Qi Feng

2025 August

Department of Physics & Astronomy
University of Utah
270 S 1400 E
Salt Lake City, UT 84112 USA

Email: qi.feng@utah.edu
Phone: +1(332)999-4031
Office: LSSB W3245

Education

2015 • Ph.D. Physics, Purdue University.
2009 • B.S. Physics, University of Science & Technology of China.

Experience

2024– • Assistant Professor, Department of Physics & Astronomy, University of Utah

2022–2023 • Astrophysicist, Center for Astrophysics | Harvard & Smithsonian

2017–2022 • Postdoctoral Research Scientist at Nevis Laboratories / Department of Physics, Columbia University (2017–2019) / Department of Physics & Astronomy, Barnard College (2019–2022).
Supervisors: Prof. Reshmi Mukherjee, Prof. Brian Humensky

2015–2017 • Postdoctoral Research Fellow at the Department of Physics, McGill University.
Supervisor: Prof. David Hanna

Grants & Proposals

2025 • NASA, Fermi Cycle 18, SEARCHING FOR ABSORPTION FEATURES IN BRIGHT TEV GAMMA-RAY BLAZARS
Science PI Filbert, Budget PI Feng; Selected; $79,960, 2025 – 2026.

• NASA, NuSTAR Cycle 11 (observing proposal) SEARCHING FOR NEUTRINO-EMITTING BLAZARS IN HARD X-RAY BAND
PI Feng; Selected; $74,515 (only available if observations are triggered), 2025 – 2026.

• NASA, IXPE Cycle 2 (observing proposal) SEARCHING FOR NEUTRINO-EMITTING BLAZARS WITH X-RAY POLARIZATION MEASUREMENTS
PI Feng; Selected; $89,995 (only available if observations are triggered), 2025 – 2026.

2024 • National Science Foundation, University of Utah Particle Astrophysics Research Group (VERITAS, HAWC, CTA, SWGO)
PI Kieda, Co-PIs Lebohec, Springer, Feng; Awarded $1,100,000; 2024 – 2027.

• NASA, NuSTAR Cycle 10 (observing proposal) SEARCHING FOR NEUTRINO-EMITTING BLAZARS IN HARD X-RAY BAND
PI Feng; Awarded $70,326 (only available if observations are triggered), 2025 – 2026.

• NASA, NuSTAR Cycle 10 (observing proposal) NUSTAR OBSERVATIONS OF 1LHAASO J1219+2915/NGC 4278
PI Feng; Awarded $67,052, 2025 – 2026.

Teaching

2025 Fall • Observational Astronomy (ASTR/PHYS 4060), University of Utah.
2025 Spring • The Solar System (ASTR/PHYS 1050), University of Utah.
2024 Fall • Observational Astronomy (ASTR/PHYS 4060), University of Utah.

Students Mentored

Graduate Students:

Michael Martin (2025-present, University of Utah), on cosmic-ray composition (VERITAS/CTAO)
Simon Filbert (2024-present, University of Utah), on multi-messenger follow-up of blazars
Sneha Singh (2025 Spring, University of Utah), on ultraheavy dark matter (VERITAS)
Benjamin Derieg (2024 Fall, University of Utah), introductory research rotation
Rumman Neshat (2024 Summer/Fall, University of Utah), on gamma-ray blazars (Fermi)

Undergraduate Students:

Rachel Freeman (2025 Summer REU, University of Florida), on ultraheavy dark matter (VERITAS)
Kennedie Wilding (2024 Fall, University of Utah), on active galactic nuclei (Swift)
Eleanor Young (2024 Fall, University of Utah), on active galactic nuclei (NuSTAR)
Chloe Dufeu (2024 Summer REU, Bard College), on Seyfert galaxies (NuSTAR)
Dylan Mendoza (2024 Summer REU, University of Northern Colorado), on radio galaxies (NuSTAR)

Students Co-mentored

Graduate Students:

Colin Adams (2018-present, Columbia University), on gamma-ray blazars, axion-like particles, and pSCT instrumentation (VERITAS/CTAO)
Deivid Ribeiro (2017-2021, Columbia University), on transients and pSCT instrumentation (VERITAS/CTAO)
Ari Brill (2017-2021, Columbia University), on gamma-ray blazars (VERITAS/CTAO)
Andriy Petrashyk (2017-2019, Columbia University), on pSCT instrumentation (VERITAS/CTAO)
Tony Lin (2016-2017, McGill University), on machine learning (VERITAS)

