

Tyler Parsotan

Education

- 2015–Present **Ph.D. Physics**, *Oregon State University*, Corvallis, OR, GPA: 3.78.
Advisor: Dr. Davide Lazzati
Topic of Research: Gamma Ray Bursts
- 2019–2020 **M.Eng. Mechanical Engineering**, *Oregon State University*, Corvallis, OR, GPA: 3.74.
Specialty: Thermal Fluid Sciences
- 2015–2018 **M.S. Physics**, *Oregon State University*, Corvallis, OR, GPA: 3.9.
Advisor: Dr. Davide Lazzati
Topic of Research: Gamma Ray Bursts
- 2011–2015 **B.S. Space Physics with Honors**, *Embry-Riddle Aeronautical University*, Daytona Beach, FL, GPA: 3.65.
Minor in Computer Science
Minor in Applied Mathematics

Professional Experience

- 2015–Present **Research Assistant**, Oregon State University.
- Researching radiation transfer mechanisms in Gamma Ray Bursts (GRBs) by developing the open source Monte Carlo Radiation Transfer (MCRaT) simulation code
 - Conducted CITI Responsible Conduct of Research
 - Awarded the NASA FINESST Fellowship to improve methods of understanding GRB radiation
 - Awarded two honorable mentions for the NSF Graduate Research Fellowship
 - NSF East Asia and Pacific Summer Institutes Fellow
 - Accepted to the NASA FERMI Summer School
- June–August 2018 **Kavli Summer Program Fellow**, Flatiron Institute, CCA.
- Part of a select group of graduate students accepted to collaborate with world experts in galaxy formation astrophysics on novel research in this area
 - Evaluated the importance of Black Holes in galaxy evolution models
- 2015–2017 **Teaching Assistant**, Oregon State University.
- Taught undergraduate students in general astronomy lab sections
 - Topics covered include: crater formation, relative sizes of celestial objects, light and matter, and stellar evolution
- May–July 2014 **NASA Intern**, NASA Johnson Space Center, Houston, TX.
- Conducted Probabilistic Risk Assessment Analysis on Spare Parts for the International Space Station
 - Determined the variance in the analysis by considering additional factors in how spare parts can fail
 - Collaborated with Thomas Van Keeping from the ISS Reliability and Maintainability Assurance Group – NE3
 - Presented results to branch chief and directorate director

Publications and Presentations

- Publication **Tyler Parsotan**, Hayward, C. et. al. 2019, "*Is Active Galactic Nuclei Feedback Necessary to Get Galaxy Sizes Right?*", in Prep.

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- Publication **Tyler Parsotan**, Lopez-Camara, D. and Lazzati, D. 2020, "*Photospheric Polarization Signatures From Gamma Ray Burst Simulations*", ApJ 896 139.
- Publication Cochrane, R., Hayward, C., Anglés-Alcázar, D., Lotz, J., **Tyler Parsotan** et. al. 2019, "*Predictions for the spatial distribution of the dust continuum emission in $1 < z < 5$ star-forming galaxies*", MNRAS, 288, 1779
- Publication **Tyler Parsotan**, Lopez-Camara, D. and Lazzati, D. 2018, "*Photospheric Emission From Variable Engine Gamma Ray Burst Simulations*", ApJ, 869, 103
- Publication **Tyler Parsotan** and Lazzati, D. 2018, "*A Monte Carlo Radiation Transfer Study of Photospheric Emission in Gamma Ray Bursts*", ApJ, 853, 8
- Presentation *Photospheric Polarization Signatures of Long Gamma Ray Bursts*. HEAP Seminar. UNAM. May 2020
- Presentation *Numerical Simulations of the Dynamics and Radiative Properties of Gamma Ray Burst Jets*. Fifty One Ergs. Raleigh, NC. May 2019
- Presentation *Photospheric Polarization Signatures of Long Gamma Ray Bursts*. SSO Seminar. Corvallis, OR. April 2019
- Presentation *Monte Carlo Radiation Transfer in Long GRBs*. Theories of Astrophysical Big Bangs. RIKEN, Japan. November 2017
- Presentation *Monte Carlo Modeling of Photospheric Emission in Gamma Ray Bursts*. Invited Seminar. Kanazawa University, Japan. August 2017
- Presentation *Monte Carlo Modeling of Photospheric Emission in Gamma Ray Bursts*. Invited Seminar. RIKEN, Japan. June 2017
- Presentation *Investigating Photospheric Emission using the Monte Carlo Radiation Transfer (MCRaT) Code*. Fifty One Ergs. Corvallis, OR. June 2017

Awards and Accomplishments

- January 2020 Designated AAS Astronomy Ambassador
- June 2019 Awarded the NASA FINESST Fellowship
- June 2019 Awarded the OSU College of Science Larry W. Martin & Joyce B. O'Neill Endowed Fellowship (Declined)
- September 2017 Awarded the OMSI Science Communication Fellowship
- March 2017 Designated as a NASA Oregon Space Grant Graduate Student Astronomer-in-Residence
- June 2016 Co-Organized first Astronomy Open House at Oregon State University
- May 2015 Awarded Oregon State University's Graduate Diversity Award
- March 2014 Chosen to be co-organizer of department wide mentor program for freshmen
- April 2013 Inducted into the Ronald E. McNair Postbaccalaureate Achievement Program
- November 2012 Initiated into Omicron Delta Kappa, the National Leadership Honor Society
- September 2011 Inducted into the Embry-Riddle Honors Program

Computer Skills

- Matlab
- Linux
- C
- L^AT_EX
- Python
- Java
- OpenMPI
- OpenMP
- SKIRT