ROBERT 'BOB' CADDY

100 Allen Hall, University of Pittsburgh, 3941 O'Hara St, Pittsburgh, PA
(765)-586-8882 r.caddy@pitt.edu rcaddy586@gmail.com
bcaddy.github.io github.com/bcaddy robertcaddy1

EDUCATION

University of Pittsburgh *2018-current*
Ph.D. Physics

Bowling Green State University, OH *2018*
M.S. Physics

Purdue University, IN *2016*
B.S. Honors Physics Major, Astronomy Minor

TECHNICAL & PROFESSIONAL SKILLS

Languages:	C++, Python, Fortran, Bash
Packages & APIs:	MPI, CUDA, OpenMP, OpenACC, Numpy, Pandas, Scipy, Matplotlib, Astropy
Software Tools:	git, LaTeX, GCC, Make, HDF5, HSI, PBS/Slurm/LSF, DAOPHOT, IRAF, SQL, mySQL
Hardware:	Experience with Optics, Digital holography, Electronics
Communication skills:	7+ years of working as a teaching assistant and giving technical presentations to technical and non-technical audiences.

EXPERIENCE

Graduate Research Assistant *2018 - Present*
University of Pittsburgh, Pittsburgh, PA

- Working to further develop and expand Cholla, a massively parallel GPU-accelerated code for simulating astrophysical fluid dynamics to include magnetic fields.
- Assisting with organizing and conforming the code base to best practices.
- Running Cholla on the fastest supercomputers in the world including Summit and was part of the early access team for Frontier, the USAs first exascale supercomputer.

Graduate Research Assistant *2016 - 2018*
Bowling Green State University, Bowling Green, OH

- Research: Conducted original thesis research into the properties of symbiotic star V1835 Aql with Professor Andrew Layden as advisor. Used image and data analysis in Python to determine the properties of the symbiotic star system and determined the causes of variability.

Undergraduate Research Assistant *2015 - 2016*
Purdue University, West Lafayette, IN

- Built an experimental optics system to investigate the chemotherapy drugs on cancer tumors.
- Improved efficiency & quality of large-scale (tens of terabytes) off-site data storage using HSI & HTAR. Reduced time per experiment from six hours to 20 minutes.

President, Purdue Society of Physics Students (SPS) *2015 - 2016*
Purdue University, West Lafayette, IN

- Coordinate sources and personnel to expand knowledge of physics and foster community within the Purdue University chapter of the Society of Physics Students.
- Through planning many events and activities more than doubled the number of active SPS members.
- Communicate with faculty to plan special colloquia events and bring speakers to Purdue.
- Designed and constructed a weather balloon payload for which we received SPS National funding.
- Organized multiple trips to museums and the Argonne National Lab.

HONORS & AWARDS

- **Learning Beyond the Classroom Certificate**, Purdue University, 2016.
  - A certificate for science students at Purdue University. Requires work experience, volunteer time, career training, and one significant activity, in my case bicycling across the U.S. with Bike & Build to raise money and awareness for affordable housing.
- **Presidential Scholarship**, Purdue University, 2012.
- **Ascarelli Fellow**, Purdue University Department of Physics and Astronomy, 2012.
- **Eagle Scout**, 2012.