

Allyson C. Sheneman

Astrobiologist, Evolutionary Biologist, Planetary Scientist

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RESEARCH PROFILE

Astrobiologist studying the evolution of metabolic pathways and biosignatures across planetary environments. Currently working on evolution in subsurface microbial systems. I am passionate about life in extreme environments, evolving, and elsewhere in the universe.

EDUCATION & PROFESSIONAL PREPARATION

Ph.D. Student: Earth & Planetary Sciences	Northwestern University	9/26–present
Research Intern: Mars Exploration Program	NASA Headquarters	6/26–8/26
Master's: Biology (Applied Evolution), <i>magna cum laude</i> Thesis: <i>Rates of Protein Structural Evolution in Mammals</i>	Stony Brook University	8/24–12/25
Advanced Graduate Certificate: Science Communication Thesis: <i>Science Communication Philosophy & Podcast</i>	Stony Brook University	8/24–12/25
Bachelor's: Astronomy, <i>cum laude</i> Thesis: <i>Measuring attachment rate of predatory bacteria to prey using optical tweezers</i>	SUNY New Paltz	8/20–5/24
Bachelor's: Biology, <i>cum laude</i> Thesis: <i>Post-wildfire soil bacterial MAGs and metagenome analysis.</i>	SUNY New Paltz	8/20–5/24
Research Intern: Astrophysics & Planetary Science Thesis: <i>Assessing the accuracy of telluric corrections</i>	Cornell University	6/23–8/23

RESEARCH EXPERIENCE

Earth, Environmental & Planetary Sciences Department 9/2026 – Present

Ph.D. Researcher - Isotope Geobiology Lab at Northwestern University

P.I. Magdalena Osburn, Profs. Betül Kaçar, Bradley Stevenson

- Upcoming and ongoing work researching the evolution of lipid and metabolic pathways in interesting subsurface microbes with origins of life implications.

NASA Headquarters Mars Exploration Program 6/2026 – 8/2026

Research Intern - Mars Exploration Program and Data Services Program at NASA Headquarters

P.I. Laura Ratliff, Drs. Cerese Albers, Lindsay Hays

- Quantified scientific output and data usage across all NASA Mars missions and instruments.
- Identified priority landing sites for astrobiological relevance on Mars.

Ecology & Evolution Department 8/2024 – 1/2026

Master's Thesis Researcher - Patterns & Processes of Evolutionary Genomics Lab at Stony Brook University

P.I. Joshua Rest, Second Reader: Dr. Jeroen Smaers

- Identified fast- and slow-evolving protein structures by comparing rates of evolution across orthogroups.
- Applied phylogenetic rate analysis, comparative genomics pipelines to link evolutionary rates to function.
- Identified protein functional divergences rooted in evolution.

Alan Alda Center for Science Communication & NYC Parks Department 5/2025 – Present

Graduate Researcher - Aquatic Invasive Species & Climate Communication Lab at Stony Brook University

P.I. Christine Gilbert

- Conducted fieldwork in Brookville Park to inform community-driven invasive species communication.
- Interviewed, transcribed, and performed a content analysis.

Cornell University Center for Astrophysics and Planetary Science

6/2023 – 5/2024

Research Intern - Exoplanet Characterization Lab at Cornell University; Honors Thesis - SUNY New Paltz

Drs. Adam Langeveld, Laura Flagg, Jake Turner, P.I. Ray Jayawardhana; Profs. Amy Bartholomew, Britney Schmidt, Alex Hayes

- Developed, implemented statistical assessments for telluric corrections in visible O₂ and H₂O regions.
- Determined ideal observation airmass constraints when searching for potential biosignatures (O₂ and H₂O) in visible wavelengths of exoplanet spectra.
- AAS Chambliss Astronomy Achievement Award Recipient (2024).

Physics & Astronomy and Chemistry Departments

8/2022 – 10/2023

Undergraduate Researcher - Optical Micromanipulation Lab at SUNY New Paltz

P.I. Catherine Herne, Prof. Megan Ferguson

- Probed microbial predation by *B. bacteriovorus* with optical tweezers to quantify prey *E. coli* interactions.
- Determined Type IV pili attachment kinetics cause binding to occur over 15× faster than previous reports.
- Provided mechanistic insights into protein-mediated cell–cell interactions (single-cell resolution); implications for the evolution of microbial predation and early protein function.
- Co-authored conference paper published.

