

## Dr. Fei Dai

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## Education

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<b>Massachusetts Institute of Technology</b>	[2014-2019]
Ph.D. in Physics; Advisor: Prof. Joshua N. Winn	
<b>University of Cambridge, UK</b>	[2010-2014]
B.A. of Natural Sciences; M.Sci of Physics, First Class Honors	

## Professional Appointment & Research Experience

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<b>Assistant Astronomer/Professor</b>	[2024-Present]
Institute for Astronomy, University of Hawai'i at Mānoa	
<b>NASA Sagan Postdoctoral Fellow</b>	[2022-2024]
Division of Physics, Math, and Astronomy, Caltech	
<b>GPS Chair's Postdoctoral Fellow</b>	[2019-2022]
Division of Geological and Planetary Sciences, Caltech	
<b>Visiting graduate student</b>	[2017-2019]
Department of Astrophysical Sciences, Princeton University	

## Publications

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**Total Refereed: 181; 1st-author: 16; Citations: 6155; h-index: 50; i10-index: 133**

### First-Author Publications

- [1] **F. Dai**, K Masuda, JN Winn, L Zeng 2019, The Astrophysical Journal, 883, 1, [ADS](#)  
*Homogeneous Analysis of Hot Earths: Masses, Sizes, and Compositions*
- [2] **F. Dai**, JN Winn, 2017, The Astronomical Journal 153, 205, [ADS](#)  
*The Oblique Orbit of WASP-107b from K2 Photometry*
- [3] **F. Dai**, JN Winn, D Gandolfi, et al., 2017, The Astronomical Journal 154, 226, [ADS](#)  
*The Discovery and Mass Measurement of a New Ultra-short-period Planet: K2-131b*
- [4] **F. Dai**, K Masuda, JN Winn, 2018, The Astrophysical Journal Letter, 864, 2, L38, [ADS](#)  
*Larger Mutual Inclinations for the Shortest-period Planets*
- [5] **F. Dai**, A Masuda, C Beard, et al., 2023, The Astronomical Journal, 165, 33, [ADS](#)  
*TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain*
- [6] **F. Dai**, S Facchini, CJ Clarke, TJ Haworth, 2015, MNRAS 449, 2, [ADS](#)  
*A Tidal Encounter Caught in the Act: Modelling a Star-disc Fly-by in the Young RW Aurigae System*
- [7] **F. Dai**, JN Winn, S Albrecht, P Arriagada, et al., 2016, The Astrophysical Journal 825, 53, [ADS](#)  
*Doppler Monitoring of five K2 Transiting Planetary Systems*
- [8] **F. Dai**, A Howard, N Batalha, et al., 2021, The Astronomical Journal, 162, 62, [ADS](#)  
*The TESS-Keck Survey. X: TOI-1444b and a Comparative Analysis of the Ultra-short-period Planets with Hot Neptunes*
- [9] **F. Dai**, JN Winn, P Arriagada, RP Butler, et al., 2015, The Astrophysical Journal Letters 813, L9, [ADS](#)  
*Doppler Monitoring of the WASP-47 Multiplanet System*
- [10] **F. Dai**, JN Winn, P Arriagada, RP Butler, et al., 2015, The Astrophysical Journal Letters 813, L9, [ADS](#)  
*Doppler Monitoring of the WASP-47 Multiplanet System*
- [11] **F. Dai**, R Roy, BJ Fulton, et al. 2020, The Astronomical Journal, 160, 193, [ADS](#)  
*The TESS-Keck Survey. III. A Stellar Obliquity Measurement of TOI-1726 c*
- [12] **F. Dai**, JN Winn, K Schlafman, et al., 2020, The Astronomical Journal, 159, 247, [ADS](#)  
*California-Kepler Survey. IX. Revisiting the Minimum-mass Extrasolar Nebula with Precise Stellar Parameters*
- [13] **F. Dai**, M. Goldberg, K. Batygin, et al., 2024, The Astronomical Journal, 166, 239, [ADS](#)  
*The Prevalence of Resonance Among Young, Close-in Planets*
- [14] **F. Dai**, JN Winn, Z Berta-Thompson, R Sanchis-Ojeda, 2018, The Astronomical Journal 155, 177, [ADS](#)  
*Stellar Obliquity and Magnetic Activity of Planet-hosting Stars and Eclipsing Binaries Based on Transit Chord Correlation*
- [15] **F. Dai**, A. Howard, S. Halverson, et al., 2024, The Astronomical Journal, 168, 101, [ADS](#)

- [16] **F. Dai**, K. C. Schlaufman, H. Reggiani, et al., 2023, The Astronomical Journal, 166, 49, [ADS](#)  
*A Mini-Neptune Orbiting the Metal-poor K Dwarf BD+ 29 2654*

