Katie Chamberlain

github: katiechambe • LinkedIn: katiechambe • personal website: katiechambe.github.io

EDUCATION

Doctor of Philosophy (PhD), Astronomy & Astrophysics **expected May 2024**
Master of Science (MS), Astronomy & Astrophysics **May 2021**
University of Arizona, Steward Observatory — Tucson AZ

Bachelors of Science (BS), Physics and Mathematics w/ Honors **May 2018**
Montana State University — Bozeman MT

TECHNICAL SKILLS

Experienced (6+ years): Python, High Performance Computing, Version control, Linux, Slack, Procreate
Past experience: HTML & CSS, Machine Learning, Bayesian Statistics, Mathematica, Java

PROFESSIONAL EXPERIENCE

Graduate Researcher — *University of Arizona,* Tucson AZ **Aug 2018—Present**
- Developed software to analyze terabyte-scale astronomical simulations using high performance computing clusters
- Evaluated code performance and maintained documentation, ensuring ease-of-use for others
- Lead training sessions and created computing documentation for fellow graduate researchers
- Presented results at conferences, seminars, and weekly individual and group meetings
- Facilitated the establishment of the Steward Observatory Diversity, Equity, and Inclusion (SODEI) Initiative
- Mentored graduate and undergraduate students to foster self-confidence and a sense of belonging

Teaching Assistant — *University of Arizona,* Tucson AZ **Aug 2021 — May 2022**
- Responded dynamically to analyze student needs and adapt lessons on the fly to ensure comprehension and help them navigate challenges effectively
- Prepared and delivered two hour-long lectures and designed associated homework

Visiting Researcher — *Center for Computational Astrophysics, Flatiron Institute,* New York City NY **Jun—Aug 2021**
- Designed software via pair coding and regular (3x per week) meetings, resulting in fast and reliable development and deployment of software
- Performed Bayesian inference-based statistical analysis and assessed reliability and convergence
- Utilized continuous integration to keep documentation up to date for remote collaborators

Research Project Lead — *Warrior Scholars Project of America,* Tucson AZ **Jun 2019, Jun 2020**
- Designed, implemented, and supervised student research projects to analyze and quantify properties of extra-solar planetary systems via observational light curve data — publicly available on Github
- Assisted students to set educational and career development goals at the end of the program

Undergraduate Researcher — *Montana State University,* Bozeman MT **June 2015 — Aug 2018**
- Constructed analytic frequency-domain gravitational waveforms to capture features of asymmetric binary black hole mergers
- Predicted constraints for tests of General Relativity with observations from future generation gravitational wave detectors (Virgo, ET, CE, LISA)
- Awarded a LIGO Summer Undergraduate Research Fellowship from Caltech in 2017
- Established peer-led coding courses to supplement student learning and teaching experiences as President of the Society of Physics Students