Biology Department

1/2023 – 5/2024

Undergraduate Researcher - Extremophiles and Wildfire Ecology Lab at SUNY New Paltz 1/2023 – 5/2024

P.I. Maureen Morrow, Prof. Eric Keeling

- Isolated soil bacteria in and out of wildfire regions to study extremophilic genes and bacterial diversity.
- Employed PCR, NanoDrop, Qubit, PowerSoil, Electrophoresis, 16S rRNA sequencing, and KBase.

Undergraduate Researcher - Phenology & Plant Ecophysiology Lab at SUNY New Paltz 3/2024 – 5/2024

P.I. Eric Keeling

- Developed data submission protocols for decades of data to provide to the National Phenology Network.

Physics & Astronomy Department

1/2023 – 5/2023

Undergraduate Researcher - Observational Astronomy Lab at SUNY New Paltz

P.I. Amy Bartholomew

- Observed and processed Martian and Venusian atmospheric spectra on a 14" Celestron (reflecting).

PUBLICATIONS

10. Allen, L., **Sheneman, A. C.**, & Morrow, M. A. (2026). "Post Wildfire Soil Bacterial MAGs and Metagenome Analysis." *Microbiology Resource Announcements*. DOI: 10.1128/mra.00444-26. **Peer-reviewed Journal Article**
9. **Sheneman, A. C.** (2026). "Quantifying the Scientific Impact of Mars Mission Data." **Internship Report**.
8. **Sheneman, A. C.** & Rest, J. S. (2025). "Rates of Protein Structural Evolution in Mammals." *Ecology and Evolution Department, Stony Brook University*. **Master's Thesis Paper**.
7. **Sheneman, A. C.**, Langeveld, A. B., & Bartholomew, A. (2024). "Assessing the Accuracy of Telluric Corrections." *SUNY Open Access Repository Honors Program Undergraduate Thesis*.
6. **Sheneman, A. C.** & Langeveld, A. B. (2024). "How significantly does Earth's atmosphere affect our ability to investigate the atmospheric spectra of exoplanets?" *Bulletin of the American Astronomical Society*, 56(2), 178.15. AAS Meeting #243, American Astronomical Society. Bibcode: 2024AAS...24317815S. **Conference Abstract**.
5. O'Connor, C.*, **Sheneman, A.***, Ferguson, M., & Herne, C. (2023). "Measuring attachment rate of predatory bacteria to prey using optical tweezers." *Optical Trapping and Optical Micromanipulation*. **Conference Paper**. DOI: 10.1117/12.2675569.

* These authors contributed equally to the work.

Science Communication and Creative Publications

4. **Sheneman, A. C.** (2026 anticipated). "To Find Life Elsewhere, We Must First Redefine It" Stony Brook Press. **Article**.
3. **Sheneman, A. C.** (2025). "Spring Rituals" *On the Temporal Ecology of Spring Ephemeral Flowers*. SBU Graduate Arts and Sciences Magazine. **Poem**.

2. **Sheneman, A. C.** (2025). "Fossils Aren't Bones" *SBU Graduate Arts and Sciences Magazine*. **Poem**.
1. **Sheneman, A.** (2025) "Flag Remnant." In *Storied Objects: A Material History of New Paltz, Hudson River Valley Heritage*. **Digital museum exhibit**.

AWARDS & HONORS

- **Chambliss Astronomy Achievement Award, American Astronomical Society (AAS)** 2024
 - National recognition for early-career outstanding research and presentation in astronomy
- **Highly Effective Biology Teacher: Formal Evaluation**, Flagler Palm Coast High School 2026
- **Highly Effective Biology Teacher: Informal Evaluation**, Flagler Palm Coast High School 2026
- **Graduate Staff Member of the Year**, Stony Brook University (Selected by Senior Leadership) 2025
- **Graduate Staff Member of the Year**, Stony Brook University (Selected by Resident Assistants) 2025
- The Lifelong Learner Award, Stony Brook University (Selected by Senior Leadership) 2025
- **Outstanding Graduate Award**, SUNY New Paltz 2024
- Honors Cords Awarded to Recognize Substantial Contributions: 2024
 - *Departments*: Biology, Honors, Student Engagement, Library, Residence Life, Admissions
 - *Clubs*: Society of Physics Students, Biology, Geology & Environmental Science, WISE
- Dean's List: Fall 2020, Spring 2022, Fall 2022, Spring 2023, Fall 2023, Spring 2024 2020 – 2024

