Akshat S. Chaturvedi

Curriculum Vitae

Georgia State University Department of Physics and Astronomy
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Education

Georgia State University — Atlanta, GA
PhD Astronomy (expected) — 2024 – Present

Georgia State University — Atlanta, GA
MS Physics w/ Astronomy Concentration — 2024 – 2026

Pennsylvania State University — University Park, PA
BS Astronomy & Astrophysics; BS Physics; Minor in Mathematics — 2020 – 2024

Research Experience

Georgia State University — Atlanta, GA
Graduate Research Assistant — Fall 2024 – Present
Advisor: Dr. Douglas R. Gies
Project: *Investigating the fundamental properties of Be+sdOB binaries*
Research Expertise: Be stars, UV and optical spectroscopy, radial velocity analysis, cross correlation function analysis, Doppler tomography, long-baseline optical/near-IR interferometry

Pennsylvania State University — University Park, PA
Undergraduate Research Assistant — Fall 2023 – Summer 2024
Advisors: Dr. Robin Ciardullo and Dr. Howard E. Bond
Project: *A spectroscopic study of the peculiar planetary nebula Abell 57*
Research Expertise: Planetary nebulae, optical spectroscopy, photoionization modeling, UV photometry

Pennsylvania State University — University Park, PA
Undergraduate Research Assistant — Fall 2022 – Present
Advisors: Dr. Howard E. Bond, Dr. Robin Ciardullo, and Dr. Gautam Nagaraj
Project: *A census of blue post-AGB stars in Galactic globular clusters*
Research Expertise: Post-AGB stars, globular clusters, optical photometry, clustering algorithms, stellar populations, astrometric analysis

Pennsylvania State University — University Park, PA
Undergraduate Research Assistant — Summer 2022
Advisors: Dr. Kevin Luhman
Project: *A chrono-kinematic analysis of nearby star associations*
Research Expertise: Clustering algorithms, stellar populations, kinematic analysis, traceback age analysis

Publications

Detection and Astrometry of the Ba–Bb Subsystem in α Piscium: First Dual-field Interferometry at the CHARA Array
N. Anugu, R. Klement, [...] **A. S. Chaturvedi**, et al. 2026
The Astronomical Journal, Volume 171, Issue 4, id. 253

Broad-band Monitoring of 797 Montana
M. C. Bentz, R. Alakhone, L. Azoulay, E. Burns-Kaurin, **A. S. Chaturvedi**, et al., 2025
The Minor Planet Bulletin Vol. 52, No. 3, pp. 207-208

R-Band Monitoring of Patroclus and Menoetius Mutual Events
M. C. Bentz, R. Brown, S. Carrazco-Gaxiola, **A. S. Chaturvedi**, et al., 2025
The Minor Planet Bulletin Vol. 52, No. 1, pp. 79-81

Spectroscopic Survey of Faint Planetary-nebula Nuclei. V. The EGB 6-type Central Star of Abell 57
H. E. Bond, **A. S. Chaturvedi**, et al., 2024
The Astrophysical Journal, Volume 970, Issue 2, id.164

Conference Posters and Talks

2026 CHARA/MROI Science Meeting — Socorro, NM
Talk: Exploring the Binarity of Be Stars — March 2026

Georgia Regional Astronomy Meeting — Atlanta, GA
Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer — November 2025

Staraganza III — Atlanta, GA
Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer — September 2025

Galaxies to Gluons Summer Lunch Talk — Atlanta, GA
Talk: Be Stars and Beyond: A Legacy of Binary Mass Transfer — July 2025

Penn State Undergraduate Research Exhibition — University Park, PA
Poster: A Spectroscopic Study of the Peculiar Planetary Nebula Abell 57 — April 2024

American Physical Society Mid-Atlantic Section Meeting — University Park, PA
Poster: A Census of Blue Post-Horizontal-Branch Stars in Galactic Globular Clusters — Nov 2025

Awards, Funding, and Scholarships

Second Century Initiative (2CI) Fellow — Fall 2024 – Present
Georgia State University

