

Travis Court

University of North Carolina at Asheville

1 University Heights
Asheville, NC 28804
✉ tcourt@unca.edu
📄 [courttr.github.io](https://github.com/courttr)

Education

- 2021 - 2025 **University of Pittsburgh, Ph.D. in Physics and Astronomy**, Pittsburgh, PA.
THESIS TITLE: Modeling X-ray Emission from Type Ia Supernova Remnants in Different Circumstellar Environments
RESEARCH ADVISOR: Dr. Carles Badenes
- 2021 **University of Pittsburgh, M.S. in Physics**.
- 2018 **Allegheny College, B.S. in Physics, Psychology Minor**, Meadville, PA, *Summa Cum Laude*.
THESIS TITLE: Cassiopeia A: Seeing a Supernova Remnant in a New Light
RESEARCH ADVISOR: Dr. James C. Lombardi, Jr.

Teaching

- Fall 2025 - Present **Lecturer, Physics and Astronomy**, University of North Carolina at Asheville.
Phys 131: Introduction to Physics 1 FA 2025, SP 2026
Phys 221L: Physics 1 Lab FA 2025
Phys 231L: Introduction to Physics 2 Lab SP 2026
Phys 325: Thermal Physics SP 2026
- 2023 - 2025 **Teaching Fellow (Instructor of Record)**, *Physics and Astronomy*, University of Pittsburgh.
Phys 110: Introduction to Physics 1, SU2 2023, SU1 2025
- 2024 **Physics Instructor, Pitt EXCEL, Swanson School of Engineering**, University of Pittsburgh.
Summer Engineering Academy
- 2020 - 2025 **Teaching Assistant, Physics and Astronomy**, University of Pittsburgh.
Astron 089: Stars, Galaxies, and the Cosmos, SU1, SU2 2020, SU1, SU2 2021
Phys 174: Basic Physics for Science and Engineering 1 SP 2025
Phys 219: Basic Laboratory Physics for Science and Engineering, FA 2020
- 2022 - 2025 **Session Leader, AstroPGH Python Bootcamp**, University of Pittsburgh, Carnegie Mellon University.
Numpy II, SU 2023, SU 2025
Numpy III, Numpy IV, SU 2022
- 2016 - 2017 **Undergraduate Teaching Assistant, Physics**, Allegheny College.
FS 101: Science in 19th Century Literature, FA 2017
Phys 102: Fundamentals of Physics II, SP 2016
Phys 110: Core Concepts in Physics I, FA 2016
Phys 120: Core Concepts in Physics II, FA 2017
- 2015 **Individual Tutor, Maytum Learning Commons**, Allegheny College.
Math 140: Introductory Calculus for Life Sciences, SP 2015
- 2014 - 2015 **Teaching Assistant, Crawford County READ Program**, Meadville, PA.
GED Class, SP 2015
Adult Basic Education Tutor, FA 2014

Mentorship

- FA 2023 - 2025 **Peri Schindelhoeim, Modeling SNR 0519-69.0 in a Planetary Nebula Cocoon**, University of Pittsburgh.
Undergraduate and Post-Baccalaureate Research Mentor

2023 - 2024 **Aidan Payton**, *Physics and Astronomy*, University of Pittsburgh.
Graduate Student Peer Mentor

Academic Service

2026 - Present **Education Department Liaison**, *Physics & Astronomy*, University of North Carolina at Asheville.

2023 - 2025 **Writing Fridays Workshops**, *Co-Lead*, Astronomy Group, University of Pittsburgh.

August 2024 **Dietrich School New Student Welcome**, *Panelist*, University of Pittsburgh.

April 2024 **Trip Coordinator**, *Solar Eclipse Bus Trip*, University of Pittsburgh.

2023 **Summer Research Grant Committee**, *Reviewer*, Arts and Science Graduate Student Organization, University of Pittsburgh.

2022 - 2023 **AstroSnacks Journal Club**, *Organizer*, University of Pittsburgh.

2021 - 2023 **Association of Physics and Astronomy Graduate Students**, *Co-President*, University of Pittsburgh.

2021 - 2023 **Dietrich School of Arts and Sciences Graduate Council**, *Graduate Student Representative*, University of Pittsburgh.

FA 2020 - SP 2021 **Dietrich School of Arts and Sciences Council**, *Graduate Student Representative*, University of Pittsburgh.

FA 2020 **Computational Astrophysics Seminar**, *Organizer*, University of Pittsburgh.

FA 2017 - SP 2018 **Committee of Student Affairs**, *Co-Director*, Student Government, Allegheny College.

SP 2016 - SP 2018 **Astronomy Club**, *President*, Allegheny College.

SP 2017 - SP 2018 **Society of Physics Students**, *Vice President*, Allegheny College.

Research Experience

FA 2019 - SU 2025 **Graduate Student**, *University of Pittsburgh*.
RESEARCH ADVISOR: Dr. Carles Badenes
X-ray and computational research on Type Ia supernova remnants in circumstellar environments

SU 2018 **Research Assistant**, *Los Alamos National Laboratory*.
RESEARCH ADVISOR: Dr. Chris Fryer
Computational research on binary progenitors to supernovae

2015 - 2018 **Independent Study and Senior Project**, *Allegheny College*.
RESEARCH ADVISOR: Dr. James C. Lombardi, Jr.
Computational research on merging binary systems using smoothed particle hydrodynamics

SU 2017 **Undergraduate Research Assistant**, *Flatiron Institute, Center for Computational Astrophysics*.
RESEARCH ADVISOR: Dr. Francisco Villaescusa-Navarro
Computational research on cosmology and Large-Scale Structure

