

# ASHLEY CHONTOS

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## EDUCATION

Ph.D., Astronomy, University of Hawai'i at Mānoa	(expected) 2022
Thesis: <i>Precise Stellar and Planet Properties in the Kepler, K2 &amp; TESS Era</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
Focuses: Statistics, Applied Mathematics	
Minor: Computer Science	
B.Sc., Physics, <i>Summa Cum Laude</i> , SUNY Albany	2016

## PROFESSIONAL EMPLOYMENT

NSF Graduate Research Fellow	2018 – present
Research Assistant, University of Hawai'i at Mānoa	2017 – 2018
Research Assistant, NASA Goddard Space Flight Center	2016
Research Assistant, Stanford University	2015 – 2016

## RESEARCH INTERESTS

Asteroseismology, stellar evolution, exoplanet detection and characterization, photometric data analyses, spectroscopic radial velocity analyses, software development, computational astrophysics, post main-sequence planetary system dynamics and evolution, space telescopes, astronomical surveys.

## SELECTED HONORS & AWARDS

Friends of the IfA Outreach Award	2019
ARCS (Achievement Rewards for College Scientists)	2019
National Science Foundation Graduate Research Fellowship	2018
Outstanding Outreach Award	2017
John C. Mather Nobel Scholar	2016

## SELECTED TALKS

University Of Chicago Exoplanet Journal Club ( <i>invited</i> )	September 2021
Carnegie EPL Astronomy Seminar ( <i>invited</i> )	September 2021
TESS Science Talk, MIT ( <i>invited</i> )	September 2021
Keck Science Meeting	September 2021
TESS SciCon II	August 2021
The Good Vibrations Seminar ( <i>invited</i> )	February 2021
TESS Science Team Meeting	October 2020
Yale Exoplanets & Stars Seminar ( <i>invited</i> )	September 2020
Exoplanets III, Heidelberg, Germany	July 2020
The 235th American Astronomical Society Meeting, Honolulu, HI	January 2020
TASC5, MIT, Cambridge, USA	July 2019
TESS SciCon I, MIT, Cambridge, USA	July 2019
Kepler/K2 SciCon V, Glendale, CA	March 2019
University of Hawai'i Astrobiology Seminar ( <i>invited</i> )	September 2018
TASC4, Aarhus, Denmark	July 2018
Columbia University Astronomy Seminar ( <i>invited</i> )	October 2017

## TEACHING, SERVICE & LEADERSHIP

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<i>Mentor</i> for high school students through HI STAR, Oahu, HI and Maui, HI	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 at Mānoa	2016
<i>Teaching Assistant</i> , ASTR 110: Lecture, University of Hawai'i at Mānoa	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], [University 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> , 60 nights on Keck/HIRES through the California Planet Search	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: 37, with 4 as first author and 10 with significant contributions.

Total citations: 382, h-index: 13, as of Oct 25 2021.

Bibliography: [NASA ADS] [ORCID]

### First Author Publications:

**Chontos, A.**, Sayeed, M. and Huber, D., “pySYD: Automated Measurements of Global Asteroseismic Parameters,” *JOSS*, *in review*. Citations: 2

<https://ui.adsabs.harvard.edu/abs/2021tsc2.confE.189C>

**Chontos, A.**, et al., “The TESS-Keck Survey: Science Goals and Target Selection,” *AJ*, *in review* [with favorable referee report]. Citations: 2

<https://ui.adsabs.harvard.edu/abs/2021arXiv210606156C>

**Chontos, A.**, et al., “TESS Asteroseismology of  $\alpha$  Mensae: Benchmark Ages for a G7 Dwarf and its M-dwarf Companion,” *ApJ*, *in press*. Citations: 4

<https://ui.adsabs.harvard.edu/abs/2020arXiv201210797C>

**Chontos, A., et al.**, “The Curious Case of KOI 4: Confirming Kepler’s First Exoplanet Detection,” *AJ*, **157**, 192 (2019). Citations: 15  
<https://ui.adsabs.harvard.edu/abs/2019AJ....157..192C>

#### **Significant Contributions:**

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,” *in review* [with favorable referee report].  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210809109H>

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 (2021). Citations: 15  
<https://ui.adsabs.harvard.edu/abs/2021ApJS..255....8R>

Guerrero et al. [including **Chontos, A.,**], “The TESS Objects of Interest Catalog from the TESS Prime Mission,” *ApJSS*, **254**, 39 (2021). Citations: 22  
<https://ui.adsabs.harvard.edu/abs/2021ApJS..254...39G>

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 (2021). Citations: 17  
<https://ui.adsabs.harvard.edu/abs/2021MNRAS.502.3704A>

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 (2021). Citations: 13  
<https://ui.adsabs.harvard.edu/abs/2021AJ....161..119R>

Lund, M., Knudstrup, E., Silva Aguierre, V., Basu, S., **Chontos, A., et al.**, “Asteroseismology of Multiplanet System K2-93,” *AJ*, **158**, 248 (2019). Citations: 6  
<https://ui.adsabs.harvard.edu/abs/2019AJ....158..248L>

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 (2019). Citations: 23  
<https://ui.adsabs.harvard.edu/abs/2019ApJ...883L..16C>