FUNDING & GRANTS

- **\$3,000** Conference Travel Funding, Cornell University 2024
- **\$40,000 (total)** New New Yorker Scholarship, SUNY New Paltz 2020 – 2024
- **\$1,500** Academic Year Undergraduate Research Experience Grant, RSCA 2023
- **\$1,000** Student Travel Award – Conference Travel Funding, RSCA 2023
- **\$2,500** Honors Program Experiential Grant/Scholarship, The Honors Program 2023
- **\$1,500** Academic Year Undergraduate Research Experience Grant 2022
- **\$5,000 (total)** Disabled American Veterans Dependent Scholarship, DAVA 2020, 2021, 2025

SKILLS

- **Programming & Data Analysis**: Python, R, MATLAB, Bash, HPC (slurm)
 - Python: NumPy, SciPy, pandas, matplotlib, astropy, scikit-learn, emcee (MCMC)
 - R: ggplot2, geiger, phytools, ape, sequinr, phangorn, sf, raster, terra, ggmap, SIBER, MIXSIAR
- **Wet Lab Techniques**: PCR, CRISPR/Cas9, 16S sequencing, electrophoresis, NanoDrop, Qubit
- **Observational & Instrumentation**: Optical and radio telescope operation, CCD calibration, electronics
- **Bioinformatics & Genomics**: Sequence alignment (BLAST, MUSCLE), metagenomics (KBase), phylogenetic reconstruction, structural modeling.
- **Communication**: Science communication, Public speaking, Curriculum development and alignment.
- **Interpersonal & Professional**: Supervision, Mentorship, Cross-disciplinary and remote collaboration.
- **Languages**: English (Fluent), Spanish (Fluent), French (Working Proficiency), ASL (Elementary).

TALKS & POSTERS

Invited, Featured & Keynote Talks

20. "Evolution & Extraterrestrial Life" (2026) Astronomy Initiative Invited Speaker, Stuttgart Media University, Stuttgart, Germany - Virtual — **Talk**
19. "Evolution, Ecology, & Extraterrestrial Life" (2025) Ecology & Evolution Club Featured Speaker, Stony Brook University, Stony Brook, NY & Virtual — **Talk**
18. "The Universe in Endless Variety" (2022) **Convocation Student Keynote Address**, SUNY New Paltz, New Paltz, NY — **Keynote Speech** [Link]
17. "The Universe in Endless Variety" (2022) Distinguished Student Affairs Speaker, SUNY New Paltz, New Paltz, NY — **Talk**
16. "The Universe in Endless Variety" (2021) Distinguished Student Affairs Speaker, SUNY New Paltz, New Paltz, NY — **Talk**

Conference Talks

15. "Rates of Protein Structure Evolution" (2025) Ecology & Evolution Retreat, Stony Brook University, Port Jefferson, NY — **Lightning Talk**
14. "Spectral Contamination from Earth's Atmosphere in Exoplanet Atmospheres" (2024) Physics Senior Project Symposium, SUNY New Paltz, New Paltz, NY — **Talk**
13. "Spectral Contamination from Earth's Atmosphere in Exoplanet Atmospheres" (2024) Honors Thesis Symposium, SUNY New Paltz Honors Program, New Paltz, NY — **Talk**
12. "How significantly does Earth's atmosphere affect our ability to investigate the atmospheric spectra of exoplanets?" (2023) Summer Research Presentation, Cornell University, Ithaca, NY — **Talk**
11. "Measuring attachment rate of predatory bacteria to prey using optical tweezers." (2023) Frontiers in Optics + Laser Science Conference (FiO+LS), Tacoma, WA — **Talk**

