

Ngan (Steve) H. Nguyen

Curriculum Vitae

Homer L. Dodge Department of Physics & Astronomy, the University of Oklahoma
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Education

Johns Hopkins University Baltimore, MD
Ph.D., Physics August 2026
M.A., Physics August 2023
Advisors: David $\vec{E}$. Kaplan and Surjeet Rajendran

Harvey Mudd College (and Pitzer College) Claremont, CA
B.A., Joint Math and Physics May 2021
Advisor: Brian Shuve
Thesis: *Dark Matter Through the Axion Portal: Axion-Like Particles as Mediators to the Hidden Sector*

Affiliations

University of Oklahoma Norman, OK
Postdoctoral research associate September 2026

Sloan Digital Sky Survey Collaboration International (remote)
Member researcher February 2026 – Current

VERITAS Collaboration International (remote)
Research associate October 2024 – Current

BaBar Collaboration International (remote)
Research associate January 2019 – August 2022

Awards and Summer Schools

- N3AS-sponsored Summer School on Multi-Messenger Astrophysics Summer 2026
University of California Santa Cruz, CA
- Summer School on Quantum Science and Precision Measurement Summer 2025
Johns Hopkins University, MD
- TASI 2024 - “The Frontiers of Particle Theory” Summer 2024
University of Colorado Boulder, CO

- Harvey Mudd College Physics Summer Research Grant Summer 2020
NASA JPL's project on "Testing Superdense Teleportation: Relativistic phase of time-bin qubits with polarization as a reference"
- J. Arthur Campbell Endowed Grant Summer 2019
"A Search for Axionlike Particles at BaBar" project at Harvey Mudd College
- Pitzer College Dean of Faculty Office Grant for Research Summer 2018
"Cultural Dissemination: A Modified Model with Social Influence" project at W.M. Keck Science Department, Claremont Colleges
- Full-ride scholarship from Pitzer College 2017 - 2021
- Third Award in Mechanical Engineering Category May 2016
"Diverse Terrain Wheelchair" project at the 2016 Intel International Science and Engineering Fair (Intel ISEF), Phoenix, AZ

Talks and Invited Seminars*

- From Bursts to Baths: Dark-Sector Signatures Across the Mass Scale***
Stony Brook University, NY October 2025
- Ultrashort Gamma-Ray Bursts Search in VERITAS Data: Simulations**
28th International Conference on Particle Physics & Cosmology Carnegie Mellon University, PA
October 2025
- Electroweak Axion Portal to Dark Matter**
TeV Particle Astrophysics International Conference University of Chicago, IL
August 2024
- Indirect Searches for Ultraheavy Dark Matter in the Time Domain**
DPS - Phenomenology Symposium University of Pittsburgh, PA
May 2024
- TASI 2024 - "The Frontiers of Particle Theory"* University of Colorado at Boulder, CO
June 2024
- "Bridging Multi-Messenger Astronomy and SETI: The Deep Ends of the Haystack" Workshop* Ohio State University, OH
June 2025
- Spectra of Axions Emitted from Main Sequence Stars**
Rencontres du Vietnam - "Window on the Universe" Conference ICISE, Vietnam
August 2023
- Phenomenology Symposium* University of Pittsburgh, PA
May 2023
- Search for an Axionlike Particle in B Meson Decays**
International Workshop on e^+e^- Collisions from Phi to Psi Fudan University, China
August 2022

Cultural Dissemination: A Modified Model with Social Influence

Southern California Conference for Undergraduate Research

Pasadena City College, CA
November 2018

Teaching and Leadership Activities

Johns Hopkins University

Teaching assistant (lecturer and grader)

Baltimore, MD
August 2021 – August 2026

- Graduate Quantum Mechanics I and II, Spacetime and Quanta, General Physics I and II, General Physics Laboratory I and II.

Regeneron International Science and Engineering Fair (ISEF)

Grand Award Judge

Columbus, OH
May 2025

- Interviewed and judged finalists in the Physics and Astronomy Category at the largest high school science fair in the world.

Science for the Future Fair

Founder & chief manager

Ho Chi Minh City, Vietnam
May 2019 – December 2020

- Organized numerous research-training workshops and science-related symposiums for high school and college students in Vietnam.
- Admitted 32 research projects of 84 students across Vietnam for the fair in December 2020.

In Preparation Manuscripts

Most updated list can also be found at [Inspirehep](#) or [Google Scholar](#).

[1] VERITAS, Q. Feng, M. Lundy, X. Luo, N. H. Nguyen and E. H. Tanin, *Ultrashort Gamma-Ray Bursts Search in VERITAS Data: Simulations, In preparation* (2025)

Preprints[†] and Publications

[2] G. A. Pallathadka, Y. Zenati, N. L. Zakamska, N. H. Nguyen and A. L. Piro, *Presaging Doppler beaming discoveries of double white dwarfs during the Rubin LSST era*, [[arXiv:2602.13137](#)] [†]

[3] A. Banerjee, N. H. Nguyen and E. H. Tanin, *Thermal damping of mass-modulating scalars*, *Phys. Rev. D* **114** (2026) 015032 [[arXiv:2512.05188](#)]

[4] A. Banerjee, N. H. Nguyen and E. H. Tanin, *Thermal Damping of Neutrino-Coupled Scalar Dark Matter*, [[arXiv:2509.25308](#)] [†]

[5] D. E. Kaplan, X. Luo, N. H. Nguyen, S. Rajendran and E. H. Tanin, *Indirect searches for ultraheavy dark matter in the time domain*, *Phys. Rev. D* **111** (Jan 2025) 023041 [[arXiv:2407.06262](#)]

- [6] S. Allen, A. Blackburn, O. Cardenas, Z. Messenger, N. H. Nguyen and B. Shuve, *Electroweak axion portal to dark matter*, *Phys. Rev. D* **110** (2024) 095010 [[arXiv:2405.02403](#)]
- [7] N. H. Nguyen, E. H. Tanin and M. Kamionkowski, *Spectra of axions emitted from main sequence stars*, *JCAP* **11** (2023) 091 [[arXiv:2307.11216](#)]
- [8] BABAR, J. P. Lees et al., *Search for an Axionlike Particle in B Meson Decays*, *Phys. Rev. Lett.* **128** (2022) 131802 [[arXiv:2111.01800](#)]
- [9] N. Nguyen, H. Chen, B. Jin, W. Quinn, C. Tyler and A. Landsberg, *Cultural dissemination: An agent-based model with social influence*, *Journal of Artificial Societies and Social Simulation* **24** (2021) 5