Curriculum Vitae

Miles Currie

February 2021

EDUCATION

PhD Astronomy and Astrobiology, University of Washington, estimated 2024

MS Astronomy, University of Washington, 2020

BS *magna cum laude* Physics and Astrophysics, Florida State University, 2017

RESEARCH EXPERIENCE

University of Washington September 2018—present
Graduate Research Assistant
Uses theoretical models and synthetic observations to understand how the upcoming extremely large ground-based telescopes will characterize terrestrial exoplanets for habitability and life

Space Telescope Science Institute August 2017—September 2018
Post-Baccalaureate Researcher
Calibrated type Ia supernova observations using Bayesian mixture models from ground-based surveys for cosmology fits and developed a convolutional neural network to automatically search for transients in Hubble Space Telescope and James Webb Space Telescope observations

Geophysical Fluid Dynamics Institute January 2017—August 2017
Post-Baccalaureate Researcher
Used models and experiments to understand and predict how forest fires spread in a given environment

SETI Institute/NASA Ames Research Center June 2016—August 2016
Post-Baccalaureate Researcher
Developed a novel method of detrending noisy Kepler/K2 observations for exoplanet discovery

Florida State University January 2014—August 2017
Undergraduate Researcher
Used Hubble Space Telescope data to characterize supernovae in their host galaxies in support of mission development for the Wide Field Infrared Survey Telescope

PUBLICATIONS

First Authored

3. **Currie, M.**, Rubin, D., Aldering, G., Deustua, S., Fruchter, A., Perlmutter, S. (2020, *submitted). "Improving the Calibration of the SN Ia Anchor Datasets with a Bayesian Hierarchical Model", *The Astrophysical Journal*.

2. **Currie, M.** and Rubin, D. (2018). "Characterization of Unstable Pixels Using a Mixture Model: Application to HST WFC3 IR". *Research Notes of the American Astronomical Society*, 2, 141.

1. **Currie, M.**, Speer, K., Hiers, J.K., O'Brien, J.J., Goodrick, S., and Quaife, B. (2018). "Pixel-level statistical analyses of prescribed fire spread". *Canadian Journal of Forest Research*, 49, 1.

Co-Authored

1. Rubin, D.; Aldering, G.; Barbary, K.; Boone, K.; Chappell, G.; **Currie, M.**; Deustua, S.; Fagrelius, P.; Fruchter, A.; Hayden, B.; Lidman, C.; Nordin, J.; Perlmutter, S.; Saunders, C.; Sofiatti, C. "UNITY: Confronting Supernova Cosmology's Statistical and Systematic Uncertainties in a Unified Bayesian Framework" (2016). *The Astrophysical Journal*, 813(2), 137.

CONFERENCES

Posters

4. **Currie, M.** and Meadows, V.S. (2021). "There's more to life than O2: Simulating the detectability of a range of molecules for ground-based high-resolution spectroscopy of transiting terrestrial exoplanets". Habitable Worlds 2, Virtual, 24-28 February.

3. **Currie, M.** and Meadows, V.S. (2020). "Observing Terrestrial Exoplanets with Ground-Based High-Resolution Spectroscopy". Exoplanets in Our Backyard, Houston, TX, 5–7 February.

2. **Currie, M.** and Meadows, V.S. (2019). "Detecting Oxygen False Positives: A Feasibility Study". Sagan Summer Science Workshop, Pasadena, CA, 15–19 July.

1. **Currie, M.** and Meadows, V.S. (2019). "Detecting Oxygen False Positives: A Feasibility Study". Astrobiology Science Conference, Bellevue, WA, 24–28 June.