

# ASHLEY CHONTOS

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## EDUCATION

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| Ph.D., Astronomy, University of Hawai'i at Mānoa         | 2022 |
| Thesis: <i>The Space Photometry Revolution</i>           |      |
| Advisor: Daniel Huber                                    |      |
| M.Sc., Astronomy, University of Hawai'i at Mānoa         | 2018 |
| B.Sc., Mathematics, <i>Summa Cum Laude</i> , SUNY Albany | 2016 |
| B.Sc., Physics, <i>Summa Cum Laude</i> , SUNY Albany     | 2016 |

## PROFESSIONAL EMPLOYMENT

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|---|--------------|
| <i>Henry Norris Russell Fellow</i> , Princeton                | 2022–present |
| <i>Visiting Research Scientist</i> , TESS Science Office, MIT | 2019–2022    |
| <i>NSF Graduate Research Fellow</i> , UH Mānoa                | 2018–2022    |
| <i>Research Assistant</i> , UH Mānoa                          | 2017–2018    |
| <i>Research Assistant</i> , NASA Goddard Space Flight Center  | 2016         |
| <i>Research Assistant</i> , Stanford                          | 2015–2016    |

## RESEARCH INTERESTS

Asteroseismology; exoplanet detection and characterization; subgiant demographics; software development; stellar evolution; space telescopes; astronomical surveys; computational astrophysics.

## SELECTED HONORS & AWARDS

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| Student Excellence in Research Award, UH Mānoa                       | 2022 |
| Henry Norris Russell Postdoctoral Fellowship, Princeton              | 2021 |
| IfA Director's Award for Outstanding Outreach, UH Mānoa              | 2019 |
| Achievement Reward for College Scientists (ARCS) Scholar, UH Mānoa   | 2019 |
| National Science Foundation Graduate Research Fellowship             | 2018 |
| IfA Director's Award for Outstanding Outreach, UH Mānoa              | 2017 |
| John C. Mather Nobel Scholar Award, NASA Goddard Space Flight Center | 2016 |

## SELECTED TALKS

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| <i>Invited Colloquium</i> , University of Kansas                             | April 2022     |
| <i>Invited Seminar</i> , Princeton Exoplanets                                | February 2022  |
| <i>Invited Seminar</i> , Stanford KIPAC Tea Talk                             | November 2021  |
| <i>Invited Seminar</i> , UChicago Exoplanet Journal Club                     | September 2021 |
| <i>Invited Seminar</i> , Carnegie EPL Astronomy Seminar                      | September 2021 |
| <i>Invited Seminar</i> , MIT TESS Science Talk                               | September 2021 |
| <i>Contributed Talk</i> , Keck Science Meeting                               | September 2021 |
| <i>Contributed Talk</i> , TESS Science Conference II                         | August 2021    |
| <i>Invited Seminar</i> , The Good Vibrations Seminar                         | February 2021  |
| <i>Contributed Talk</i> , TESS Science Team Meeting #23                      | October 2020   |
| <i>Invited Seminar</i> , Yale Exoplanets & Stars Seminar                     | September 2020 |
| <i>Contributed Talk</i> , Exoplanets III                                     | July 2020      |
| <i>Contributed Talk</i> , 235th Meeting of the American Astronomical Society | January 2020   |
| <i>Contributed Talk</i> , TESS Asteroseismic Science Consortium V            | July 2019      |

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| <i>Contributed Talk</i> , TESS Science Conference I                | July 2019      |
| <i>Contributed Talk</i> , Kepler/K2 SciCon V                       | March 2019     |
| <i>Invited Seminar</i> , UH Mānoa Astrobiology Seminar             | September 2018 |
| <i>Contributed Talk</i> , TESS Asteroseismic Science Consortium IV | July 2018      |
| <i>Invited Seminar</i> , Columbia Astronomy Seminar                | October 2017   |

## TEACHING, SERVICE & LEADERSHIP

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| <i>Mentor</i> for high school students through HI STAR               | 2017– <i>present</i>   |
| <i>Astronomy Graduate Outreach Coordinator &amp; Volunteer</i>       | 2016–2020              |
| Selected Events:   |                        |
| · Punahou Speaker Series (Oahu, HI)                                  | 2018– <i>present</i>   |
| · Starlab (Oahu, HI)   | 2017– <i>present</i>   |
| · Boy Scouts of Hawai‘i Astronomy Merit Badge (Oahu, HI)             | 2017, 2018, 2019       |
| · Stem Fest (Oahu, HI)   | 2017, 2018, 2019       |
| · Hawaiian Astronaut Lacy Veach Day (Oahu, HI)                       | 2017, 2018, 2019       |
| · Astroday (Big Island, HI)  | 2016, 2017a/b, 2018a/b |
| <i>Teaching Assistant</i> , ASTR 110: Lab, University of Hawai‘i     | 2016                   |
| <i>Teaching Assistant</i> , ASTR 110: Lecture, University of Hawai‘i | 2016                   |
| <i>Teaching Assistant</i> , ICSI 124X: Lecture, SUNY Albany          | 2013, 2014             |

