
Education

- Aug 2022 – **Ph.D., Physics and Space Science**, *University of New Hampshire*, Durham, NH
May 2027
Department of Physics & Astronomy
Advisor: Harlan Spence
- May 2021 **B.A., Astronomy and Astrophysics**, *University of Colorado Boulder*, Boulder, CO
Department of Astrophysical & Planetary Science
Minor in Space

Publications

In Preparation

Catherine E. Regan, Silvia Ferro, Austin Matheus Smith, **Alvin J. G. Angeles**, Jasper S. Halekas. “Solar Wind Classifications at Mars using Machine Learning Techniques.” *Solar Physics*.

Published

- 2025 **Alvin J. G. Angeles**, Harlan E. Spence, Charles W. Smith, Bernard J. Vasquez, Ian J. Cohen, Kevin J. Genestreti, Ruth Skoug, Savvas Raptis, Christine Gabrielse, Daniel J. Gershman, David Fischer, Christopher T. Russell, James L. Burch, Roy B. Torbert, Werner Magnes. “The Correlation Function for Magnetic Field Fluctuations at Ion Dissipation Scales in the Solar Wind.” *Journal of Geophysical Research: Space Physics*. [doi:10.1029/2025JA034569](https://doi.org/10.1029/2025JA034569)
- 2025 Sarah A. Kovac, Amir Caspi, Daniel B. Seaton, *et al.* (incl. **Alvin J. G. Angeles**). “Citizen CATE 2024: Extending Totality During the 8 April 2024 Total Solar Eclipse with a Distributed Network of Community Participants.” *Solar Physics*. [doi:10.1007/s11207-025-02588-9](https://doi.org/10.1007/s11207-025-02588-9)

Professional Experience

- Aug 2022 – **Graduate Research Assistant**, *University of New Hampshire, Space Science Center*, Durham, NH
Present
 - Conducting research focused on characterizing solar wind turbulence at small scales and the dynamics that drive them.
 - Performing data analysis on large datasets from the NASA Magnetospheric Multiscale (MMS) Mission.
- Aug 2019 – **Solar Physics Student Research Assistant**, *Colorado Space Grant Consortium*, Boulder, CO
Aug 2021
 - Science Team co-lead for the Student Thermal Energetic Activity Module (STEAM) student payload on the SouthWest Research Institute NASA Small Explorer PUNCH spacecraft mission.
 - Conducted background research, preliminary analysis, and calculations for possible solar flares and background radiation the mission would encounter.

- Jan 2020 – May 2020 **Undergraduate Research Assistant**, *ASTR 3400: Research Methods in Astronomy*, Boulder, CO
 ○ Analyzed data for the Research and Education Collaborative Occultation Network in its search for Trans-Neptunian Objects.
- Feb 2019 – May 2019 **Student Demosat Team Member**, *Colorado Space Grant Consortium*, Boulder, CO
 ○ Proposed, designed, built, tested, and flew a balloon cubesat payload; analyzed data post-flight in mission summary report.

Scientific Service & Professional Development

- Jan 2026 – Present **Student Advisory Committee Chair, Space Physics and Aeronomy (SPA)**, *American Geophysical Union*, Washington, D.C.
- Mar 2025 – Present **Heliophysics Lead Ambassador, 2025–2027 Cohort**, *Science Explorer (SciX)*, Cambridge, MA
- Aug 2025 **NASA’s Living With a Star Heliophysics Summer School 2025**, *University Corporation for Atmospheric Research (UCAR)*, Boulder, CO
- Mar 2025 – Dec 2025 **Student Advisory Committee Co-Chair, Space Physics and Aeronomy (SPA)**, *American Geophysical Union*, Washington, D.C.
- Aug 2024 **NASA Review Panel Executive Secretary**, *NASA Headquarters, Heliophysics SMD*, Washington, D.C.
- Feb 2024 – Apr 2024 **Citizen CATE Next-Generation Experiment Team Member, Site 32**, *Southwest Research Institute*, Boulder, CO
- Oct 2020 – Feb 2022 **Science Museum Volunteer**, *Denver Museum of Nature and Science*, Denver, CO
- Sep 2018 – May 2020 **Space Minor Lead Ambassador**, *University of Colorado Boulder*, Boulder, CO

