

MICHELLE L HILL

CURRICULUM VITAE

UCR PhD Candidate

Department of Earth and Planetary Sciences
University of California, Riverside

Mobile: +1 (415) 278-1709
Email: mhill012@ucr.edu

Research Interests

My research interests include exoplanet habitability and detection, with particular interest in low-mass exoplanets in the habitable zone. My main thesis project explores how small a planet can be and still maintain liquid surface water through modelling. I also use a combination of transit photometry, radial velocity and astrometry methods to detect exoplanets.

Education

University of California, Riverside	EPS	Ph.D. <i>Expected:</i> April 2025
University of Southern Queensland	Physics	B.S. Honors <i>Summa Cum Laude</i> , 2018
University of New England	Physics	B.S. <i>Summa Cum Laude</i> , 2017
San Francisco State University	Astrophysics	B.S. <i>1 year exchange.</i> , 2016

Positions Held

Research Assistant, University of California, Riverside	2018-2025
Science Instructor, Science From Scientists	2016-2018
Research Assistant, San Francisco State University	2015-2016
Pilot: First Officer, GAMair	2012-2015
Pilot: Charter & Flight instructor, FlightOne	2010-2012
Pilot: Flight instructor, Flight Training Australia	2008-2010

First Author Publications

1. Hill, M.L. et al., “*STEHM: Smaller Than Earth Habitability Model. Exploring the Lower Planet Size Boundary of Planetary Habitability*”, 2024, **in Prep**
2. Hill, M.L. et al., “*The TESS-Keck Survey. XIX. A Warm Transiting Sub-Saturn Mass Planet and a non-Transiting Saturn Mass Planet Orbiting a Solar Analog*”, 2024, *The Astronomical Journal*, 167, 151
3. Hill, M.L. et al., “*A Catalog of Habitable Zone Exoplanets*”, 2023, *The Astronomical Journal*, 165, 34
4. Hill, M.L. et al., “*Asteroseismology of iota Draconis and Discovery of an Additional Long-Period Companion*”, 2021, *The Astronomical Journal*, 162, 211
5. Hill, M.L., Kane, S.R., Mocnik, T. “*Orbital Refinement and Stellar Properties for the HD 9446, HD 43691, and HD 179079 Planetary Systems*”, 2020, *The Astronomical Journal*, 159, 5
6. Hill, M.L., Kane, S.R., Duarte, E. Seperuelo, Kopparapu, R.K., Gelino, D.A., & Wittenmyer, R.A. “*Exploring Kepler Giant Planets in the Habitable Zone*”, 2018, *The Astrophysical Journal*, 860, 1

Notable Coauthor Publications

1. Kane, S.R., Hill, M.L. et al. , 2023, *The Astronomical Journal*, 165, 252
2. Ostberg, C. et al. (9 additional co-authors including Hill, M.L.), 2023, *The Astronomical Journal*, 165, 4
3. Crossfield, I.J.M., Malik, M., Hill, M.L., et al., 2023, *The Astrophysical Journal Letters*, 937, L17

4. Chontos, A. et al. (61 additional co-authors including **Hill, M.L.**), 2022, The Astronomical Journal, 163, 297
 5. Kane, S.R., Foley, B.J., **Hill, M.L.**, et al. 2022, The Astronomical Journal, Volume 163, 20
 6. Kane, S.R., Roettenbacher, R.M., Unterborn, C., Foley, B.J., **Hill, M.L.**, 2020, The Planetary Science Journal, 1, 2
 7. Kane, S.R., Fetherolf, T., **Hill, M.L.**, 2020, The Astronomical Journal, 159, 4
 8. Kane, S.R., **Hill, M.L.**, et al., 2016, The Astrophysical Journal, 830, 1
- + Plus **27 additional publications** for which I supplied observations.

Talks

1. *May 2022 Contributed Talk*, AbSciCon, Atlanta, GA, USA
2. *October 2019 Invited Talk*, IPAC Seminar, Pasadena, CA, USA
3. *March 2019 Contributed Talk*, Kepler & K2 Science Conference V, Glendale, CA, USA
4. *January 2019 Contributed Talk*, 233rd Meeting of the AAS, Seattle, WA, USA
5. *June 2018 Thesis Defense*, University of New England, NSW, Australia
6. *December 2017 Contributed Talk*, AGU Fall Meeting, New Orleans, LA, USA
7. *April 2017 Contributed Talk*, AbSciCon, Mesa, AZ, USA

Posters

1. *June 2024, Hill, M.L.* et al., Exoplanets 5, Leiden, Netherlands **Poster**
2. *May 2024, Hill, M.L.* et al., AbSciCon, Providence, RI, USA **Poster**
3. *April 2024, Hill, M.L.* et al., SEEC, Baltimore, MD, USA **Poster**
4. *June 2022, Hill, M.L.* et al., CIDER Workshop, Berkeley, CA, USA **Poster**
5. *Feb 2022, Hill, M.L.* et al., Exoplanets in Our Backyard, Albuquerque, NM, USA **Poster**
6. *August 2019, Hill, M.L.* et al., Extreme Solar Systems IV, Reykjavik, Iceland **Poster**
7. *July 2019, Hill, M.L.* et al., Sagan Summer Workshop, Pasadena, CA, USA **Poster**

Honors and Awards

NASA FINESST Fellow	2021 - 2025
Exoplanets in Our Backyard 3 Travel Grant	2024
Seec Symposium Student Travel Grant	2024
Sagan Summer workshop Travel Grant	2019
Kepler & K2 Science Conference V Student Travel Grant	2019
University of Southern Queensland First Class Honours	2018
AGU Student Travel Grant	2017
University of New England Vice Chancellor Honour Roll	2015, 2016
San Francisco State University Dean's List	2015

Computer Skills

Proficient in Python, Matlab

Intermediate in Fortran

Extensive experience modeling radial velocity data with RadVel & RVSearch

Experience modeling joint astrometry and radial velocity data with Orvara

Experience modeling joint transit and radial velocity data with Exoplanet

Intermediate experience modeling with VPLanet, cGENIE, ROCKE-3D

Outreach

Member	UCR EpSci DEI	2020 - Present
Founder and Treasurer	Women in Physics and Astronomy (WIPAA) SFSU	2015 - 2016
Member	Ninety-Nines	2008 - Present

Workshops

Sagan Summer	2016, 2018, 2019, 2020, 2022, 2024
CIDER	2022
VPLanet	2019, 2023
cGENIE	2019
ROCKE-3D	2019
Lick Observatory	2019

Telescope Training

Keck HIRES, 2019, HI, USA
 Lick Observatory, 2019, CA, USA