

# ASHLEY CHONTOS

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## EDUCATION

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

<i>Henry Norris Russell Fellow</i> , Princeton	2022– <i>present</i>
<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

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

<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

<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> , 85 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: 53, with 4 as first author and 17 with significant contributions.

Total citations: ~1000, h-index=18 (updated February 20, 2023).

Bibliography: [NASA ADS] [ORCID]

### First Author Publications:

**Chontos, A.**, Huber, D., Sayeed, M. and Yamsiri, P., “pySYD: Automated Measurements of Global Asteroseismic Parameters,” *JOSS*, **7**, 3331 (11/2022). [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:

- Grunblatt, G., Saunders, N., **Chontos, A.**, et al., “TESS Giants Transiting Giants III: An Eccentric Warm Jupiter Supports a Period-eccentricity Relation for Giant Planets Transiting Evolved Stars,” *AJ*, **165**, 44 (02/2023). [NASA ADS]
- Hatt, E., et al. [including **Chontos, A.**], “A Catalogue of Solar-like Oscillators Observed by TESS in 120-second and 20-second Cadence,” *A&A*, **669**, A67 (01/2023). [NASA ADS]
- Vissapragada, S., **Chontos, A.**, et al., “The Possible Tidal Demise of Kepler’s First Planetary System,” *ApJL*, **941**, L31 (12/2022). [NASA ADS]
- Boesgaard, A., Deliyannis, C., Lum, M., and **Chontos, A.**, “Lithium and Beryllium in One Solar Mass Stars,” *ApJ*, **941**, 21 (12/2022). [NASA ADS]
- 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.**, Deliyannis, 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:

Knudstrup, E., et al. [including **Chontos, A.**], “Radial velocity confirmation of a hot super-Neptune discovered by TESS with a warm Saturn-mass companion,” *MNRAS*, **519**, 5637-5655 (03/2023). [NASA ADS]

Yee, S., et al. [including **Chontos, A.**], “The TESS Grand Unified Hot Jupiter Survey. II. Twenty New Giant Planets,” *ApJSS*, **265**, 1 (03/2023). [NASA ADS]

Van Zandt, J., et al. [including **Chontos, A.**], “TESS-Keck Survey XIV: 2 Giant Exoplanets from the Distant Giants Survey,” *AJ*, **165**, 60 (02/2023). [NASA ADS]

Dai, F., et al. [including **Chontos, A.**], “TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain,” *AJ*, **165**, 33 (02/2023). [NASA ADS]

Mohammed, E., et al. [including **Chontos, A.**], “TOI 560: Two Transiting Planets Orbiting a K Dwarf Validated with iSHELL, PFS and HIRES RVs,” *AJ*, **165**, 10 (01/2023). [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,” *AJ*, **164**, 97 (09/2022). [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 191939 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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