## PRESS COVERAGE

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Kepler’s First Exoplanet Discovery [Chontos et al. 2019]: The discovery was announced during my talk at Kepler SciCon V, which included a coordinated press release between [NASA] and [UH]. Articles featuring the science result included [CNN], [Space.com], [Universe Today], [Science News], and many others. The story made the front page of the main [Hawaiian newspaper] as well as my [hometown newspaper]. I was also invited as a guest speaker to talk about the planet on live [Hawai‘i public radio].

## AWARDED TELESCOPE TIME & OBSERVING EXPERIENCE

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| <i>PI</i> , 16 nights over 4 semesters using HIRES on Keck I 10m Telescope      | 2019– <i>present</i> |
| <i>Exoplanets Orbiting Subgiants: Benchmark Systems with TESS</i>               |                      |
| Co-Is: Daniel Huber, Andrew Howard, Howard Isaacson, Lauren Weiss               |                      |
| <i>Co-I</i> , 4 nights in 2019B using HIRES on Keck I 10m Telescope             | 2018                 |
| <i>The TESS-Keck Survey of Exoplanets Orbiting Asteroseismic Host Stars</i>     |                      |
| PI: Daniel Huber; Co-Is: Andrew Howard, Howard Isaacson, Lauren Weiss           |                      |
| <i>Co-I</i> , 0.5 night in 2019B using HIRES on Keck I 10m Telescope            | 2018                 |
| <i>Spin-Orbit Alignment in Kepler’s First Exoplanet System</i>                  |                      |
| PI: Daniel Huber; Co-I: Teruyuki Hirano   |                      |
| <i>Observer</i> , 74 nights on Keck/HIRES through the CPS & TKS collaborations  | 2018– <i>present</i> |
| <i>Observer</i> , 5 nights on Gemini South/GPI through the GPI Exoplanet Survey | 2015                 |

## PEER-REVIEWED PUBLICATIONS

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Total publications: 45, with 4 as first author and 13 with significant contributions.

Total citations: ~700, h-index=16 (updated August 22, 2022).

Bibliography: [NASA ADS] [ORCID]

### First Author Publications:

**Chontos, A.**, Sayeed, M. and Huber, D., “pySYD: Automated Measurements of Global Asteroseismic Parameters,” *JOSS*, *in review*. [NASA ADS]

- Chontos, A.**, Murphy, J., MacDougall, M., et al., “The TESS-Keck Survey: Science Goals and Target Selection,” *AJ*, **163**, 297 (06/2022). [NASA ADS]
- Chontos, A.**, Huber, D., Kjeldsen, H., et al., “TESS Asteroseismology of  $\alpha$  Mensae: Benchmark Ages for a G7 Dwarf and its M-dwarf Companion,” *ApJ*, **922**, 229 (12/2021). [NASA ADS]
- Chontos, A.**, Huber, D., Latham, D., et al., “The Curious Case of KOI 4: Confirming Kepler’s First Exoplanet Detection,” *AJ*, **157**, 192 (05/2019). [NASA ADS]

