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