

Ashley Chontos

CONTACT

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EDUCATION

2016 - present **University of Hawai'i at Mānoa, Honolulu, HI**

- Advanced to Ph. D. Candidacy (2018)
- M.S. in Astronomy and Astrophysics (2018), GPA: 3.68/4.00

2013 - 2016 **State University of New York (SUNY) at Albany, Albany, NY**

- Graduated Summa Cum Laude
 - B.S. in Physics, GPA: 3.86/4.00
 - B.S. in Mathematics, GPA: 3.93/4.00
 - Focuses in Applied Mathematics and Statistics

RESEARCH EXPERIENCE

2016 - present **Graduate Research Assistant, University of Hawai'i at Mānoa,**

- Ph. D. Title: *Precise Stellar and Planet Properties in the Kepler, K2 & TESS Era*
- Committee: Daniel Huber (chair, IfA Mānoa), Christoph Baranec (IfA Hilo), Eric Gaidos (UH Mānoa), Andrew Howard (Caltech), Michael Liu (IfA Mānoa), Sara Seager (MIT), Jennifer van Saders (IfA Mānoa)
- Focuses:
 - Stellar radii, masses, and ages using asteroseismology, including a complete catalogue of exoplanets orbiting asteroseismic stars
 - Transit photometry and spectroscopic radial velocity analyses
 - Photometric data processing and software development for precise stellar and planet properties
 - Post main-sequence planetary system dynamics and evolution

- 2016 | **Graduate Research Assistant, NASA Goddard Space Flight Center**
- Developed an algorithm to model non-uniform surfaces and atmospheres of exoplanets from space-based photometry
 - Mapped and estimated dayside/nightside equilibrium temperatures
- 2015 - 2016 | **Undergraduate Research Assistant, Stanford University**
- Ran simulations for the direct imaging exoplanet survey of the NASA Roman Space Telescope (formerly WFIRST) with Prof. Bruce Macintosh, Co-I of the coronagraph instrument
 - Tested different strategies and yields, which included a purely blind survey and a joint ground-based RV survey for pre-launch target selection
- 2014 - 2016 | **Undergraduate Research Assistant, SUNY Albany**
- Detected and characterized non-transiting exoplanets with EXONEST, a Bayesian nested sampling algorithm that looks for reflected light variations in *Kepler* data

TEACHING EXPERIENCE

- Fall 2016 Lecture Teaching Assistant, ASTR 110: Survey of Astronomy
- Fall 2016 Lab Teaching Assistant, ASTR 110: Survey of Astronomy
- Spring 2014 Lecture Teaching Assistant, ICSI 124X: Computer Security Basics
- Fall 2013 Lecture Teaching Assistant, ICSI 124X: Computer Security Basics

OUTREACH EXPERIENCE

- 2018 - present Punahou Speaker Series, Oahu, HI
- 2017 - present Maunakea Scholars (long-term mentor), Big Island, HI
- 2017 - present HI STAR (long-term mentor), Oahu, HI and Maui, HI
- 2019 Boy Scouts of Hawai'i Astronomy Merit Badge, Oahu, HI
- 2018 Lacy Veach Day, Oahu, HI
- 2018 Astroday, Big Island, HI
- 2018 Space Night, Oahu, HI
- 2018 STEM Fest, Oahu, HI
- 2017 Astroday West, Big Island, HI
- 2017 Lacy Veach Day, Oahu, HI
- 2017 HI STAR (student-mentor visit), Maui, HI
- 2017 Starlab, Oahu, HI

- 2017 Oahu In-step Science Show and Exposition, Oahu, HI
- 2017 Boy Scouts of Hawai'i Astronomy Merit Badge, Oahu, HI
- 2017 HI STAR (short-term mentor), Oahu, HI
- 2017 HI STAR (camp counselor), Oahu, HI
- 2017 Astroday, Big Island, HI
- 2017 March for Science, Oahu, HI
- 2016 Solar System Walk, Big Island, HI
- 2016 KTA Super Store Haunted House, Big Island, HI
- 2016 Girl Scouts of Hawai'i, Light and Spectra Activity, Oahu, HI

GRANTS, FELLOWSHIPS, HONORS & AWARDS

- 2018 - present National Science Foundation Graduate Research Fellowship
- 2019 Friends of the IfA Outreach Award, Honolulu, Hawai'i
- 2019 Achievement Reward for College Scientists, Columbia Communications Award in Astronomy (Honolulu Chapter)
- 2017 Poster Award, Know Thy Star, Know Thy Planet, Pasadena, California
- 2017 Outstanding Outreach Award, Institute for Astronomy, University of Hawai'i at Mānoa
- 2016 John C. Mather Nobel Scholar, NASA Goddard Space Flight Center
- 2016 Summer Internship, NASA Goddard Space Flight Center
- 2015 Summer Undergraduate Research Fellowship, Stanford University