## Major-Contribution Publications

- [17] Y. Xu & **F. Dai**, 2025, The Astrophysical Journal 981, 142 [ADS](#)  
*Amplifying Resonant Repulsion with Inflated Young Planets, Overlooked Inner Planets, and Nonzero Initial  $\Delta$*
- [18] R. Lee, **F. Dai**, et al., 2025, The Astrophysical Journal Letters 983 L36, [ADS](#)  
*TOI-6324 b: An Earth-mass Ultra-short-period Planet Transiting a Nearby M Dwarf*
- [19] F. Keller, **F. Dai** & W. Xu, 2025, The Astrophysical Journal, in press, [ADS](#)  
*Higher-Order Mean-Motion Resonances Can Form in Type-I Disk Migration*
- [20] E. Zhang, H. Teng, **F. Dai**, et al. 2025, The Astrophysical Journal, in press, [ADS](#)  
*TOI-880 is an Aligned, Coplanar, Multi-planet System*
- [21] H. Teng, **F. Dai**, 2025, The Astrophysical Journal, 170, 51 [ADS](#)  
*Stellar Obliquity of the Ultra-short-period Planet System HD 93963*
- [22] Z. Hu, W. Zhu, **F. Dai**, 2024, The Astrophysical Journal Letters 977, L28 [ADS](#)  
*An Eccentric Binary with a Misaligned Circumbinary Disk*
- [23] H. Teng, **F. Dai**, et al., 2024, The Astronomical Journal 168, 194, [ADS](#)  
*The  $\sim 50$  Myr Old TOI-942c is Likely on an Aligned, Coplanar Orbit and Losing Mass*
- [24] S. Giacalone, **F. Dai**, et al., 2024, The Astronomical Journal 168, 188, [ADS](#)  
*The OATMEAL Survey. I. Low Stellar Obliquity in the Transiting Brown Dwarf System GPX-1*
- [25] R. Rubenzahl, **F. Dai**, et al., 2024, The Astronomical Journal 168, 189, [ADS](#)  
*KPF Confirms a Polar Orbit for KELT-18 b*
- [26] R. Rubenzahl, **F. Dai**, et al., 2024, The Astrophysical Journal Letters 971, L40, [ADS](#)  
*Obliquity Constraints for the Extremely Eccentric Sub-Saturn Kepler-1656 b*
- [27] H. Yu & **F. Dai**, 2024, The Astrophysical Journal, in press, [ADS](#)  
*Are WASP-107-like Systems Consistent with High-eccentricity Migration?*
- [28] T. Gan, S. Wang, **F. Dai**, et al., 2024, The Astrophysical Journal Letters, 969, 1, L24, [ADS](#)  
*The Aligned Orbit of a Hot Jupiter around the M Dwarf TOI-4201*
- [29] R. Rubenzahl, **F. Dai**, et al., 2024, The Astronomical Journal, 167, 4, 16, [ADS](#)  
*The TESS-Keck Survey. XII. A Dense 1.8 R Ultra-short-period Planet Possibly Clinging to a High-mean-molecular-weight Atmosphere after the First Gigayear*
- [30] C. Beard, P. Robertson, **F. Dai**, et al., 2024, The Astronomical Journal, 167, 2, 70, [ADS](#)  
*The TESS-Keck Survey. XVII. Precise Mass Measurements in a Young, High-multiplicity Transiting Planet System Using Radial Velocities and Transit Timing Variations*
- [31] A. Behmard, **F. Dai**, et al., 2023, Monthly Notices of the Royal Astronomical Society, 521, 2, [ADS](#)  
*Planet engulfment detections are rare according to observations and stellar modelling*
- [32] C. Brinkman, L. Weiss, **F. Dai**, et al., 2023, The Astronomical Journal, 165, 3, 88, [ADS](#)  
*TOI-561 b: A Low-density Ultra-short-period “Rocky” Planet around a Metal-poor Star*
- [33] A. Goyal, **F. Dai**, S. Wang, 2023, The Astrophysical Journal, 955, 2, 118, [ADS](#)  
*Enhanced Size Uniformity for Near-resonant Planets*
- [34] T. Hirano, **F. Dai**, et al., 2023, The Astronomical Journal, 165, 3, 131, 14, [ADS](#)  
*An Earth-sized Planet around an M5 Dwarf Star at 22 pc*
- [35] M. Zhang, **F. Dai**, et al., 2023, The Astrophysical Journal Letters, 953, 2, L25, [ADS](#)  
*Outflowing helium from a mature mini-Neptune*
- [36] A. Behmard, **F. Dai**, A. Howard, 2022, The Astronomical Journal, 163, 4 [ADS](#)  
*Stellar Companions to TESS Objects of Interest: A Test of Planet-Companion Alignment*
- [37] W. Zhu, K. Bernhard, **F. Dai**, et al., 2022, The Astrophysical Journal Letters 933 (1), L21, [ADS](#)  
*Two Candidate KH 15D-like Systems from the Zwicky Transient Facility*
- [38] L. Weiss, **F. Dai**, et al., 2021, The Astronomical Journal, 161, 2, [ADS](#)  
*The TESS-Keck Survey. II. An Ultra-short-period Rocky Planet and Its Siblings Transiting the Thick-disk Star TOI-561*
- [39] R. Rubenzahl, **F. Dai**, et al., 2021, The Astronomical Journal, 161, 3, [ADS](#)  
*TESS-Keck Survey. IV. A Retrograde, Polar Orbit for the Ultra-low-density, Hot Super-Neptune WASP-107b*
- [40] L. Wang & **F. Dai**, 2021, The Astrophysical Journal, 914, 2, 98, [ADS](#)  
*Metastable Helium Absorptions with 3D Hydrodynamics and Self-consistent Photochemistry. II. WASP-107b, Stellar Wind, Radiation Pressure, and Shear Instability*
- [41] L. Wang & **F. Dai**, 2021, The Astrophysical Journal, 914, 2, 98, [ADS](#)  
*Metastable Helium Absorptions with 3D Hydrodynamics and Self-consistent Photochemistry. I. WASP-69b, Dimensionality,*

