanford University.
- Fall 2022 **Practicum Student**, Teaching of Physics Seminar/Practicum, Stanford University.

PROFESSIONAL SERVICE

- 2021-present **DES Shear Analysis Team Co-convenor**
Co-organizer (with Masaya Yamamoto) of ~10-person analysis team (AT) weekly telecons, weekly AT updates for the larger collaboration and AT parallel sessions during twice yearly collaboration meetings.
- 2024 **Rubin Community Workshop at SLAC**
Event volunteer
Conference for Undergraduate Women in Physics (CUWiP) at Stanford & SLAC
Event volunteer
- 2023 **DES Y6KP Workshop at Princeton**
Science organizing committee, session facilitator
DESC Collaboration Meeting at SLAC
Local organizing committee, co-lead of social activities subcommittee
- AY 2018-19 **Columbia University Committee on Science Instruction**
School of General Studies student representative
- 2018 **CUWiP at Barnard College, Columbia University and City College of New York**
Host institution proposal committee member and event volunteer

BROADER IMPACT

- 2023-present **KIPAC Public Stargazing**
Science communicator and 0.7m-class telescope operator for ~twice quarterly public outreach stargazing events, usually serving 50-150+ attendees.

- 2020-present **Stanford Physics, Identity and Equity Program**
Volunteer in yearly student-led 3-day workshop (plus extended one-on-one mentoring) to help undergraduate students from underrepresented backgrounds plan for and apply to graduate programs in physics and related fields.
Mentored four students through the graduate school application process, including statement revisions and check-ins on application progress. All four students had successful applications and matriculated at graduate physics programs.
- 2021, 2023 **Stanford Physics “Respect is Part of Research” Program**
Conversation facilitator in yearly graduate student orientation program where incoming students discuss in small groups how to encourage respectful research group dynamics and navigate potential identity-based conflicts or harmful situations.
- AY 2022-23 **Letters to a Pre-Scientist**
Volunteer in year-long one-on-one snail mail pen pal program connecting STEM professionals with middle/high school students, often from underrepresented backgrounds. The program seeks to demystify STEM career pathways, encourage students’ curiosity in STEM fields and broaden their awareness of “who can be a scientist.”
- AY 2018-19 **Barnard-Columbia Math Mentors**
Volunteer one-on-one math tutor for 6th graders at local public middle school.
- 2016-2020 **Columbia Spectra: A Society for Diversity and Inclusion in Physics**
Mentor to three underclassmen in physics and related majors.

PRESS COVERAGE & OUTREACH

- 2024 Rubin Observatory outreach video: [Instagram](#) / [YouTube](#), 8 Oct 2024.
[Interview with Tri-Valley Stargazers](#), Apr 2024.
- 2023 [Rubin Observatory press release](#) / [Space.com](#) article, 13 Oct 2023.
[VOA News](#) video feature, 17 Jan 2023.
- 2022 [Symmetry Magazine](#) article, 22 Nov 2022.
[InMenlo](#) news article, 30 Sep 2022.

NON-ACADEMIC EXPERIENCE

- 2012-2016 **US Air Force**, Pashto Cryptologic Language Analyst