Huber, D., Chaplin, W., **Chontos, A., et al.**, “A Hot Saturn Orbiting an Oscillating Late Subgiant Discovered by TESS,” *AJ*, **157**, 245 (2019). Citations: 55  
<https://ui.adsabs.harvard.edu/abs/2019AJ....157..245H>

Grunblatt, S., et al. [including **Chontos, A.,**], “Do Close-in Giant Planets Orbiting Evolved Stars Prefer Eccentric Orbits?” *ApJL*, **861**, L5 (2018). Citations: 16  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...861L...5G>

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 (2015). Citations: 44  
<https://ui.adsabs.harvard.edu/abs/2015ApJ...814L...3D>

#### **Other Publications:**

Heidari, N., et al. [including **Chontos, A.,**], “HD207897 b: A Dense Sub-Neptune Transiting a Nearby and Bright K-type Star,” *in review*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv211008597H>

Saunders, N., et al. [including **Chontos, A.,**], “TESS Giants Transiting Giants I: A Non-inflated Hot Jupiter Orbiting a Massive Subgiant,” *in review*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210802294S>

Winters, J. G., et al. [including **Chontos, A.,**], “A Second Planet Transiting LTT-1445A and a Determination of the Masses of Both Worlds,” *in review*. Citations: 2  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210714737W>

- Polanski, A. S., et al. [including **Chontos, A.**], “Wolf 503 b: Characterization of a Sub-Neptune Orbiting a Metal-Poor K Dwarf,” *in review*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210708092P>
- MacDougall, M., et al. [including **Chontos, A.**], “The TESS-Keck Survey. VI. Two Eccentric Sub-Neptunes Orbiting HIP-97166,” *The Astronomical Journal*, *in press*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv211005628M>
- Scarsdale, N., et al. [including **Chontos, A.**], “The TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935,” *The Astronomical Journal*, *in press*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210802294S>
- Mathur, S., et al. [including **Chontos, A.**], “Detections of solar-like oscillations in dwarfs and subgiants with Kepler DR25 short-cadence data,” *A&A*, *in press*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210914058M>
- 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*, *in press*.  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210802208L>
- Zhang, J., et al. [including **Chontos, A.**], “Long-period Jovian Tilts the Orbits of Two sub-Neptunes Relative to Stellar Spin Axis in Kepler-129,” *AJ*, **162**, 89 (2021). Citations: 3  
<https://ui.adsabs.harvard.edu/abs/2021AJ....162...89Z>
- Llop-Sayson, J., et al. [including **Chontos, A.**], “Constraining the Orbit and Mass of eps Eridani b with Radial Velocities, Hipparcos IAD-Gaia DR2 Astrometry, and Multi-epoch Vortex Coronagraphy Upper Limits,” *AJ*, **162**, 181 (2021). Citations: 1  
<https://ui.adsabs.harvard.edu/abs/2021arXiv210802305L>
- 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 (2021). Citations: 3  
<https://ui.adsabs.harvard.edu/abs/2021AJ....162...62D>
- Fulton, B. J., et al. [including **Chontos, A.**], “The California Legacy Survey. II. Occurrence of Giant Planets beyond the Ice Line,” *ApJSS*, **255**, 14 (2021). Citations: 11  
<https://ui.adsabs.harvard.edu/abs/2021ApJS..255...14F>
- 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 (2021). Citations: 9  
<https://ui.adsabs.harvard.edu/abs/2021AJ....161...56W>
- Kosiarek, M. R., et al. [including **Chontos, A.**], “Physical Parameters of the Multiplanet Systems HD 106315 and GJ 9827,” *AJ*, **161**, 47 (2021). Citations: 1  
<https://ui.adsabs.harvard.edu/abs/2021AJ....161...47K>
- 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**, 127 (2020). Citations: 7  
<https://ui.adsabs.harvard.edu/abs/2020A%26A...644A.127D>
- Dai, F., et al. [including **Chontos, A.**], “The TESS-Keck Survey. III. A Stellar Obliquity Measurement of TOI-1726 c,” *AJ*, **160**, 193 (2020). Citations: 9  
<https://ui.adsabs.harvard.edu/abs/2020AJ....160..193D>
- 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**, 49 (2020). Citations: 18  
<https://ui.adsabs.harvard.edu/abs/2020A%26A...642A..49D>
- Carleo, I., et al. [including **Chontos, A.**], “The Multiplanet System TOI-421,” *AJ*, **160**, 114 (2020). Citations: 9  
<https://ui.adsabs.harvard.edu/abs/2020AJ....160..114C>
- 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 (2020). Citations: 13

<https://ui.adsabs.harvard.edu/abs/2020AJ....160...22C>

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 (2020). Citations: 15

<https://ui.adsabs.harvard.edu/abs/2020AJ....159..241D>

Guo, X., et al. [including **Chontos, A.**], “Updated Parameters and a New Transmission Spectrum of HD 97658b,” *AJ*, **159**, 239 (2020). Citations: 23

<https://ui.adsabs.harvard.edu/abs/2020AJ....159..239G>

Pope, B. J. S., et al. [including **Chontos, A.**], “The Kepler Smear Campaign: Light Curves for 102 Very Bright Stars,” *ApJSS*, **244**, 18 (2019). Citations: 4

<https://ui.adsabs.harvard.edu/abs/2019ApJS..244...18P>

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 (2019). Citations: 10

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...19B>

## REFERENCES

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