

Travis Court

University of Pittsburgh

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📄 [courttr.github.io](https://github.com/courttr)

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Education

- 2021 – Present **University of Pittsburgh**, *Ph.D. Candidate in Physics and Astronomy*, Pittsburgh, PA.
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.

Research Experience

- Fall 2019 – **Graduate Student**, *University of Pittsburgh*.
Present RESEARCH ADVISOR: Dr. Carles Badenes
X-ray and computational research on Type Ia supernova remnants in circumstellar environments
Summer 2018 **Research Assistant**, *Los Alamos National Laboratory*.
RESEARCH ADVISOR: Dr. Chris Fryer
Computational research on binary progenitors to supernovae
Spring 2015 – **Undergraduate Independent Study and Senior Project**, *Allegheny College*.
Spring 2018 RESEARCH ADVISOR: Dr. James C. Lombardi, Jr.
Computational research on merging binary systems using smoothed particle hydrodynamics
Summer 2017 **Undergraduate Research Assistant**, *Flatiron Institute, Center for Computational Astrophysics*.
RESEARCH ADVISOR: Dr. Francisco Villaescusa-Navarro
Computational research on cosmology and Large-Scale Structure
Summer 2016 **NSF REU**, *Rutgers University*.
RESEARCH ADVISOR: Dr. Saurabh Jha
Optical spectroscopy research on Type Ia supernovae

Awards and Honors

- 2023 **3 Minute Thesis Finalist** Dietrich School of Arts and Sciences, University of Pittsburgh
2021 **Thomas-Lain Scholarship** 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

- 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 **19th Meeting of the 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 **231st Meeting of the 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 **229th Meeting of the American Astronomical Society**, *Poster*, Grapevine, TX.
 “SALT Spectroscopy of ASASSN-15lh: The Most Luminous Supernova?”

Academic Service

- Summer 2023 **Writing Fridays Workshops**, *Co-Lead*, University of Pittsburgh.
 Weekly workshop to focus on academic writing
- 2022 - Present **AstroSnacks Journal Club**, *Organizer*, University of Pittsburgh.
 Graduate student journal club and research seminar
- 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.
 Co-Lead Mathematics TA/TF Review
- Fall 2020 - Spring 2021 **Dietrich School of Arts and Sciences Council**, *Graduate Student Representative*, University of Pittsburgh.
- Fall 2020 **Computational Astrophysics Seminar**, *Organizer*, University of Pittsburgh.
 Organized seminar in department focused on computational techniques in astrophysics
- Fall 2017 - Spring 2018 **Allegheny Student Government Committee of Student Affairs**, *Co-Director*, Allegheny College.
 Directed student life subcommittee of general assembly. Representative on Campus Life and Community Standards Faculty Committee
- Spring 2016 - Spring 2018 **Astronomy Club**, *President*, Allegheny College.
- Spring 2017 - Spring 2018 **Society of Physics Students**, *Vice President*, Allegheny College.

Teaching

- Summer 2023 **Instructor of Record**, *Introduction to Physics 1*.
 Physics and Astronomy Department, University of Pittsburgh
- Summer 2023 **Session Leader**, *Numpy II*.
 AstroPGH Python Bootcamp, University of Pittsburgh, Carnegie Mellon University
- Summer 2022 **Session Leader**, *Numpy III and IV*.
 AstroPGH Python Bootcamp, University of Pittsburgh, Carnegie Mellon University
- 2021 - 2022 **Private Tutor**, *High School Honors Physics*.

Summer 2020, **Teaching Assistant**, *Stars, Galaxies, and the Cosmos*.
 Summer 2021 Physics and Astronomy Department, University of Pittsburgh
 Fall 2020 **Teaching Assistant**, *Basic Laboratory Physics for Science and Engineering*.
 Physics and Astronomy Department, University of Pittsburgh
 Spring 2016 – **Teaching Assistant**, *Core Concepts in Physics I and II*.
 Spring 2017 Physics Department, Allegheny College
 Fall 2017 **Teaching Assistant**, *Science in Literature Freshman Seminar*.
 Physics Department, Allegheny College
 Spring 2015 **Individual Tutor**, *Introductory Calculus for Life Sciences*.
 Maytum Learning Commons, Allegheny College
 Fall 2014 – Spring **Teaching Assistant and Individual Tutor**, *GED Class*.
 2015 Crawford County READ Program, Meadville, PA

Outreach

June 2023 **Astrophysicist for a Day**, *Group Leader*, Pittsburgh, PA.
 Lead group of local high school students in hands-on problem solving project involving error propagation
 June 2023 **Astronomy on Tap**, *Talk*, Pittsburgh, PA.
 "Astronomy for Pittsburghers"
 2022 - Present **Astronomy on Tap**, *Co-Organizer*, Pittsburgh, PA.
 Recruited speakers, partnered with multiple locations, operated social media outreach, co-hosted events

Publications

3. *Do Type Ia Supernovae Explode Inside Planetary Nebulae?*
Court, T., Badenes, C., Lee, S-H., Patnaude, D., García-Segura, G., Bravo, E. (2023), eprint arXiv:2309.00572.
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.