*X-Ray and UV Flux Level, Spectral Types, and Flares*

- [42] G Li, **F. Dai** & J Becker, 2020, The Astrophysical Journal Letters, 890, 2 [ADS](#)  
*Mutual Inclination Excitation by Stellar Oblateness*
- [43] J Livingston, **F. Dai**, et al., 2019, MNRAS, 484, 1, [ADS](#)  
*K2-264: a Transiting Multiplanet System in the Praesepe Open Cluster*
- [44] L Wang & **F. Dai**, 2018, The Astrophysical Journal Letters 873, 1, L1, [ADS](#)  
*Dusty Outflows in Planetary Atmospheres: Understanding "Super-puffs" and Transmission Spectra of Sub-Neptunes*
- [45] JH Livingston, M Endl, **F. Dai**, et al., 2018, The Astronomical Journal 156 , 78 [ADS](#)  
*44 Validated Planets from K2 Campaign 10*
- [46] MC Johnson, **F. Dai**, et al., 2018, MNRAS, 481, 1, [ADS](#)  
*The K2-260 b: a Hot Jupiter Transiting an F Star, and K2-261 b: a Warm Saturn Around a Bright G Star*
- [47] L Wang & **F. Dai**, 2018, The Astrophysical Journal 860, 175, [ADS](#)  
*Evaporation of Low-mass Planet Atmospheres: Multidimensional Hydrodynamics with Consistent Thermochemistry*
- [48] W Zhu, **F. Dai**, K Masuda, 2018, Research Notes of the American Astronomical Society, 2, 3, [ADS](#)  
*Kepler-730b is Probably a Hot Jupiter with a Small Companion*
- [49] V Van Eylen, **F. Dai**, et al., 2018, MNRAS, 478, 4, [ADS](#)  
*HD 89345: a Bright Oscillating Star Hosting a Transiting Warm Saturn-sized Planet Observed by K2*
- [50] O Barragan, D Gandolfi, **F. Dai**, et al., 2018, Astronomy & Astrophysics 612, A95, [ADS](#)  
*K2-141 b-A 5-M<sub>⊕</sub> Super-Earth Transiting a K7 V Star Every 6.7 h*
- [51] T Hirano, **F. Dai**, et al., 2018, The Astronomical Journal 155 , 127, [ADS](#)  
*Exoplanets around Low-mass Stars Unveiled by K2*
- [52] T Hirano, **F. Dai**, et al., 2018, The Astronomical Journal 155 , 124, [ADS](#)  
*K2-155: A Bright Metal-poor M Dwarf with Three Transiting Super-Earths*
- [53] JH Livingston, **F. Dai**, et al., 2018, The Astronomical Journal 155 , 115, [ADS](#)  
*Three Small Planets Transiting a Hyades Star*
- [54] P Niraula, S Redfield, **F. Dai**, et al., 2017, The Astronomical Journal 154 , 266, [ADS](#)  
*Three Super-Earths Transiting the Nearby Star GJ 9827*
- [55] EW Guenther, O Barragan, **F. Dai**, et al., 2017, Astronomy & Astrophysics 608, A93, [ADS](#)  
*K2-106, a System Containing a Metal-rich Planet and a Planet of Lower Density*
- [56] R Sanchis-Ojeda, JN Winn, **F. Dai**, et al., 2015, The Astrophysical Journal Letters 812 , L11, [ADS](#)  
*A Low Stellar Obliquity for WASP-47, a Compact Multiplanet System with a Hot Jupiter and an Ultra-short Period Planet*

## Other Refereed Publications

- [57] J. Šubjak, **including F. Dai**, et al., 2025, Astronomy & Astrophysics 693, A235 [ADS](#)  
*TOI-2458 b: A mini-Neptune consistent with in situ hot Jupiter formation*
- [58] Q. Liu, **including F. Dai**, et al., 2025, The Astronomical Journal 169, 79 [ADS](#)  
*Detecting Planetary Oblateness in the Era of JWST: A Case Study of Kepler-167e*
- [59] X. Hua, **including F. Dai**, et al., 2025, The Astrophysical Journal Letters 980, L46 [ADS](#)  
*Short-period Small Planets with High Mutual Inclinations are More Common around Metal-rich Stars*
- [60] M. Zhang, **including F. Dai**, et al., 2025, The Astronomical Journal 169, 204 [ADS](#)  
*Constraining atmospheric composition from the outflow: helium observations reveal the fundamental properties of two planets straddling the radius gap*
- [61] L. Handley, **including F. Dai**, et al., 2025, The Astronomical Journal 169, 212 [ADS](#)  
*An Obliquity Measurement of the Hot Neptune TOI-1694b*
- [62] Z. van Zandt, **including F. Dai**, et al., 2025, The Astronomical Journal 169, 235 [ADS](#)  
*The TESS-Keck Survey. XXIV. Outer Giants May Be More Prevalent in the Presence of Inner Small Planets*
- [63] Y. Li, **including F. Dai**, et al., 2025, The Astrophysical Journal 984, 125 [ADS](#)  
*K Dwarf Radius Inflation and a 10 Gyr Spin-down Clock Unveiled through Asteroseismology of HD 219134 from the Keck Planet Finder*
- [64] R. Li, **including F. Dai**, et al., 2025, The Astronomical Journal 169, 323 [ADS](#)  
*The Resonant Remains of Broken Chains from Major and Minor Mergers*
- [65] Y. Chen, **including F. Dai**, et al., 2025, MNRAS, 540, 1998-2007 [ADS](#)  
*Capture and escape of planetary mean-motion resonances in turbulent discs*
- [66] A. Howard, **including F. Dai**, et al., 2025, ApJS, 278, 52 [ADS](#)  
*Planet Masses, Radii, and Orbits from NASA's K2 Mission*
- [67] S. Giacalone, **including F. Dai**, et al., 2025, PASP, 137,10 [ADS](#)  
*A Hot Jupiter with a Retrograde Orbit around a Sun-like Star and a Toy Model of Hot Jupiters in Wide Binary Star Systems*