Faculty Undergraduate Research Support Award — Spring 2024
$ 1000 to support publication costs
Pennsylvania State University

Induction into Sigma Pi Sigma Spring 2024
National physics and astronomy honors society
Pennsylvania State University

Induction into Phi Beta Kappa Spring 2023
National libearl arts and sciences honors society
Pennsylvania State University

Eberly College of Science Dean's List 2021, 2022, Fall 2023, and Spring 2024
Pennsylvania State University

George E., Jr. and Elizabeth S. Sperling Tutorial Endowment Scholarship Spring 2022
$1000 awarded to learning assistants who excel in tutorial ability
Pennsylvania State University

Outreach and Leadership

Georgia State University Undergraduate Research Conference Atlanta, GA
Graduate Student Judge for Physics and Astronomy Posters April 2026

Astronomy on Tap Atlanta Atlanta, GA
Talk: Final Destination: The Epic Ends of Stellar Lives Viewed by Next Generation Telescopes August 2025

AsTropaLooza Citizen Science Workshop – Volunteer Atlanta, GA
Astronomy of Atlanta K–12 STEM Outreach Event June 2025

Department of Physics & Astronomy Observing Nights – Volunteer Atlanta, GA
Observing Nights for Astronomy Students Spring 2025 – Present

Hard Labor Creek Observatory Public Open Nights – Volunteer Rutledge, GA
Public Open House at Georgia State University's Hard Labor Creek Observatory Fall 2024 – Present

Vice President, Society of Physics Students University Park, PA
Pennsylvania State University Fall 2023 – Spring 2024

Society of Physics Students CV Building Workshop – Lead University Park, PA
Pennsylvania State University Fall 2023

Observing Experience

Astrophysical Research Consortium 3.5m Telescope December 2025 – Present
Apache Point Observatory Observing Time: 24 hours
Sunspot, NM
— *Obtained high-resolution echelle spectra of high- and intermediate-mass stars using the ARCES instrument*

Center for High Angular Resolution Astronomy (CHARA) Array July 2025 – Present
Mount Wilson Observatory Observing Time: 32 hours
Mount Wilson, CA
— *Obtained long-baseline near-infrared interferometric observations of Be+sdOB stars*

Miller 24" Telescope Fall 2024 – Spring 2025
Hard Labor Creek Observatory Observing Time: 50 hours
Rutledge, GA
— *Obtained photometric lightcurves of the asteroids 617 Patroclus, Menoetius, 797 Montana, and 4107 Rufino*

Department of Astronomy & Astrophysics 24" Telescope Fall 2022
Pennsylvania State University Observing Time: 20 hours
University Park, PA
— *Obtained photometric observations and images of a variety of astronomical objects, including planetary nebulae, globular clusters, and planets*

Teaching Experience

Astronomy 1020K | Stellar and Galactic Astronomy (x9) Fall 2024 – Present
Georgia State University Atlanta, GA
Graduate Teaching Assistant

Astronomy 1010K | Astronomy of the Solar System (x1) Spring 2025 – Present
Georgia State University Atlanta, GA
Graduate Teaching Assistant

Astronomy & Astrophysics 292 | Astronomy of the Distant Universe Spring 2023
Pennsylvania State University University Park, PA
Undergraduate Learning Assistant

Astronomy & Astrophysics 291 | Astronomical Methods and the Solar System Fall 2022
Pennsylvania State University University Park, PA
Undergraduate Learning Assistant

Physics 212M | General Physics: Electricity and Magnetism Spring 2022
Pennsylvania State University University Park, PA
Undergraduate Learning Assistant

Physics 212M | General Physics: Mechanics Fall 2021
Pennsylvania State University University Park, PA
Undergraduate Learning Assistant

Software

CATCH (CHARA Array's Thrifty Calibrator Hunter)
A tool to find and verify calibrator stars for interferometry targets at the CHARA Array

Technical Skills & Languages Spoken

Programming: Python, ADQL, R, Julia, Rust
Software: TOPCAT, CLOUDY, AstroImageJ, SAO DS9, IRAF
Languages: English (native), Hindi (native), Marathi (native), French (A2)