#### Significant Co-Author Publications:

- Rosenthal, L. J., et al. [including **Chontos, A.**], “The California Legacy Survey. III. On the Shoulders of (Some) Giants: The Relationship between Inner Small Planets and Outer Massive Planets,” *ApJSS*, **262**, 1 (09/2022). [NASA ADS]
- Boesgaard, A., Lum, M., **Chontos, A.**, Deliyani, C., “Lithium and Beryllium in NGC 752 – An Open Cluster Twice the Age of the Hyades,” *ApJ*, **927**, 118 (03/2022). [NASA ADS]
- Grunblatt, S., Saunders, N., Sun, M., **Chontos, A.**, et al., “TESS Giants Transiting Giants II: The hottest Jupiters orbiting evolved stars,” *AJ*, **163**, 120 (03/2022). [NASA ADS]
- Huber, D., White, T., Metcalfe, T., **Chontos, A.**, et al., “A 20-Second Cadence View of Solar-Type Stars and Their Planets with TESS: Asteroseismology of Solar Analogs and a Re-characterization of  $\pi$  Men c,” *AJ*, **163**, 79 (02/2022). [NASA ADS]
- Rosenthal, L. J., et al. [including **Chontos, A.**], “The California Legacy Survey. I. A Catalog of 178 Planets from Precision Radial Velocity Monitoring of 719 Nearby Stars over Three Decades,” *ApJSS*, **225**, 8 (07/2021). [NASA ADS]
- Guerrero et al. [including **Chontos, A.**], “The TESS Objects of Interest Catalog from the TESS Prime Mission,” *ApJSS*, **254**, 39 (06/2021). [NASA ADS]
- Addison, B. C., et al. [including **Chontos, A.**], “TOI-257b (HD 19916b): a warm sub-saturn orbiting an evolved F-type star,” *MNRAS*, **502**, 3704-3722 (04/2021). [NASA ADS]
- Rubenzahl, R., Dai, F., Howard, A. W., **Chontos, A.**, et al., “The TESS-Keck Survey. IV. A Retrograde, Polar Orbit for the Ultra-low-density, Hot Super-Neptune WASP-107b,” *AJ*, **161**, 119 (03/2021). [NASA ADS]
- Lund, M., Knudstrup, E., Silva Aguirre, V., Basu, S., **Chontos, A.**, et al., “Asteroseismology of Multiplanet System K2-93,” *AJ*, **158**, 248 (12/2019). [NASA ADS]
- Crossfield, I. J. M., et al. [including **Chontos, A.**], “A Super-Earth and Sub-Neptune Transiting the Late-type M Dwarf LP 791-18,” *ApJL*, **883**, L16 (09/2019). [NASA ADS]
- Huber, D., Chaplin, W., **Chontos, A.**, et al., “A Hot Saturn Orbiting an Oscillating Late Subgiant Discovered by TESS,” *AJ*, **157**, 245 (06/2019). [NASA ADS]
- Grunblatt, S., et al. [including **Chontos, A.**], “Do Close-in Giant Planets Orbiting Evolved Stars Prefer Eccentric Orbits?” *ApJL*, **861**, L5 (07/2018). [NASA ADS]
- De Rosa, R. J., et al. [including **Chontos, A.**], “Astrometric Confirmation and Preliminary Orbital Parameters of the Young Exoplanet 51 Eridani b with the Gemini Planet Imager,” *ApJL*, **814**, L3 (11/2015). [NASA ADS]

#### Other Co-Author Publications:

- Mohammed, E., et al. [including **Chontos, A.**], “TOI 560: Two Transiting Planets Orbiting a K Dwarf Validated with iSHELL, PFS and HIRES RVs,” *in review*. [NASA ADS]