Invited Talks

- May 5, 2026 **NASA 5th Eddy Cross-Disciplinary Symposium (Lightning Talk)**, *UCAR*, Boulder, CO
 “Kinetic-Scale Solar Wind Turbulence at 1 AU: Structure, Anisotropy, and Energy Transfer”
- Oct 14, 2025 **Magnetospheric Multiscale Mission (MMS) Team Meeting**, *Southwest Research Institute*, San Antonio, TX
 “The Correlation Function for Magnetic Field Fluctuations at Ion Dissipation Scale in the Solar Wind”
- Nov 13, 2023 **EOS Space Science Seminar Series**, *University of New Hampshire, Institute of Earth, Oceans and Space*, Durham, NH
 “Investigating Magnetic Fluctuations at Dissipation Scales in the Solar Wind”

Workshop Oral Presentations

- Dec 10, 2023 **HelioSwarm Science Team Meeting 2023**, *University of New Hampshire*, Durham, NH
- Dec 3, 2020 **Southwest Research Institute PUNCH Winter Science Meeting**, *Colorado Space Grant Consortium*, Boulder, CO

Jun 3, 2020 **Southwest Research Institute PUNCH Summer Science Workshop**, *Colorado Space Grant Consortium*, Boulder, CO

Conference & Poster Presentations

- May 5, 2026 **NASA 5th Eddy Cross-Disciplinary Symposium**, *UCAR*, Boulder, CO
“Kinetic-Scale Solar Wind Turbulence at 1 AU: Structure, Anisotropy, and Energy Transfer”
- Dec 15, 2025 **AGU 2025 Annual Meeting**
“Characterizing Dissipation Scale Solar Wind Turbulence at 1 AU Using Correlation Functions”
Session: MultiScale Processes in Planetary, Space, and Astrophysics: Turbulence, Magnetic Reconnection, and Shocks II
- Aug 2025 **UCAR Heliophysics Summer School**, *UCAR*, Boulder, CO
“Investigating Anisotropies in Small-Scale Solar Wind Turbulence at 1 AU”
- Dec 11, 2024 **AGU 2024 Annual Meeting**
“Correlation Function Analysis for Magnetic Field Fluctuations at Dissipation Scales in the Pristine Solar Wind”
Session: Multiscale Dynamics in Magnetized Turbulence I
- Dec 12, 2023 **AGU 2023 Fall Meeting**
“Investigating the Behavior of Solar Wind Turbulence at the Electron Scale”
Session: Energy Transfer and Dissipation in Space Plasmas: Kinetic to Global Scales
- Dec 16, 2020 **AGU 2020 Fall Meeting**
“The Student Thermal Activity Module (STEAM) X-ray Spectrometer for Solar Flares and Active Regions”
Session: High Energy Solar Investigations Through Next-Generation Remote Sensing
- Dec 14, 2020 **NASA Student Project Internal Preliminary Design Review**, *Colorado Space Grant Consortium*, Boulder, CO
- Dec 3, 2020 **Southwest Research Institute PUNCH Winter Science Meeting**, *Colorado Space Grant Consortium*, Boulder, CO
- Aug 18, 2020 **American Astronomical Society 51st Solar Physics Division**, *Colorado Space Grant Consortium*, Boulder, CO
“The Student Thermal Activity Module (STEAM) X-ray Spectrometer for Solar Flares and Active Regions”

Teaching Experience

- Oct 2021 – May 2022 **Space Education Specialist**, *The Space Foundation*, Colorado Springs, CO
- Jun 2020 – May 2021 **Peer Mentor, CU Mentor Collective**, *University of Colorado Boulder, College of Arts and Sciences*, Boulder, CO
- Jan 2019 – May 2020 **Undergraduate Teaching Assistant**, *University of Colorado Boulder, Department of Aerospace Engineering Sciences*, Boulder, CO

Extracurricular Activities

- Oct 2024 – Present **Founding Member, UNH Run Club**, *University of New Hampshire*, Durham, NH

Sep 2024 – **Member, UNH Archery Club**, *University of New Hampshire*, Durham, NH
Present

Sep 2024 – **Member, UNH Eco-Reps**, *University of New Hampshire*, Durham, NH
Present

May 2019 – **Student Orientation Leader**, *University of Colorado Boulder*, *New Student &*
May 2021 *Family Programs*, Boulder, CO

Awards

Sep 2021 Space Grant Scholar — Colorado Space Grant Consortium

Languages & Skills

Languages English (native)

Computing Python, pySPEDAS, L^AT_EX, IDL, MATLAB