Undergraduate Students:

Leela Chari (2022 Summer, Barnard College), on gamma-ray blazars (VERITAS)
Daniela Hikari Yano (2020-2022, Barnard College), on gamma-ray blazars (VERITAS)
Gwendolyn LaPlante (2019-2020, Barnard College), on gamma-ray blazars (Fermi)
Isabella Guilherme (2020 Summer, Barnard College), on gamma-ray blazars (Fermi)
Kathryn (Katie) Brady (2019 Summer, Barnard College), on analysis software (VERITAS)
Pazit Rabinowitz (2019 Summer, Barnard College), on transients (SLSN) (Fermi/VERITAS)
Meg Houck (2018 Summer REU, Davidson College), on gamma-ray blazars (VERITAS)
Emily Harris (2018 Summer REU, Univ. of Pittsburgh), on Galactic SNR (VERITAS)

Academic Services

• Reviewer for National Science Foundation (2025).
• Reviewer on multiple NASA panels (2018, 2019, 2022, 2024, 2025).
• Organizer of the special session on microquasars at the 22nd AAS HEAD Meeting in 2025.
• Member (2024) and co-chair (2025) of the Speakers and Publications Office (SAPO) of the CTAO Consortium.
• The VERITAS Collaboration Extragalactic Science Working Group co-chair (2024-), TAC co-chair (2023-2024), Science Board Future Science Subcommittee chair (2023-2024).
• Co-chair of the CTAO-US Software Working Group (2024-).
• Serivce at the Department of Physics and Astronomy at the University of Utah: Member of the Graduate Admission Coordination Committee (2024-2025), Belonging Committee (2024-2026), and SURF/REU Committee (2024-2026); chair of the Multi-messenger Astro-particle Physics Committee (2025-2026); organizer of the summer skills series for undergraduate students (2024-2025).
• Reviewer for the Undergraduate Research Opportunity Program (UROP) at the University of Utah (2025).
• Referee for *ApJ*, *MNRAS*, *A&A*, *PRL*, *PRD*, *Galaxies*, *JHEAP*, *RMxAA*, *CPC*, *RDTM*.
• Convener for the gamma-ray sessions for TeVPA 2021.

Publications

Selected journal articles

(Authors of VERITAS and CTAO publications are listed alphabetically)

2025
• *Constraints on axionlike particles from VERITAS observations of a flaring radio galaxy in the Perseus cluster*, Adams, C. B., et al., the VERITAS Collaboration, 2025, submitted to PRD.
• *Galactic transient sources with the Cherenkov Telescope Array Observatory*, Abe, K., et al., the CTAO Consortium, 2025, MNRAS, 540, 205A.
• *VERITAS and multiwavelength observations of the Blazar B3 2247+381 in response to an IceCube neutrino alert*, Acharyya, A., et al., the VERITAS and IceCube Collaborations, 2025, ApJ, 982, 80A.
2024
• *Broadband multi-wavelength properties of M87 during the 2018 EHT campaign including a very high energy flaring episode*, Algaba, J. C., et al. 2024, A&A, 692, 140A.
• *An Angular Diameter Measurement of β UMa via Stellar Intensity Interferometry with the VERITAS Observatory*, Acharyya, A., Aufdenberg, J. P., Bangale, P., et al. 2024, ApJ, 966, 28A.
• *Dark matter line searches with the Cherenkov Telescope Array*, Abe, S., Abhir, J., Abhishek, A., et al. 2024, JCAP, 2024, 047.
• *A multi-wavelength study to decipher the 2017 flare of the blazar OJ 287*, Acharyya, A., Adams, C. B., Archer, A., et al. 2024, ApJ, 973, 134.
• *A Multiwavelength Investigation of PSR J2229+6114 and its Pulsar Wind Nebula in the Radio, X-Ray, and Gamma-Ray Bands*, Pope, I., Mori, K., Abdelmaguid, M., et al. 2024, ApJ, 960, 75.
2023
• *Multiwavelength Observations of the Blazar PKS 0735+178 Contemporaneous with the IceCube Neutrino Candidate IceCube-211208A*, The VERITAS and H.E.S.S. Collaborations, et al. 2023, ApJ 954, 70.
• *VERITAS and Fermi-LAT Constraints on the Gamma-Ray Emission from Superluminous Supernovae SN2015bn and SN2017egm*, Acharyya, A., et al. 2023, ApJ 945, 30A.
2022
• *Multiwavelength Observations of the Blazar VER J0521+211 during an elevated TeV gamma-ray state*, The VERITAS and MAGIC Collaborations, 2022, ApJ, 932, 129.
• *Variability and Spectral Characteristics of Three Flaring Gamma-Ray Quasars Observed by VERITAS and Fermi-LAT*, Adams, C. B., et al. 2022, ApJ 924, 95.
• *Design and Performance of the Prototype Schwarzschild-Couder Telescope Camera*, the CTAO pSCT project, 2022, Journal of Astronomical Telescopes, Instruments, and Systems, 8, 014007.
2020