- [68] V. Hugo, including F. Dai, et al., 2025, A&A, in press [ADS](#)  
*TOI-1259Ab: A Warm Jupiter Orbiting a K-dwarf White-Dwarf Binary is on a Well-aligned Orbit*
- [69] C. Brinkman, including F. Dai, et al., 2025, The Astronomical Journal 170, 109, [ADS](#)  
*The Compositions of Rocky Planets in Close-in Orbits Tend to be Earth-Like*
- [70] J. Zhang, including F. Dai, et al., 2025, The Astronomical Journal 168, 295, [ADS](#)  
*A Testbed for Tidal Migration: The 3D Architecture of an Eccentric Hot Jupiter HD 118203 b Accompanied by a Possibly Aligned Outer Giant Planet*
- [71] J. Livingston, including F. Dai, et al., 2025, Scientific Reports 14, 27219, [ADS](#)  
*An ultra-short-period super-Earth with an extremely high density and an outer companion*
- [72] M. Hon, including F. Dai, et al., 2025, The Astrophysical Journal 975, 147, [ADS](#)  
*Asteroseismology of the Nearby K Dwarf *Draconis* Using the Keck Planet Finder and TESS*
- [73] X. Wang, including F. Dai, et al., 2025, The Astrophysical Journal Letters 973, L21, [ADS](#)  
*Single-star Warm-Jupiter Systems Tend to Be Aligned, Even around Hot Stellar Hosts: No T eff- Dependency*
- [74] N. Saunders, including F. Dai, et al., 2024, The Astronomical Journal 168, 2, 81, [ADS](#)  
*TESS Giants Transiting Giants. VI. Newly Discovered Hot Jupiters Provide Evidence for Efficient Obliquity Damping after the Main Sequence*
- [75] H. Isaacson, including F. Dai, et al., 2024, submitted to ApJS, [ADS](#)  
*The California Legacy Survey V. Chromospheric Activity Cycles in Main Sequence Stars*
- [76] Q. Liu, including F. Dai, et al., 2024, submitted to AJ, [ADS](#)  
*Detecting Planetary Oblateness in the Era of JWST: A Case Study of Kepler-167e*
- [77] S. Lange, including F. Dai, et al., 2024, The Astronomical Journal, 167, 6, 21, [ADS](#)  
*The TESS-Keck Survey. VII. A Superdense Sub-Neptune Orbiting TOI-1824*
- [78] A. Polanski, including F. Dai, et al., 2024, The Astrophysical Journal Supplement Series 272, 2, 32, [ADS](#)  
*The TESS-Keck Survey. XX. 15 New TESS Planets and a Uniform RV Analysis of All Survey Targets*
- [79] D. Pidhorodetska, including F. Dai, et al., 2024, submitted to AJ, [ADS](#)  
*The TESS-Keck Survey. XXII. A sub-Neptune Orbiting TOI-1437*
- [80] M. Limbach, including F. Dai, et al., 2024, The Astronomical Journal, 168, 2, 54, 11, [ADS](#)  
*Occurrence Rates of Exosatellites Orbiting 3–30 M Jup Hosts from 44 Spitzer Light Curves*
- [81] B. Hord, including F. Dai, et al., 2024, The Astronomical Journal, 168, 2, 54, 11, [ADS](#)  
*Identification of the top TESS objects of interest for atmospheric characterization of transiting exoplanets with JWST*
- [82] A. Desai, including F. Dai, et al., 2024, The Astronomical Journal, 167, 5, 194, [ADS](#)  
*The TESS-Keck Survey. XVIII. A sub-Neptune and spurious long-period signal in the TOI-1751 system*
- [83] F. Liu, including F. Dai, et al., 2024, Nature 627 (8004), 501-504, [ADS](#)  
*At least one in a dozen stars shows evidence of planetary ingestion*
- [84] C. Thomas, including F. Dai, et al., 2024, The Astronomical Journal 167, 4, 160, [ADS](#)  
*A Tale of Two Peas in a Pod: The Kepler-323 and Kepler-104 Systems*
- [85] M. Hill, including F. Dai, et al., 2024, The Astronomical Journal 167, 4, 151, [ADS](#)  
*The TESS-Keck Survey. XIX. A Warm Transiting Sub-Saturn-mass Planet and a Nontransiting Saturn-mass Planet Orbiting a Solar Analog*
- [86] J. Xuan, including F. Dai, et al., 2024, The Astrophysical Journal, 962, 1, 21, [ADS](#)  
*Validation of elemental and isotopic abundances in late-M spectral types with the benchmark HIP 55507 AB system*
- [87] A. Householder, including F. Dai, et al., 2024, The Astronomical Journal 167, 2, 84, [ADS](#)  
*Investigating the Atmospheric Mass Loss of the Kepler-105 Planets Straddling the Radius Gap*
- [88] M. Zhang, including F. Dai, et al., 2024, The Astrophysical Journal Letters 961, L44, [ADS](#)  
*GJ 367b is a dark, hot, airless sub-Earth*
- [89] J. Lubin, including F. Dai, et al., 2024, The Astronomical Journal 168, 196, [ADS](#)  
*The HD 191939 Exoplanet System is Well Aligned and Flat*
- [90] J. Orell-Miquel, including F. Dai, et al., 2024, Astronomy & Astrophysics 689, A179, [ADS](#)  
*The MOPYS project: A survey of 70 planets in search of extended He I and H atmospheres-No evidence of enhanced evaporation in young planets*
- [91] S. Gibson, including F. Dai, et al., 2024, Ground-based and Airborne Instrumentation for Astronomy 13096, 42-70, [ADS](#)  
*System design of the Keck Planet Finder*
- [92] P. Dalba, including F. Dai, et al., 2024, The Astrophysical Journal Supplement, 271, 1, 16, [ADS](#)  
*Giant Outer Transiting Exoplanet Mass (GOT’EM) Survey. IV. Long-term Doppler Spectroscopy for 11 Stars Thought to Host Cool Giant Exoplanets*
- [93] H. Deeg, including F. Dai, et al., 2023, Astronomy & Astrophysics, 677, A12, [ADS](#)  
*TOI-1416: A system with a super-Earth planet with a 1.07 d period*
- [94] R. Frazier, including F. Dai, et al., 2023, The Astrophysical Journal Letters 944, 2, L41, [ADS](#)