Posters

10. "Spectral Contamination from Earth's Atmosphere in Exoplanet Atmospheres" (2025) Sagan Exoplanet Summer Workshop, California Institute of Technology, Pasadena, CA & Virtual — **Poster**
9. "How significantly does Earth's atmosphere affect our ability to investigate the atmospheric spectra of exoplanets?" (2024) American Astronomical Society (AAS), New Orleans, LA — **Poster** [Link]
8. "How significantly does Earth's atmosphere affect our ability to investigate the atmospheric spectra of exoplanets?" (2024) Astrobiology Graduate Conference (AbGradCon24), Cornell University, Ithaca, NY — **Poster** [Link]. doi:10.13140/RG.2.2.13155.16167
7. "The Effect of Wildfire on Soil Bacterial Diversity" (2024) Hudson Valley Life Sciences Symposium, SUNY New Paltz, New Paltz, NY — **Poster**
6. "The Effect of Wildfire on Soil Bacterial Diversity" (2024) Student Research Symposium, SUNY New Paltz, New Paltz, NY — **Poster**
5. "How significantly does Earth's atmosphere affect our ability to investigate the atmospheric spectra of exoplanets?" (2023) Summer Research Symposium, Cornell University, Ithaca, NY — **Poster**
4. "Measuring Time from Attachment of *B. bacteriovorus* to Prey" (2023) Student Research Symposium, SUNY New Paltz, New Paltz, NY — **Poster**

Science Communication & Outreach Talks

3. "Everyday Epiphanies: Sound Science" (2025) Science Communication Capstone Presentation on STEM Podcasts, Stony Brook University, Stony Brook, NY & Virtual — **Talk**
2. "Finding Aliens is Hard: A Crash Course in Biosignatures and Exoplanets" (2024) Science Communication Foundations Public Lectures, Stony Brook University, Stony Brook, NY — **Talk**
1. "Into the Wild: Tree Identification and Haiku Writing" (2024) Resident Assistant Conference, Stony Brook University, Stony Brook, NY — **Talk**

SCIENCE COMMUNICATION

Professional Science Communication (Paid)

John R. Kirk Planetarium, Planetarium Specialist & Educator

2021 – 2024

- Produced 50+ planetarium shows to 1,500+ audience members.
- Designed and delivered fulldome shows using Spitz A3P Starball, Stellarium, and Worldwide Telescope.
- Selected Fulldome Presentations:
 - ❖ * Cosmic Symphony: The Universe in Six Acts (Live with Improvised Music, 2024)
 - ❖ Stellar Evolution: The Birth, Life, and Death of Stars (2024)
 - ❖ * Meditation Under the Stars (2021–2024)
 - ❖ * Espectáculos del Planetario en Español (Spanish Shows, 2022–2023)
 - ❖ How Did We Get Here?: The Universe Backwards (2023)
 - ❖ * Indigenous Starlore: Black Lives Matter at School (2022)

❖ Completely original shows (sole writer for preparation, sole speaker and operator for presentation)

* First presenter to initiate a series that has since been continued

Southeast Regional Sea Turtles Network, Intern

2025 – 2026

- Created science communication and membership program materials for conservation efforts.

- Constructed the membership program using a CRM system for organization and distribution.

Women in Science & Engineering Honors at Stony Brook University, *Grad. Asst.* 2024 – 2025

- Led instructor teaching observations, survey program assessment, and efficacy data analysis.
- Assisted with admissions review, event planning, event facilitation, and volunteer management.

Editorial, Journalism & Media

Host: Science Radio and Podcast, *WFNP 88.7 The Edge and Digital Platforms* 2024 – Present

- Independently created, hosted, edited, produced, sound designed, published, and advertised.
- Hosted a new guest scientist weekly to explain their science in a fun and accessible manner.
- Reached thousands of people in a global audience across platforms, obtaining 5 stars on Spotify.
- All episodes can be found here: [\[Link\]](#)

Podcast, Guest 2024

- *Sparks in Action Episode #29: Should Humans Colonize Mars? Two Astronomers Talk About Our Cosmos* (with Raj Pandya and **Allyson Sheneman**) [\[Link\]](#)