• *A decade of multi-wavelength observations of the TeV blazar 1ES 1215+303: Extreme shift of the synchrotron peak frequency and long-term optical-gamma-ray flux increase*, The *Fermi* and VERITAS Collaborations, 2020, ApJ, 891, 2.
• *Detection of the Crab Nebula with the 9.7 m Prototype Schwarzschild-Couder Telescope*, Adams, C.B., et al. 2020, arXiv:2012.08448.
• *Multiwavelength Observations of 2HWC J1928+177: Dark Accelerator or New TeV Gamma-Ray Binary?*, Mori, K., An, H., Feng, Q., et al. 2020, ApJ, 897, 129.
• *The Great Markarian 421 Flare of February 2010: Multiwavelength variability and correlation studies*, the VERITAS collaboration and MWL partners, 2020, ApJ 890, 97.
2019 • *Measurement of the extragalactic background light spectral energy distribution with VERITAS*, VERITAS collaboration, Abeysekara, A. U., Archer, A., et al. 2019, ApJ, 885, 150
2018 • *MWL observations of the blazar BL Lacertae: a new fast TeV gamma-ray flare*, Abeysekara, A. U., et al. 2018, ApJ 856, 95.
2017 • *A search for spectral hysteresis and energy-dependent time lags from X-ray and TeV gamma-ray observations of Mrk 421*, Abeysekara, A. U., et al. 2017, ApJ, 834, 2
2016 • *Multi-wavelength Study of Quiescent States of Mrk 421 with Unprecedented Hard X-ray Coverage Provided by NuSTAR in 2013*, Baloković, et al. 2016, ApJ, 819, 156
2013 • *Rapid TeV Gamma-Ray Flaring of BL Lacertae*, Arlen, T., et al. 2013, ApJ, 762, 92
2011 • *Multiwavelength Observations of the Previously Unidentified Blazar RX J0648.7+1516*, Aliu, E., Aune, T., Beilicke, M., et al. 2011, ApJ, 742, 127
• *Multiwavelength Observations of the Radio Galaxy NGC 1275 during a flare*, The VERITAS Collaboration and MWL partners, in prep.
• 80 co-signed publications within the VERITAS Collaboration and the CTAO Consortium (*link to ADS*)

Conference Proceedings

2022 • *Snowmass2021 Cosmic Frontier White Paper: Primordial Black Hole Dark Matter*, Bird, S., Albert, A., Dawson, W., et al. 2022, arXiv:2203.08967
2021 • *Exploring the High-Energy Gamma-Ray Spectra of TeV Blazars*, Feng, Q., et al., for the VERITAS Collaboration, 2021, ICRC, 37, 802 PoS(ICRC2021)802
2020 • *Verification of the optical system of the 9.7-m prototype Schwarzschild-Couder Telescope*, Adams, C., et al., for the CTA SCT Project, Proc. SPIE 11488, Optical System Alignment, Tolerancing, and Verification XIII, 1148805 (20 August 2020); doi.org/10.1117/12.2568134
2019 • *Prototype Schwarzschild-Couder Telescope for the Cherenkov Telescope Array: Commissioning Status of the Optical System*, Feng, Q., et al., for the CTA SCT Project, 2019, ICRC, 36, 672 PoS(ICRC2019)672
2017 • *Multiwavelength Observations of the Blazar BL Lacertae: a new fast TeV gamma-ray flare*, Feng, Q., for the VERITAS Collaboration, Jorstad, S. G., et al. 2017, arXiv:1708.06386
• *A citizen-science approach to muon events in imaging atmospheric Cherenkov telescope data: the Muon Hunter* Feng, Q., for the VERITAS Collaboration, & Jarvis, J. 2017, arXiv:1708.06393
• *The analysis of VERITAS muon images using convolutional neural networks*, Feng, Qi, & Lin, T. Y., for the VERITAS Collaboration, 2017, Astroinformatics, 325, 173

