ANNE DATTILO

Santa Cruz, CA ⋄ adattilo@ucsc.edu ⋄ aedattilo.github.io

EDUCATION

University of California Santa Cruz   2019 – 2025 (expected)
Ph.D. Candidate in Astronomy and Astrophysics
M.S. Astronomy and Astrophysics (June 2021)

The University of Texas at Austin   2015 – 2019
B.S. Astronomy, with Honors (May 2019)
B.S. Physics, with Honors (May 2019)

RESEARCH POSITIONS

Graduate Student Researcher– University of California Santa Cruz   2019 – Present
Advisor: Natalie Batalha

Student Research Assistant– University of Texas at Austin   2017 – 2019
"Identifying Exoplanets in K2 Data with Deep Learning Techniques" (Advisor: Andrew Vanderburg)

Student Research Assistant– University of Texas at Austin   2016 – 2017
"Observing Eclipsing Binary Pairs" (Advisor: Mike Montgomery)

PUBLICATIONS

Dattilo, A., Batalha, N. M., & Bryson, S. "A Unified Treatment of Kepler Occurrence to Trace Planet Evolution. I. Methodology", Accepted for publication in The Astronomical Journal (2023).

Murphy, J. M. A. et. al **including Dattilo, A.** "The TESS-Keck Survey. XVI. Mass Measurements for 12 Planets in Eight Systems", Accepted for publication in The Astronomical Journal (2023).

Yu, et al. **including Dattilo, A.** "Identifying Exoplanets with Deep Learning. III. Automated Triage and Vetting of TESS Candidates", The Astronomical Journal, 158, 25 (2019).

Dattilo, A., Vanderburg, A., et al. "Identifying Exoplanets with Deep Learning II: Two New Super-Earths Uncovered by a Neural Network in K2 Data", The Astronomical Journal, 156, 169 (2019).

AWARDS, FELLOWSHIPS, & HONORS

2021 NSF Graduate Research Fellowship Program Honorable Mention

2019-2020 UCSC Regent's Fellowship

2019 Dean's Honored Graduate

2019 Jon Dahm Award for Excellence in Math, Physics and Astronomy

2019 College of Natural Sciences College Scholar

2019 Department of Astronomy Outstanding Senior Award

2018 Gulf Coast Undergraduate Research Symposium Astronomy & Physics Outstanding Presentation

2018 College of Natural Sciences College Scholar

2015-2019 Terry Scholarship

TALKS & PRESENTATIONS

Talks * = invited

Mapping Kepler Occurrence to the Physics of Planet Evolution — July 2023
Bay Area Exoplanet Meeting, UC Santa Cruz

Mapping Kepler Occurrence to the Physics of Planet Evolution* — June 2023
Planetary Lunch Seminar, MIT

Mapping Kepler Occurrence to the Physics of Planet Evolution — August 2022
Emerging Researchers in Exoplanet Science, Penn State

Kepler's Greatest Hits: Mapping Exoplanet Occurrence to Planet Evolution — January 2022
FLASH, UC Santa Cruz

Identifying Exoplanets with Neural Networks* — May 2019
Computational Astrophysics Summer School, UT Austin

Exoplanet Detection Using AI* — April 2019
Dean's Scholars Friday Seminar, UT Austin

Identifying Transiting Exoplanets in K2 Data with Deep Learning Techniques — October 2018
Gulf Coast Undergraduate Research Symposium, Rice University

Identifying Transiting Exoplanets in K2 Data with Deep Learning Techniques — October 2018
Texas Astronomy Undergraduate Research Symposium, UT Austin

Posters

A Study of the Radius Cliff — June 2023
Emerging Researchers in Exoplanet Science, Yale University

Kepler's Greatest Hits — May 2022
Exoplanets IV

Identifying Exoplanets with Deep Learning — April 2019
Undergraduate Research Forum, UT Austin

Identifying Transiting Exoplanets in K2 Data with Deep Learning Techniques — January 2019
Conference for Undergraduate Women in Physics, TAMUCC

Identifying Transiting Exoplanets in K2 Data with Deep Learning Techniques — January 2019
233rd American Astronomical Society Conference

Observing Eclipsing Binaries — April 2017
Undergraduate Research Symposium, UT Austin

ADVSING & TEACHING

Students

Vivian Paull, UCSC undergraduate.   October 2021–December 2022
Analyzed Kepler completeness data with updated Gaia stellar properties.

Javier Soto, UCSC undergraduate. Primarily advised by Dr. Benjamin Gerard   June–August 2022
Deformable mirror project; primarily gave Python support

Arya Jhamb, UCSC undergraduate.   June 2023–Present
Analyzed a volume limited set of TESS stars for occurrence rate studies.

Carmen Galmes Altafulla, UCSC undergraduate.   June 2023–Present
Analyzed a volume limited set of TESS stars for occurrence rate studies.

Teaching

Introductory Astronomy: Planetary Systems   April–June 2020
Astronomy 3; teaching assistant

SERVICE & OUTREACH

Lamat Python Workshops   January 2022 – January 2023

· Developed a curriculum to teach incoming Lamat REU students Python programming skills
· Led one-week Python bootcamps for 10-12 students in January 2022 and January 2023
· Held regular office hours over their summer research work summer 2022

Head Grad, Manager   September 2022 – August 2023

· Set meeting agendas and organized monthly grad meetings
· Developed a plan to get the department to pay head grad roles in line with other departments on campus and nation-wide astronomy departments. This included estimating costs as well as writing a successful Osterbrock mini-grant proposal.

Astronomy on Tap Santa Cruz   January 2020 – June 2021

· Led AV/Zoom tech for all virtual shows
· Search committee member for speakers for the Fall 2020/Spring 2021 shows

Research Mentor   January 2017 – May 2019
Exploring the Universe with White Dwarf Stars, Freshman Research Initiative, UT Austin

· Taught freshmen fundamental research skills such as programming and astronomical data reduction.
· Led several student projects including observations of globular clusters, color-magnitude diagram creation, and categorizing white dwarf spectra.

Python Fundamentals Programming Workshop   September 2018
Undergraduate Women in Physics, UT Austin

· Designed a two part curriculum to teach students with little to no programming experience Python fundamentals.

Peer Mentoring   Fall 2016 – Spring 2018
Women in Natural Sciences, UT Austin

· Mentored freshmen women in math and science throughout their first year to help transition to college.

PRESS & MEDIA

Press Releases

· "Two New Planets Discovered Using Artificial Intelligence" Release by McDonald Observatory and University of Texas at Austin. March 26, 2019.

Radio & TV

· "What Starts Here" Televised interview for the Longhorn Network. Aired Dec. 28, 2019.
· "From College Student to Planet Hunter" YouTube interview by Google. Published Dec. 12, 2019.
· "Young Astronomer Uses Artificial Intelligence To Discover 2 Exoplanets" NPR interview for *Morning Edition.* Aired April 1, 2019.

Press Coverage

· "UT Astronomers Find Two New Planets Using Artificial Intelligence" Featured in outlets including MIT Technology Review, FiveThirtyEight, Venture Beat, and UT Austin's "Research that Changed the World in 2019." March 26, 2019.