- NEID Reveals That the Young Warm Neptune TOI-2076 b Has a Low Obliquity*
- [95] E. Goffo, **including F. Dai**, et al., 2023, The Astrophysical Journal Letters, 955, 1, L3, [ADS](#)  
*Company for the ultra-high density, ultra-short period sub-Earth GJ 367 b: discovery of two additional low-mass planets at 11.5 and 34 days*
- [96] C. Harada, **including F. Dai**, et al., 2023, The Astronomical Journal, 166, 5, 208, [ADS](#)  
*Stability and detectability of exomoons orbiting HIP 41378 f, a temperate Jovian planet with an anomalously low apparent density*
- [97] A. Householder, **including F. Dai**, et al., 2023, The Astronomical Journal, 167, 2, 84, [ADS](#)  
*Investigating the Atmospheric Mass Loss of the Kepler-105 Planets Straddling the Radius Gap*
- [98] J. Korth, **including F. Dai**, et al., 2023, Astronomy & Astrophysics 675, A115, [ADS](#)  
*TOI-1130: A photodynamical analysis of a hot Jupiter in resonance with an inner low-mass planet*
- [99] E. Knudstrup, **including F. Dai**, et al., 2023, Astronomy & Astrophysics 671, A164, [ADS](#)  
*A puffy polar planet-The low density, hot Jupiter TOI-640 b is on a polar orbit*
- [100] E. Knudstrup, **including F. Dai**, et al., 2023, Monthly Notices of the Royal Astronomical Society 519, 4, 5637, [ADS](#)  
*Radial velocity confirmation of a hot super-Neptune discovered by TESS with a warm Saturn-mass companion*
- [101] R. Luque, **including F. Dai**, et al., 2023, Nature 623, 932–937, [ADS](#)  
*A resonant sextuplet of sub-Neptunes transiting the bright star HD 110067*
- [102] M. Mallorquín, **including F. Dai**, et al., 2023, Astronomy & Astrophysics 680, A76, [ADS](#)  
*TOI-1801 b: A temperate mini-Neptune around a young M0.5 dwarf*
- [103] J. Murphy, **including F. Dai**, et al., 2023, The Astronomical Journal, 166, 4, 153, [ADS](#)  
*The TESS-Keck Survey. XVI. Mass Measurements for 12 Planets in Eight Systems*
- [104] M. Rice, **including F. Dai**, et al., 2023, The Astronomical Journal, 165, 2, 65, [ADS](#)  
*The Orbital Architecture of Qatar-6: A Fully Aligned Three-body System?*
- [105] S. Vissapragada, **including F. Dai**, et al., 2022, The Astrophysical Journal Letters 941, 2, L31, [ADS](#)  
*The Possible Tidal Demise of Kepler’s First Planetary System*
- [106] J. Xuan, **including F. Dai**, et al., 2023, in press, [ADS](#)  
*Validation of elemental and isotopic abundances in late-M spectral types with the benchmark HIP 55507 AB system*
- [107] D. Yong, **including F. Dai**, et al., 2023, Monthly Notices of the Royal Astronomical Society, 526, 2, 2181, [ADS](#)  
*C3PO: towards a complete census of co-moving pairs of stars–I. High precision stellar parameters for 250 stars*
- [108] S. Yoshida, **including F. Dai**, et al., 2023, The Astronomical Journal, 166, 5, 181, [ADS](#)  
*TESS Spots a Super-puff: The Remarkably Low Density of TOI-1420b*
- [109] M. Zhang, R Hu, J Inglis, **F. Dai**, et al. 2023, The Astrophysical Journal Letters, 961, 2, L44, [ADS](#)  
*GJ 367b is a dark, hot, airless sub-Earth*
- [110] M. Rice, S Wang, **including F. Dai**, et al., 2022, The Astronomical Journal, 164, 104, [ADS](#)  
*A Tendency Toward Alignment in Single-star Warm-Jupiter Systems*
- [111] L Rosenthal, H Knutson, **including F. Dai**, et al., 2022, The Astrophysical Journal Supplement Series, 262, 1, [ADS](#)  
*The California Legacy Survey III. On The Shoulders of (Some) Giants: The Relationship between Inner Small Planets and Outer Massive Planets*
- [112] M MacDougall, E Petigura, **including F. Dai**, et al., 2022, The Astronomical Journal, 164, 3, [ADS](#)  
*The TESS-Keck Survey. XIII. An Eccentric Hot Neptune with a Similar-Mass Outer Companion around TOI-1272*  
*TOI-2196 b: Rare planet in the hot Neptune desert transiting a G-type star*
- [113] S Yee, J Winn, **including F. Dai**, et al., 2022, The Astronomical Journal, 164, 2, [ADS](#)  
*The TESS Grand Unified Hot Jupiter Survey. I. Ten TESS Planets*
- [114] E Turtelboom, L Weiss, **including F. Dai**, et al., 2022, The Astrophysical Journal Letters, 933, 1, [ADS](#)  
*The TESS-Keck Survey. XI. Mass Measurements for Four Transiting Sub-Neptunes Orbiting K Dwarf TOI-1246*
- [115] J Christiansen, S Bhure, **including F. Dai**, et al., 2022, The Astronomical Journal, 163, 6, [ADS](#)  
*Scaling K2. V. Statistical Validation of 60 New Exoplanets From K2 Campaigns 2-18*
- [116] M Johnson, T David, **including F. Dai**, et al., 2022, The Astronomical Journal, 163, 6, [ADS](#)  
*An Aligned Orbit for the Young Planet V1298 Tau b*
- [117] L Serrano, D Gandolfi, **including F. Dai**, et al., 2022, Nature Astronomy, 6, 736-750, [ADS](#)  
*A low-eccentricity migration pathway for a 13-h-period Earth analogue in a four-planet system*  
*The Upper Edge of the Neptune Desert Is Stable Against Photoevaporation*
- [118] O Barragan, D Armstrong, **including F. Dai**, et al., 2022, MNRAS, 514, 2, [ADS](#)  
*The young HD 73583 (TOI-560) planetary system: two 10- $M_{\oplus}$  mini-Neptunes transiting a 500-Myr-old, bright, and active K dwarf*
- [119] S Grunblatt, N Saunders, **including F. Dai**, et al., 2022, The Astronomical Journal, 163, 3, [ADS](#)  
*TESS Giants Transiting Giants. II. The Hottest Jupiters Orbiting Evolved Stars*
- [120] S Vissapragada, H Knutson, **including F. Dai**, et al., 2022, The Astrophysical Journal, 927, 1, [ADS](#)