Conference presentations

2025 • *Probing Ultraheavy Dark Matter with VERITAS*
Feng, Q., for the VERITAS Collaboration, 22nd Meeting of the High Energy Astrophysics Division of the AAS (HEAD 22), October 12th - 16th, 2025, St. Louis, MO.
• *Future Perspective of Microquasar Observations with CTAO*
Feng, Q., for the CTAO Consortium, 22nd Meeting of the High Energy Astrophysics Division of the AAS (HEAD 22), October 12th - 16th, 2025, St. Louis, MO.
2024 • *X-ray and Gamma-ray Follow-up Observations of IceCube Astrophysical Neutrino Alerts*

Feng, Q., for the VERITAS Collaboration, The Eleventh International Fermi Symposium, September 9-13, 2024, College Park, MD.

2023 • *TeV Gamma-Ray Variability in Blazars & more*

Feng, Q., First CDY Workshop on Black Hole Flares: Connecting Theory to Observations November 13th - 15th, 2023, Flatiron Institute, New York, USA

• *X-ray and Gamma-ray Follow-ups of IceCube Neutrino Alerts: The Case of PKS 0735+178*

Feng, Q., for the VERITAS and H.E.S.S. Collaborations, 20th Meeting of the High Energy Astrophysics Division of the AAS (HEAD 20), March 26th - 30th, 2023, Waikōloa, Hawai'i.

• *CTA and IceCube: the prospects of multi-messenger astrophysics with next-generation gamma-ray and neutrino observatories*

Feng, Q., for the CTA Consortium, Snowmass P5 (Particle Physics Project Prioritization Panel) Town Hall at Fermilab and Argonne National Labs, March 21st - 24th, 2023, Batavia/Lemont, IL.

2022 • *The Cherenkov Telescope Array (CTA): Prospects for Fundamental Physics and Cosmology with Very-High-Energy Gamma Rays*

Feng, Q., for the CTA Consortium, Seattle Snowmass Summer Meeting 2022 (Snowmass 2022), July 17th – 26th, 2022, Seattle, WA.

2021 • *Exploring the High-Energy Gamma-Ray Spectra of TeV Blazars*

Feng, Q., for the VERITAS Collaboration, 37th International Cosmic Ray Conference (ICRC 2021), July 12th – 23rd, 2021 Online – Berlin, Germany

• *Variability and Spectral Cutoff of Bright TeV Gamma-Ray Blazars*

Feng, Q., for the VERITAS Collaboration, 43rd COSPAR Scientific Assembly, 28 January - 4 February 2021, Sydney, Australia, and online.

2020 • *Verification of the optical system of the 9.7-m prototype Schwarzschild-Couder Telescope*

Feng, Q., for the CTA SCT Project, SPIE Optical Engineering + Applications, 24 August - 4 September 2020, online only.

2019 • *CTLearn: Deep Learning for Gamma-ray Astronomy*

Feng, Q., Brill, A., Humensky, Kim, B., Mienerd, T., Mukherjee, R., Nieto, D., and Sevilla, J., Data Science and Machine Learning Workshop, The 17th Biennial International Conference on Accelerator and Large Experimental Physics Control Systems, Oct 6, 2019, New York, NY.

• *Prototype Schwarzschild-Couder Telescope for the Cherenkov Telescope Array: Commissioning Status of the Optical Alignment System*

Feng, Q., Brill, A., Humensky, T. B., Kaaret, P., Kieda, D., Kim, B., Mukherjee, R., Petrashyk, A., Ribeiro, D., Shang, R., Sternberger, R., Stevenson, B., Vassiliev, V. V., Wilcox, P. for the CTA pSCT project, 36th International Cosmic Ray Conference, Jul 24 - Aug 1, 2019, Madison, WI.

• *Gotta keep an eye on you – those flares we caught and wanted to catch with VERITAS*

Feng, Q., The fifth Fermi-VERITAS-HAWC Workshop, May 16-17, 2019, Houghton, MI.

• *Cosmic Accelerators Through the Eyes of Ground-Based Gamma-Ray Telescopes*

Feng, Q., LHAASO Scientific Observation and Multi-messenger Astronomy Workshop, Apr 24-28, 2019, Chengdu/Daocheng, China.