CONFERENCES & INVITED TALKS

- 2020 TESS Science Team Meeting #23
- 2020 Exoplanets & Stars Seminar, Yale University, New Haven, CT
- 2020 Exoplanets III, Heidelberg, Germany
- 2020 The 235th American Astronomical Society Meeting, Honolulu, HI
- 2019 Fifth TESS Asteroseismic Science Consortium Conference, MIT, Cambridge, USA
- 2019 TESS SciCon I, MIT, Cambridge, USA
- 2019 Kepler/K2 SciCon V, Glendale, CA
- 2018 Astrobiology Seminar, University of Hawai'i at Mānoa, HI, USA
- 2018 Fourth TESS Asteroseismic Science Consortium Conference, Aarhus, Denmark
- 2017 Know Thy Star, Know Thy Planet, Pasadena, CA, USA
- 2017 Astronomy Seminar, Columbia University, New York, NY
- 2017 Kepler/K2 SciCon IV, NASA Ames Research Center, Mountain View, CA
- 2016 NASA Goddard Space Flight Center, Greenbelt, MD

SELECTED PUBLICATIONS

- Chontos, A.**, et al., "TESS Asteroseismology of alpha Mensae: Benchmark Ages for a G7 Dwarf and its M-dwarf Companion," *The Astrophysical Journal*, submitted (2021).
- Weiss, L. M., et al., "The TESS-Keck Survey II: An Ultra-short-period Rocky Planet and Its Siblings Transiting the Galactic Thick-disk Star TOI-561," *The Astronomical Journal* vol. 161, 56 (2021).
- Kosiarek, M. R., et al., "Physical Parameters of the Multiplanet Systems HD 106315 and GJ 9827," *The Astronomical Journal* vol. 161, 47 (2021).
- Addison, B. C., et al., "TOI-257 b (HD 19916 b): A Warm Sub-Saturn Orbiting an Evolved F-type Star," *Monthly Notices of the Royal Astronomical Society*, submitted (2020). Citations: 7
- Dai, F., et al., "The TESS-Keck Survey III: A Stellar Obliquity Measurement of TOI-1726 c," *The Astronomical Journal* vol. 160, 193 (2020).
- Carleo, I., "The Multiplanet System TOI-421," *The Astronomical Journal* vol. 160, 114 (2020). Citations: 5
- Cloutier, R., et al., "TOI 1235 b: A Keystone Super-Earth for Testing Radius Valley Emergence Models around Early M Dwarfs," *The Astronomical Journal* vol. 160, 22 (2020). Citations: 10
- Dalba, P., et al., "The TESS-Keck Survey I: A Warm Sub-Saturn-mass Planet and a Caution about Stray Light in TESS Cameras," *The Astronomical Journal* vol. 159, 241 (2020).
- Guo, X., et al., "Updated Parameters and a New Transmission Spectrum of HD 97658b," *The Astronomical Journal* vol. 159, 239 (2020). Citations: 9
- Lund, M., et al., "Asteroseismology of the Multiplanet System K2-93," *The Astronomical Journal* vol. 158, 248 (2019).
- Pope, B., et al., "The Kepler Smear Campaign: Light Curves for 102 Very Bright Stars," *The Astrophysical Journal Supplement Series* vol. 224, 18 (2019).
- Crossfield, I., et al., "A Super-Earth and Sub-Neptune Transiting the Late-type M Dwarf LP 791-18," *The Astrophysical Journal Letters* vol. 883, L16 (2019). Citations: 14
- Huber, D., Chaplin, B., **Chontos, A.**, Kjeldsen, H. Christensen-Dalsgaard, J., et al., "A Hot Saturn Orbiting An Oscillating Late Subgiant Discovered by TESS," *The Astronomical Journal* vol. 157, 245 (2019). Citations: 42
- Chontos, A.**, et al., "The Curious Case of KOI-4: Confirming Kepler's First Exoplanet Detection," *The Astronomical Journal* vol. 157, 192 (2019). Citations: 10
- Grunblatt, S., Huber, D., Gaidos, E., Lopez, E., Barclay, T., **Chontos, A.**, Sinukoff, E., Van Eylen, V., Howard, A., and Isaacson, H., "Do Close-in Giant Planets Orbiting Evolved Stars Prefer Eccentric Orbits?" *The Astrophysical Journal Letters* vol. 861, L5 (2018). Citations: 13
- De Rosa, R. J., et al., "Astrometric Confirmation and Preliminary Orbital Parameters of the Young Exoplanet 51 Eridani b with the Gemini Planet Imager," *The Astrophysical Journal Letters* vol. 814, L3 (2015). Citations: 43