- [121] A Munazza, J Kirk, **including F. Dai**, et al., 2022, The Astrophysical Journal Letters, 927, 1, [ADS](#)  
*The First Near-infrared Transmission Spectrum of HIP 41378 f, A Low-mass Temperate Jovian World in a Multiplanet System*
- [122] K Lam, S Csizmadia, **including F. Dai**, et al., 2022, Science, 374, 6572, [ADS](#)  
*GJ 367b: A dense, ultrashort-period sub-Earth planet transiting a nearby red dwarf star*
- [123] M MacDougall, E Petigura, **including F. Dai**, et al., 2021, The Astronomical Journal, 162, 6, [ADS](#)  
*The TESS-Keck Survey. VI. Two Eccentric Sub-Neptunes Orbiting HIP-97166*
- [124] V Zandt, E Petigura, **including F. Dai**, et al., 2022, The Astronomical Journal, 161, 1, [ADS](#)  
*TESS-Keck Survey XIV: 2 giant exoplanets from the Distant Giants Survey*  
*Non-detection of He I in the atmosphere of GJ1214b with Keck/NIRSPEC, at a time of minimal telluric contamination*
- [125] M Zhang, H Knutson, L Wang, **F. Dai**, et al., 2021, The Astronomical Journal, 161, 4, [ADS](#)  
*No Escaping Helium from 55 Cnc e*
- [126] M Zhang, H Knutson, L Wang, **F. Dai**, et al., 2021, The Astronomical Journal, 163, 2, [ADS](#)  
*Detection of Ongoing Mass Loss from HD 63433c, a Young Mini Neptune*
- [127] N Scarsdale, J Murphy, **including F. Dai**, et al., 2021, The Astronomical Journal, 162, 5, [ADS](#)  
*TESS-Keck Survey. V. Twin Sub-Neptunes Transiting the Nearby G Star HD 63935*
- [128] M Rice, S Wang, **including F. Dai**, et al., 2021, The Astronomical Journal, 162, 5, [ADS](#)  
*SOLES I: The Spin-Orbit Alignment of K2-140 b*
- [129] X Wang, M Rice, **including F. Dai**, et al., 2021, The Astrophysical Journal Letters, 926, 2, [ADS](#)  
*The Aligned Orbit of WASP-148b, the Only Known Hot Jupiter with a nearby Warm Jupiter Companion, from NEID and HIRES*
- [130] N Heidari ; I Boisse, **including F. Dai**, et al., 2021, Astronomy & Astrophysics, Volume 658, 176, [ADS](#)  
*HD 207897 b: A dense sub-Neptune transiting a nearby and bright K-type star*
- [131] M Kosiarek, D Berardo, **including F. Dai**, et al., 2021, The Astronomical Journal, 161, 1, [ADS](#)  
*Physical Parameters of the Multiplanet Systems HD 106315 and GJ 9827*
- [132] R Luque; L Serrano, **including F. Dai**, et al., 2021, Astronomy & Astrophysics, 645, [ADS](#)  
*A Planetary System with two Transiting Mini-Neptunes Near the Radius Valley around the Bright M dwarf TOI-776*
- [133] P Kimberly; S Vissapragada, **including F. Dai**, et al., 2021, The Astrophysical Journal Letters, 909, 1, L10, [ADS](#)  
*Metastable Helium Reveals an Extended Atmosphere for the Gas Giant HAT-P-18b*
- [134] S Wang, JN Winn, **including F. Dai**, et al., 2021, The Astronomical Journal, 162, 2, [ADS](#)  
*The Aligned Orbit of the Eccentric Warm Jupiter K2-232b*
- [135] J Lubin, J Van Zandt, **including F. Dai**, et al., 2021, The Astronomical Journal, 163, 2, [ADS](#)  
*TESS-Keck Survey IX: Masses of Three Sub-Neptunes Orbiting HD 191939 and the Discovery of a Warm Jovian*
- [136] S Vissapragada, G Stefansson, **including F. Dai**, et al., 2021, The Astronomical Journal, 162, 5, [ADS](#)  
*A Search for Planetary Metastable Helium Absorption in the V1298 Tau System*
- [137] V Van Eylen, N Astudillo-Defru, **including F. Dai**, et al., 2021, MNRAS, 507, 2, [ADS](#)  
*Masses and Compositions of three Small Planets Orbiting the Nearby M dwarf L231-32 and the M dwarf Radius Valley*
- [138] A Osborn, D Armstrong, **including F. Dai**, et al., 2021, MNRAS, 507, 2, [ADS](#)  
*TOI-431/HIP 26013: a super-Earth and a sub-Neptune transiting a bright, early K dwarf, with a third RV planet*
- [139] A Chontos, J Murphy, **including F. Dai**, et al., 2021, The Astronomical Journal, 163, 6, [ADS](#)  
*The TESS-Keck Survey: Science Goals and Target Selection*
- [140] J G Winters, R Cloutier, **including F. Dai**, et al., 2021, The Astronomical Journal, 163, 4, [ADS](#)  
*A Second Planet Transiting LTT 1445A and a Determination of the Masses of Both Worlds*
- [141] J de Leon, J Livingston, **including F. Dai**, et al., 2021, MNRAS, 508, 1, [ADS](#)  
*37 New Validated Planets in Overlapping K2 Campaigns*
- [142] M A Limbach, J Vos, **including F. Dai**, et al., 2021, The Astrophysical Journal Letters, 918, 2, [ADS](#)  
*On the Detection of Exomoons Transiting Isolated Planetary-Mass Objects*
- [143] T Hirano, E Gaidos, **including F. Dai**, et al., 2020, The Astrophysical Journal Letters, 890, 2, [ADS](#)  
*Evidence for Spin-Orbit Alignment in the TRAPPIST-1 System*
- [144] L Nielsen, D Gandolfi, **including F. Dai**, et al., 2020, MNRAS, 492, 4, [ADS](#)  
*Mass Determinations of the three Mini-Neptunes Transiting TOI-125*
- [145] K Lam, Kristine, J Korth, **including F. Dai**, et al., 2020, The Astronomical Journal, 159, 3, [ADS](#)  
*It Takes Two Planets in Resonance to Tango around K2-146*
- [146] J Subjak, R Sharma, **including F. Dai**, et al., 2020, The Astronomical Journal, 159, 4, [ADS](#)  
*TOI-503: The First Known Brown-dwarf Am-star Binary from the TESS Mission*
- [147] D Hidalgo, E Palle, **including F. Dai**, et al., 2020, Astronomy & Astrophysics, 636, 13, [ADS](#)  
*Three Planets Transiting the Evolved Star EPIC 249893012: a Hot Super-Earth and Two Warm Sub-Neptunes*