- MacDougall, M., et al. [including **Chontos, A.**], “The TESS-Keck Survey. XIII. An Eccentric Hot Neptune with a Similar-Mass Outer Companion around TOI-1272,” *in review*. [NASA ADS]
- Turtelboom, E., et al. [including **Chontos, A.**], “The TESS-Keck Survey. XI. Mass Measurements for Four Transiting Sub-Neptunes Orbiting K Dwarf TOI-1246,” *AJ*, **163**, 293 (06/2022). [NASA ADS]
- Winters, J. G., et al. [including **Chontos, A.**], “A Second Planet Transiting LTT-1445A and a Determination of the Masses of Both Worlds,” *AJ*, **163**, 168 (04/2022). [NASA ADS]
- Lubin, J., et al. [including **Chontos, A.**], “TESS-Keck Survey IX: Masses of Three Sub-Neptunes Orbiting HD 19139 and the Discovery of a Warm Jovian Plus a Distant Sub-Stellar Companion,” *AJ*, **163**, 101 (02/2022). [NASA ADS]
- Giacalone, S., et al. [including **Chontos, A.**], “Validation of 13 Hot and Potentially Terrestrial TESS Planets,” *AJ*, **163**, 99 (02/2022). [NASA ADS]
- Dalba, P., et al. [including **Chontos, A.**], “The TESS-Keck Survey. VIII. Confirmation of a Transiting Giant Planet on an Eccentric 261 day Orbit with the Automated Planet Finder Telescope,” *AJ*, **163**, 61 (02/2022). [NASA ADS]
- Heidari, N., et al. [including **Chontos, A.**], “HD207897 b: A Dense Sub-Neptune Transiting a Nearby and Bright K-type Star,” *A&A*, **658**, 176 (02/2022). [NASA ADS]
- Saunders, N., et al. [including **Chontos, A.**], “TESS Giants Transiting Giants I: A Non-inflated Hot Jupiter Orbiting a Massive Subgiant,” *AJ*, **163**, 53 (02/2022). [NASA ADS]
- Mathur, S., et al. [including **Chontos, A.**], “Detections of solar-like oscillations in dwarfs and subgiants with Kepler DR25 short-cadence data,” *A&A*, **657**, A31 (01/2022). [NASA ADS]
- MacDougall, M., et al. [including **Chontos, A.**], “The TESS-Keck Survey. VI. Two Eccentric Sub-Neptunes Orbiting HIP-97166,” *AJ*, **162**, 265 (12/2021). [NASA ADS]
- Polanski, A. S., et al. [including **Chontos, A.**], “Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-Poor K Dwarf,” *AJ*, **162**, 238 (12/2021). [NASA ADS]
- Scarsdale, N., et al. [including **Chontos, A.**], “The TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935,” *AJ*, **162**, 215 (11/2021). [NASA ADS]
- Llop-Sayson, J., et al. [including **Chontos, A.**], “Constraining the Orbit and Mass of  $\epsilon$  Eridani b with Radial Velocities, Hipparcos IAD-Gaia DR2 Astrometry, and Multi-epoch Vortex Coronagraphy Upper Limits,” *AJ*, **162**, 181 (11/2021). [NASA ADS]
- Zhang, J., Weiss, L. M., Huber, D., Blunt, S., **Chontos, A.**, et al., “Long-period Jovian Tilts the Orbits of Two sub-Neptunes Relative to Stellar Spin Axis in Kepler-129,” *AJ*, **162**, 89 (09/2021). [NASA ADS]
- Dai, F., et al. [including **Chontos, A.**], “TKS X: Confirmation of TOI-1444b and a Comparative Analysis of the Ultra-short-period Planets with Hot Neptunes,” *AJ*, **162**, 62 (08/2021). [NASA ADS]
- Fulton, B. J., et al. [including **Chontos, A.**], “The California Legacy Survey. II. Occurrence of Giant Planets beyond the Ice Line,” *ApJSS*, **255**, 14 (07/2021). [NASA ADS]
- Weiss, L. M., et al. [including **Chontos, A.**], “The TESS-Keck Survey. II. An Ultra-short-period Rocky Planet and its Siblings Transiting the Galactic Thick-disk Star TOI-561,” *AJ*, **161**, 56 (02/2021). [NASA ADS]
- Kosiarek, M. R., et al. [including **Chontos, A.**], “Physical Parameters of the Multiplanet Systems HD 106315 and GJ 9827,” *AJ*, **161**, 47 (01/2021). [NASA ADS]

- Dreizler, S., et al. [including **Chontos, A.**], “The CARMENES search for exoplanets around M dwarfs. LP 714-47 b (TOI 442.01): populating the Neptune desert,” *A&A*, **644**, A127 (12/2020). [NASA ADS]
- Dai, F., et al. [including **Chontos, A.**], “The TESS-Keck Survey. III. A Stellar Obliquity Measurement of TOI-1726 c,” *AJ*, **160**, 193 (10/2020). [NASA ADS]
- Demory, B. O., et al. [including **Chontos, A.**], “A Super-Earth and a Sub-Neptune Orbiting the Bright, Quiet M3 Dwarf TOI-1266,” *A&A*, **642**, A49 (10/2020). [NASA ADS]
- Carleo, I., et al. [including **Chontos, A.**], “The Multiplanet System TOI-421,” *AJ*, **160**, 114 (09/2020). [NASA ADS]
- Cloutier, R., et al. [including **Chontos, A.**], “TOI-1235 b: A Keystone Super-Earth for Testing Radius Valley Emergence Models around Early M Dwarfs,” *AJ*, **160**, 22 (07/2020). [NASA ADS]
- Dalba, P., et al. [including **Chontos, A.**], “The TESS-Keck Survey. I. A Warm Sub-Saturn-mass Planet and a Caution about Stray Light in TESS Cameras,” *AJ*, **159**, 241 (05/2020). [NASA ADS]
- Guo, X., et al. [including **Chontos, A.**], “Updated Parameters and a New Transmission Spectrum of HD 97658b,” *AJ*, **159**, 239 (05/2020). [NASA ADS]
- Pope, B. J. S., et al. [including **Chontos, A.**], “The Kepler Smear Campaign: Light Curves for 102 Very Bright Stars,” *ApJSS*, **244**, 18 (09/2019). [NASA ADS]
- Becker, J. C., et al. [including **Chontos, A.**], “A Discrete Set of Possible Transit Ephemerides for Two Long-period Gas Giants Orbiting HIP 41378,” *AJ*, **157**, 19 (01/2019). [NASA ADS]

## REFERENCES

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