Stony Brook Press (SBPress), *Science Article Writer* 2025 – 2026

- Wrote and published science articles such as "To Find Life Elsewhere, We Must First Redefine It"

Science Communication Society at Stony Brook University, *Writer, Member* 2024 – 2026

- Wrote and published educational and engaging science communication materials [\[Link\]](#)

Public Outreach, Education & Service

John R. Kirk Planetarium, *Planetarium Social Media Creator and Manager* 2022 – 2024

- Founded the social media for the John R. Kirk Planetarium to advertise planetarium shows.
- Curated social media content for shows, presenter introductions, and other outreach initiatives including Sidewalk Astronomy, "October Madness", Eclipse Information, and Indigenous Starlore.
- Produced and distributed physical advertisements (flyers, banners, cards) across campus.

Muriel & Jack Smolen Observatory, *Observatory Operator* 2021 – 2024

- Operated the Celestron 14" telescope and 8" Dobsonian telescopes during biweekly public nights.

Fuertes Observatory, *Observatory Operator & Museum Guide* 2023

- Operated the 12" equatorial refracting telescope and portable telescopes during weekly public nights.
- Provided facility and equipment tours of the historic museum components of the observatory.

Spacecraft Planetary Image Facility at Cornell University, *Outreach Educator* 2023

- Planned and led educational activities such as "The Scale of the Solar System" and "Making a Comet."
- Co-led Q&A sessions to engage students in scientific discussions.

Biology Club at SUNY New Paltz, *Executive Board Member* 2020 – 2024

- Participated in executive board meetings; Managed social media and physical advertisements.
- Organized annual trips (Boston Whale Watching, NYC Museum of Natural History, Central Park Zoo)

Honors Program Advisory Council at SUNY New Paltz, *Council Member* 2022 – 2024

- Represented STEM students in Honors; Advised decisions, organized events, served on student panels.

Society of Physics Students at SUNY New Paltz, *Member* 2020 – 2024

- Prepared and ran experiments for high schoolers in Science and Technology Entry Program (STEP).

Gift of Life, *Campus Ambassador* 2023

- Organized talks, presentations, and tabling events to provide information on blood donation registries.
- Managed donor swab shipments and facilitated connecting donors with potential recipients.

Geology & Environmental Science Club at SUNY New Paltz, *Member* 2022 – 2024

- Planned events for geoscience education and environmental awareness partnered with Biology Club.

Astronomy Club at Stony Brook University, *Member* 2024 – 2025

Women in Physics & Astronomy Club at Stony Brook University, *Member* 2024 – 2025

Women in Science & Engineering at SUNY New Paltz, *Member* 2020 – 2024

Astronomy/Cosmic Club at SUNY New Paltz, *Member* 2020 – 2024

Chemistry Club at SUNY New Paltz, *Member* 2020 – 2024

TEACHING & TUTORING

Teacher, High School Biology – *Flagler Palm Coast High School, In Person*

1/2026–6/2026

- Delivered standards-aligned biology instruction to 130+ high school students
- Over 70% of students had documented support plans, including English Language Learners (ELL)/Limited English Proficiency (LEP), Access Point students, and over 80 students with Individual Education Plans (IEPs), 504 accommodation plans, and Positive Behavioral Interventions and Supports (PBIS) plans.
- Designed and implemented structured classroom routines to support executive functioning, attention regulation, and academic confidence while maintaining rigorous academic standards.
- Translated complex biological concepts into accessible, developmentally appropriate instruction for diverse learners using inclusive and differentiated instructional strategies.
- Utilized data-driven interventions and progress monitoring to inform instruction and improve outcomes.
- Reinforced scientific literacy through clear, effective science communication at the secondary level.

University Tutor: General Biology, Calculus II, Statistics – *Varsity Tutors, Remote* 2025–2026

High School Tutor (General, AP, IB): Biology; Calculus AB, BC – *Varsity Tutors, Remote* 2025–2026

Middle School Tutor (General): Biology – *Varsity Tutors, Remote* 2025–2026

Instructor, SBU 101: Professional & Academic Development – *Stony Brook University, In Person* 2025

- Undergraduate instruction in a first-year seminar for academic skills and professional development.