- [148] Y Chachan, D Jontof-Hutter, **including F. Dai**, et al., 2020, The Astronomical Journal, 160, 5, [ADS](#)  
*A Featureless Infrared Transmission Spectrum for the Super-puff Planet Kepler-79d*
- [149] I Carleo, D Gandolfi, **including F. Dai**, et al., 2020, The Astronomical Journal, 160, 3, [ADS](#)  
*The Multiplanet System TOI-421*
- [150] M Fridlund, J Livingston, **including F. Dai**, et al., 2020, MNRAS, 498, 3, [ADS](#)  
*The TOI-763 system: Sub-Neptunes Orbiting a Sun-like star*
- [151] B-O Demory, F Pozuelos, **including F. Dai**, et al., 2020, Astronomy & Astrophysics, 642, 21, [ADS](#)  
*A Super-Earth and a Sub-Neptune Orbiting the Bright, Quiet M3 Dwarf TOI-1266*
- [152] G Nowak, E Palle, **including F. Dai**, et al., 2020, MNRAS, 497, 4, [ADS](#)  
*K2-280 b - a Low Density Warm Sub-Saturn Around a Mildly Evolved Star*
- [153] M Esposito, D Armstrong, **including F. Dai**, et al., 2019, Astronomy & Astrophysics, 623, 11 [ADS](#)  
*HD 219666 b: a Hot-Neptune from TESS Sector 1*
- [154] J Korth, Sz Csizmadia, **including F. Dai**, et al., 2019, MNRAS, 482, 2, [ADS](#)  
*K2-140b and K2-180b Characterization of a Hot Jupiter and a Mini Neptune from the K2 Mission*
- [155] E Palle, G Nowak, **including F. Dai**, et al., 2019, Astronomy & Astrophysics, 623, 10, [ADS](#)  
*Detection and Doppler monitoring of K2-285 (EPIC 246471491), a System of four Transiting Planets Smaller than Neptune*
- [156] A Smith, Sz Csizmadia, **including F. Dai**, et al., 2019, Acta Astronomica, 69, 2, [ADS](#)  
*K2-295 b and K2-237 b: Two Transiting Hot Jupiters*
- [157] R Luque, G Nowak, **including F. Dai**, et al., 2019, Astronomy & Astrophysics, 623, 9, [ADS](#)  
*Detection and Characterization of an Ultra-dense sub-Neptunian Planet Orbiting the Sun-like Star K2-292*
- [158] S Kamiaka, O Benomar, **including F. Dai**, et al., 2019, The Astronomical Journal, 157, 4, [ADS](#)  
*The Misaligned Orbit of the Earth-sized Planet Kepler-408b*
- [159] M Hjorth, A Justesen, **including F. Dai**, et al., 2019, MNRAS, 484, 3, [ADS](#)  
*K2-290: a Warm Jupiter and a Mini-Neptune in a Triple-star System*
- [160] D Gandolfi, L Fossati, **including F. Dai**, et al., 2019, The Astrophysical Journal Letters, 876, 2, [ADS](#)  
*The Transiting Multi-planet System HD15337: Two Nearly Equal-mass Planets Straddling the Radius Gap*
- [161] L Bouma, JN Winn, **including F. Dai**, et al., 2019, The Astronomical Journal, 157, 6, [ADS](#)  
*WASP-4b Arrived Early for the TESS Mission*
- [162] Z Zhan, M Gunther, **including F. Dai**, et al., 2019, The Astrophysical Journal, 876, 2, [ADS](#)  
*Complex Rotational Modulation of Rapidly Rotating M Stars Observed with TESS*
- [163] C Persson, Sz Csizmadia, **including F. Dai**, et al., 2019, Astronomy & Astrophysics, 628, 14, [ADS](#)  
*Greening of the Brown Dwarf Desert. EPIC 212036875 b – a 51 M<sub>J</sub> object in a 5 day orbit around an F7 V star*
- [164] S Rappaport, A Vanderburg, **including F. Dai**, et al., 2019, MNRAS, 488, 2, [ADS](#)  
*The Random Transiter EPIC 249706694/HD 139139*
- [165] A Santerne, L Malavolta, **including F. Dai**, et al., 2019, Submitted to Nature Astronomy, [ADS](#)  
*An Extremely Low-density and Temperate Giant Exoplanet*
- [166] E Palle, G Nowak, R Luque, D Hidalgo, O Barragan, J Prieto-Arranz, **including F. Dai**, et al., 2018, Astronomy & Astrophysics, 623, 41, [ADS](#)  
*Detection and Doppler Monitoring of EPIC 246471491, a System of four Transiting Planets Smaller than Neptune*
- [167] CM Persson, M Fridlund, O Barragan, **F. Dai**, et al., 2018, Astronomy & Astrophysics, 618, 16, [ADS](#)  
*An Super-Earth in a 2.2 day orbit around the K5V star K2-216*
- [168] JK Teske, S Wang, A Wolfgang, **F. Dai**, et al., 2018, The Astronomical Journal 155 , 148, [ADS](#)  
*Magellan/PFS Radial Velocities of GJ 9827, a Late K dwarf at 30 pc with Three Transiting Super-Earths*
- [169] J Prieto-Arranz, E Palle, ... **F. Dai**, et al., 2018, Astronomy & Astrophysics, 618, 116, [ADS](#)  
*Mass Determination of the 1: 3: 5 Near-resonant Planets Transiting GJ 9827 (K2-135)*
- [170] JN Winn, EA Petigura, **including F. Dai**, et al., 2017, The Astronomical Journal 154 , 270, [ADS](#)  
*Constraints on the Obliquities of Kepler Planet-hosting Stars*
- [171] D Gandolfi, O Barragán, **including F. Dai**, et al., 2017, The Astronomical Journal 154 , 123, [ADS](#)  
*The Transiting Multi-planet System HD 3167: A Super-Earth and a Mini-Neptune*
- [172] A Smith, J Cabrera, **including F. Dai**, et al., 2017, MNRAS, 474, 5523, [ADS](#)  
*K2-137 b: an Earth-sized Planet in a 4.3-h Orbit Around an M-dwarf*
- [173] KC Patra, JN Winn, **including F. Dai**, 2017, The Astronomical Journal 154 , 4, [ADS](#)  
*The Apparently Decaying Orbit of WASP-12b*
- [174] G Nowak, E Palle, **including F. Dai**, et al., 2017, The Astronomical Journal 153 , 131, [ADS](#)  
*EPIC 219388192b An Inhabitant of the Brown Dwarf Desert in the Ruprecht 147 Open Cluster*
- [175] N Narita, T Hirano, **including F. Dai**, et al., 2017, Publications of the Astronomical Society of Japan 69 , 29, [ADS](#)  
*The K2-ESPRINT project. VI. K2-105 b, a Hot Neptune around a Metal-rich G-dwarf*
- [176] V Van Eylen, S Albrecht, **including F. Dai**, et al., 2016, The Astronomical Journal 152, 143, [ADS](#)