SU 2016 **NSF REU**, *Rutgers University*.
RESEARCH ADVISOR: Dr. Saurabh Jha
Optical spectroscopy research on Type Ia supernovae

Awards and Honors

2024 **Grad Expo Outstanding Speaker Award** Dietrich School of Arts and Sciences, University of Pittsburgh

2023 **3 Minute Thesis Finalist** Dietrich School of Arts and Sciences, University of Pittsburgh

2021 **Thomas-Lain Essay Contest** Physics and Astronomy, University of Pittsburgh

2019 - 2020 **Dietrich School of Arts and Sciences Fellowship** University of Pittsburgh

2018 **Phi Beta Kappa** Allegheny College

- 2018 **Summa Cum Laude** Allegheny College
- 2017 **Goldwater Scholarship Honorable Mention**
- 2017 **Physics Department Junior Student Award** Allegheny College
- 2014 - 2018 **Distinguished Alden Scholar** (High Dean's List) Allegheny College
- 2011 **Eagle Scout**

Presentations

- April 2025 **Guest Lecture**, University of North Carolina at Asheville.
ASTRO 202: Foundations of Stars and Planets
- October 2025 **Society of Physics Students Lecture**, *Invited*, University of North Carolina at Asheville.
"Blast from the Past: Using Supernova Remnants to Learn about their Explosions"
- December 2024 **Guest Lecture for Graduate Course**, University of Pittsburgh.
ASTRON 3550: Stellar Structures
- June 2024 **Supernova Remnants III**, *Poster*, Crete, Greece.
"Type Ia Supernova Remnants in Different Circumstellar Environments"
- March 2024 **Grad Expo**, *Talk*, Dietrich School of Arts and Science, University of Pittsburgh.
"The Impact of Pre-Supernova Mass Loss on Type Ia Supernova Remnants"
- March 2023 **Lecture Series**, *Invited Talk*, Allegheny College.
"Type Ia Supernova Remnants: The Story Behind the Explosion"
- August 2022 **Supernova Remnants and Their Progenitors**, *Talk*, Harvard Center for Astrophysics.
"Models for the X-Ray Emission of Type Ia Supernova Remnants in Different Circumstellar Environments"
- March 2022 **High Energy Astrophysics Division of the American Astronomical Society**, *Poster*, Pittsburgh, PA.
"Models for the X-Ray Emission of Type Ia Supernova Remnants in Different Circumstellar Environments"
- May 2018 **Cook-Lahti Senior Scholars Symposium**, *Invited Poster*, Allegheny College.
"Cassiopeia A: Seeing a Supernova Remnant in a New Light"
- January 2018 **American Astronomical Society**, *Poster*, National Harbor, MD.
"Impact of Massive Neutrinos on Dark Matter Halo Environment"
- October 2017 **Gator Day Physics Research Symposium**, *Poster*, Allegheny College.
"SALT Spectroscopy of ASASSN-15lh: The Most Luminous Supernova?"
- January 2017 **American Astronomical Society**, *Poster*, Grapevine, TX.
"SALT Spectroscopy of ASASSN-15lh: The Most Luminous Supernova?"

Science Communication

- 2022 - 2025 **Astronomy on Tap**, *Co-Organizer*, Pittsburgh, PA.
Recruited speakers, partnered with multiple locations, operated social media outreach, co-hosted 12 events
- March 2025 **Astronomy on Tap**, *Talk*, Pittsburgh, PA.
"Saturn: The Lord of the Rings"
- August 2024 **Exploring the Universe with Pitt Astronomers**, *Speaker*, University of Pittsburgh.
Seminar discussion targeted at high school seniors interested in undergraduate research
- April 2024 **Pitt News**, *Interview*, University of Pittsburgh.
Astronomy department gives recommendations for Monday's eclipse
- June 2023 **Astrophysicist for a Day**, *Group Leader*, University of Pittsburgh.
Lead group of local high school students in hands-on problem solving project involving error propagation

Publications

5. *A Classification Scheme for X-ray Bright Type Ia Supernova Remnants Based on Their Circumstellar Interaction*
Court, T., Badenes, C., Lee, S-H., Patnaude, D., Bravo, E. (2025), *Astrophysical Journal*, 996, 100.
4. *SNR 0519-69.0 as a Type Ia Explosion in a Planetary Nebula Cocoon*
Schinedelheim, P. **Court, T.**, Badenes, C., Lee, S-H., Patnaude, D., García-Segura, G., Bravo, E. (2025), *Research Notes AAS*, 8, 309.
3. *Do Type Ia Supernovae Explode Inside Planetary Nebulae?*
Court, T., Badenes, C., Lee, S-H., Patnaude, D., García-Segura, G., Bravo, E. (2024), *Astrophysical Journal*, 962, 63.
2. *Multiplicity Statistics of Stars in the Sagittarius Dwarf Spheroidal Galaxy: Comparison to the Milky Way*,
Bonidie, V., **Court, T.**, Daher, C. M., Fielder, C. E., Badenes, C., Newman, J., Moe, M., Kratter, K. M.,
Walker, M. G., Majewski, S. R., Hayes, C. R., Hasselquist, S., Stassun, K., Kounkel, M., Dixon, D., Stringfellow,
G. S., Carlberg, J. K., Anguiano, B., De Lee, N., & Troup, N. W. (2022), *Astrophysical Journal, Letters*, 933,
L18.
1. *Weighing neutrinos with the halo environment*,
Banerjee, A., Castorina, E., Villaescusa-Navarro, F., **Court, T.**, & Viel, M. (2020), *Journal of Cosmology and
Astroparticle Physics*, 2020, 032.