University Tutor: Astronomy, Astrophysics – *SUNY New Paltz, In Person* 2022–2024

- Courses: Exploring the Solar System (PHY 205), Exploring the Universe (PHY 206), Astronomy Lab (PHY 293), Introduction to Astrophysics (PHY 340).

Elementary/Middle School Tutor: English as a Second Language – *Howland Tutors, Remote* 2020–2021

Elementary/Middle School Tutor: Music – *New City Kids After School Program, In Person* 2017–2020

MENTORING

Mentored 150+ students across graduate, undergraduate, and high school levels in interdisciplinary STEM fields, emphasizing research development, academic success, and professional growth.

Level	Student	Field / Support Area	Years
Graduate	Jonathan Tims	Coastal Ecology	2025–Present
Graduate	Adam Freihofner	Education—Chemistry	2024–2025
Graduate	Lisa Chan	Physics & Biophysics	2024–2025
Graduate	Ngozi Ohagwa	Chemical Biology	2024–2025
Graduate	Sanket Wardhekar	Mechanical Engineering	2024–2025
Graduate	Parth Kansara	Computer Science	2024–2025
Graduate	Aliakbar Mevliwala	Computer Science	2024–2025
Graduate	Jeremy Kuri	Digital Media Communication	2024–2025
Graduate	Krishna Trejo	Medicine & Social Work	2024–2025
Graduate	Kayla Titus	Social Work	2024–2025
Graduate	David Loayza	Physical Therapy	2024–2025
Graduate	Kafilat Abdul	Occupational Therapy	2024–2025
Graduate	Rebecca Sewdya	Social Work	2024–2025
Undergraduate	Demi Uwechue	Astrobiology & Computational Biology	2025–2026
Undergraduate	Maura Luby	Science Communication & Marketing	2023–2026
Undergraduate	Abigail Hedler	Environmental Science Education	2022–2024
Undergraduate	Anna Benlien	Adolescent Education—History	2022–2023
Undergraduate	Mariana Mejia	Forensic Psychology	2021–2024
High School	130+ students	High School Biology	2026
High School	Arely Rios	Academic & Leadership Support	2017–2020
High School	Jivran Parra-Guzman	Academic & Leadership Support	2017–2020

RESEARCH OBSERVING TIME

- **2 Hours** - Observatorio del Teide in Tenerife 2025
 - Remote observations on COAST (CCompletely Autonomous Service Telescope)
 - Obtained FITS files of several nebulae, galaxies, and clusters.
- **60 Hours** - Smolen Observatory in New Paltz 2023
 - In person observations on Celestron 14" telescope
 - Obtained FITS files of atmospheres (Mars and Venus) and several nebulae, galaxies, and clusters.

INDEPENDENT STUDIES

Independent Studies and Skill Building Projects

- **Multivariate geochemical analysis of planetary regolith** simulants from high-dimensional datasets, applying PCA and KMeans clustering to identify patterns in lunar, Martian, and asteroid soil analogs.
- **Exoplanet demographics analysis** (NASA Exoplanet Archive datasets) applying SQL queries and stellar flux modeling to classify habitability regimes and assess atmospheric escape and water vapor.
- **Exoplanet climate modeling** with simplified radiative transfer and gray atmosphere models for temperature–optical depth profiles, greenhouse gas absorption (CO₂ & H₂O) and model limitations analysis.
- **Exoplanet transit detection** on simulated stellar light curves with Gaussian noise with peak-detection.
- **Prebiotic chemical evolution** models of early Earth to simulate polymerization, hydrolysis, degradation, and wet-dry cycles, tracking molecular complexity under energy and catalytic constraints.
- **Stable isotope climatic modeling** using SIBER, isotopic niche modeling, Bayesian mixing, and spatial mapping to interpret $\delta^{18}\text{O}$ and $\delta^2\text{H}$ variation across regions and seasons.
- **Simulated microgravity transcriptomics** analysis of *Arabidopsis thaliana* via NCBI GEO data, log2 normalization, differential expression testing, and visualizations to identify gravity-responsive pathways.