2018 • *Very-High-Energy Emission from Extragalactic Cosmic Accelerators - Highlights from recent VERITAS AGN Observations*

Feng, Q., for the VERITAS Collaboration, Eighth International Fermi Symposium, Oct 14-19, 2018, Baltimore, MD.

• *A search for primordial black hole evaporation events with the VERITAS experiment*

Feng, Q., Zitzer, B, for the VERITAS Collaboration, The 30th Rencontres de Blois, June 03-08, 2018, Blois, France.

2017 • *MWL Observations of the Blazar BL Lacertae: a new fast TeV gamma-ray flare*

Feng, Q., for the VERITAS Collaboration, Jorstad, S. G., et al., 35th International Cosmic Ray Conference, 12-20 July, 2017, Busan, Korea.

• *A citizen-science approach to muon events in VHE data: the Muon Hunter*

Feng, Q., for the VERITAS Collaboration, and Jarvis, J., 35th International Cosmic Ray Conference, 12-20 July, 2017, Busan, Korea.

2016 • *The analysis of VERITAS muon images using convolutional neural networks*
Feng, Q., Lin, Tony T. Y., for the VERITAS Collaboration, IAU Symposium 325 on Astroinformatics, Oct 20-24, 2016, Sorrento, Italy.
• *Recent Highlights from VERITAS*
Feng, Q., for the VERITAS Collaboration, 11th SciNeGHE workshop, Oct 18-21, 2016, Pisa, Italy.

2014 • *Simultaneous X-ray and gamma-ray observations of Mrk 421 during a strong flaring episode*
Feng, Q., & Cui, W., HEAD 2014, Aug 17-21, 2014, Chicago, USA.

2011 • *Highlights from the VERITAS Blazar Observation Program*
Feng, Q., Cui, W., & the VERITAS Collaboration, AAS 222, Jun 2-6, 2013, Indianapolis, USA.
• *Rapid TeV Gamma-ray Variability of BL Lacertae*
Feng, Q., HEAD 2011, Sep 7-10, 2011, Newport, USA.

Other talks

2025 • *Searching for elusive messengers with ground-based gamma-ray telescopes*, Seminars, 2025 Sep 24, Weber State University.
• *Multi-messenger astronomy with photons and neutrinos*, Lecture at the Astro Summer Camp, 2025 Jul 9, University of Utah.

2024 • *Are black holes black?*, Lecture at the Astro Summer Camp, 2024 Jun 30, University of Utah.
• *Active Galactic Nuclei & Ground-Based Gamma-Ray Astronomy*, Lectures at the Fermi Summer School, 2024 May 28 – Jun 7, University of Delaware.
• *Hidden or not hidden? Searching for astrophysical neutrino counterparts with VERITAS, Seminars, 2024 Apr 9, Center for Astrophysics, Harvard University | Smithsonian Astrophysical Observatory.*

2020 • *The making of a novel telescope, Talk at the 2020 AstroFest, 2020 Sep 18, Columbia University.*

2019 • *Status and Recent Results of Very-High-Energy Gamma-ray Astrophysics with VERITAS and CTA, Seminars, 2019 Aug 26, Kansas State University.*

2018 • *Extragalactic Cosmic Accelerators Through the Eyes of Ground-Based Gamma-Ray Telescopes, Seminars talk, 2018 Dec 24, Institute of High Energy Physics, Chinese Academy of Sciences.*
• *Extragalactic Cosmic Accelerators Through the Eyes of Ground-Based Gamma-Ray Telescopes, Seminars talk, 2018 Dec 21, Kavli Institute for Astronomy and Astrophysics, Peking University.*
• *Extragalactic Cosmic Accelerators Through the Eyes of Ground-Based Gamma-Ray Telescopes, Seminars talk, 2018 Dec 19, Tsinghua Center for Astrophysics, Tsinghua University.*
• *Variability of Very-High-Energy Emission from Extragalactic Cosmic Accelerators, Talk at the 2018 AstroFest, 2018 Sep 7, Columbia University.*
• *Introduction to Very-High-Energy Astrophysics, Talk to incoming 2018 Barnard College undergraduate students in the Science Pathways Scholars Program, 2018 Jul 30, Barnard College.*

2017 • *Machine Learning and Crowdsourcing Made Easy for Physicists, Public lecture at the Physics Matters Lecture Series, 2017 May 4, McGill University.*