OTHER EMPLOYMENT

- Interim Residence Hall Director** *Campus Residences, Stony Brook University* 2024 – 2025
- Oversaw daily operations of 12 buildings (900+ students), supervised 12 Resident Assistants.
 - Served in an overnight on-call rotation, mitigated crises, handled 100+ Student Conduct cases.
 - Analyzed event data and staff engagement data to improve campus-wide practices.
 - Member of 3 committees including Academic Initiatives and Community Engagement (hiring and curriculum development).
- Librarian in the Dean's Office** *Sojourner Truth Library* 2023 – 2024
- Managed daily operations of the library, administrative duties, and curated library events.
- Resident Assistant** *Department of Residence Life, SUNY New Paltz* 2021 – 2024
- Oversaw daily operations of 1 floor (40+ students), served in an overnight duty rotation, mitigated crises.
 - Fulfilled roles of Inclusivity Coordinator, Hall Government Liaison, and Social Media Manager.
- Night Host** *Department of Residence Life, SUNY New Paltz* 2021 – 2024
- Oversaw overnight operations of 1 building (250+ students), mitigated crises.
- Admissions Assistant & Student Ambassador** *Undergraduate Adm., SUNY New Paltz* 2021 – 2023
- Performed campus tours (specializing in Spanish and Science & Engineering tours).
 - Supervised 45 Student Ambassadors, 100+ volunteer staff, and managed social media.
- Social Media Branding Contractor** 2023
- Designed brand identity packages for podcasts (logos, fonts, color palettes, and thumbnails).
- Social Media Manager** *Honors Program, SUNY New Paltz* 2020 – 2023
- Supervised the Honors Social Media team and generated engaging content to advertise the program.
- Honors Orientation Liaison** *Honors Program, SUNY New Paltz* 2021 – 2022
- Led 2 Honors Summer Orientations (16 sessions) with programming and first year student mentorship.

PROFESSIONAL DEVELOPMENT

- Paleoproteomics And Archaeology, Society for Techniques and Advances (PAASTA) Workshop 2026
- Astrobiology Academy, European Astrobiology Inst., Centro de Astrobiología CSIC-INTA 2026
- International Online Conference on the Universe 2026
- Sagan Summer Workshop, NASA Exoplanet Science Institute (NExSci) at Caltech [Link] 2025
- Astrobiology Academy, European Astrobiology Inst., Centro de Astrobiología CSIC-INTA [Link] 2025
- LIFE Seminars, NASA Research Coordination Network (RCN) [Link] 2025 – 2026
- Open Science 101 Credential, National Aeronautics and Space Administration (NASA) [Link] 2025
- Open Science Course Credential, National Aeronautics and Space Administration (NASA) [Link] 2025
- Origins of Life Course Certificate, Santa Fe Institute Complexity Explorer [Link] 2025
- Uncertainty in Astrobiology: Careers in Academia and Careers in Industry (Virtual Panel Series) 2025
- Particle Physics course, The Open University [Link] 2025
- The Search for Water on Mars course, The Open University [Link] 2025
- The Formation of Exoplanets course, The Open University [Link] 2025
- Introduction to Exoplanets course, The Open University [Link] 2025
- Exoplanets Badge, The Open University [Link] 2025
- Astronomy with an Online Telescope Badge, The Open University [Link] 2025
- Understanding Atmospheric and Ocean Flows course, The Open University [Link] 2025
- An Introduction to Geology course, The Open University [Link] 2025
- Life in the Paleozoic course, The Open University [Link] 2025
- ACES Supervision Credential, Stony Brook University [Link] 2024
- Icy Bodies – Europa and Elsewhere course, The Open University [Link] 2023
- Responsible Conduct of Research in Social & Behavioral Sciences, CITI Program 2025–2028
- Human Research in Social & Behavioral Sciences, CITI Program 2025–2028
- Responsible Conduct of Research in Physical Sciences, CITI Program 2023–2026

MEMBERSHIPS

American Physical Society (APS): Laser Science, Early Career Scientists, Outreach & Engaging the Public

American Astronomical Society (AAS): Astronomy, Planetary Science

Network for Ocean Worlds (NOW): Affiliate and Member of Future Leaders of Ocean Worlds (FLOW)

Astronomers for Planet Earth (A4E): Partner

LIFE NASA RCN: Affiliate, Monthly seminar attendee