- The K2-Esprint Project. V. A Short-period Giant Planet Orbiting a Subgiant Star*  
**[177]** T Hirano, G Nowak, **including F. Dai**, et al., 2016, The Astrophysical Journal 825 , 53, [ADS](#)  
*The K2-ESPRINT Project IV. A Hot Jupiter in a Prograde Orbit with a Possible Stellar Companion*  
**[178]** V Van Eylen, G Nowak, **including F. Dai**, et al., 2016, The Astrophysical Journal 820, 56, [ADS](#)  
*The K2-ESPRINT Project. II. Spectroscopic Follow-up of Three Exoplanet Systems from Campaign 1 of K2*  
**[179]** T Hirano, A Fukui, **including F. Dai**, et al., 2016, The Astrophysical Journal 820 , 41, [ADS](#)  
*The K2-ESPRINT Project III: A Close-in Super-Earth around a Metal-rich Mid-M Dwarf*  
**[180]** R Sanchis-Ojeda, S Rappaport, **including F. Dai**, et al., 2015, The Astrophysical Journal 812 , 112, [ADS](#)  
*The K2-ESPRINT Project. I. Discovery of the Disintegrating Rocky Planet K2-22b with a Cometary Head and Leading Tail*  
**[181]** L Yu, JN Winn, **including F. Dai**, et al., 2015, The Astrophysical Journal 812 , 48, [ADS](#)  
*Tests of the Planetary Hypothesis for PTFO 8-8695b*

## Student Advised and Publications

### Graduate Students:

- Rena Lee**, Graduate Student, NSF GRFP Fellow, University of Hawaii [2024-Present]  
 R. Lee, **F. Dai**, et al., 2025, The Astrophysical Journal Letters 983 L36, [ADS](#)  
*TOI-6324 b: An Earth-mass Ultra-short-period Planet Transiting a Nearby M Dwarf*  
**Elina Zhang**, Graduate Student, University of Hawaii [2024-Present]  
 E. Zhang, H. Teng, **F. Dai**, et al. 2025, The Astrophysical Journal, in press, [ADS](#)  
*TOI-880 is an Aligned, Coplanar, Multi-planet System*  
**Chase Urasaki**, Graduate Student, University of Hawaii [2025-Present]  
**Mu-Tian Wang**, Visiting graduate student, Nanjing University [2024-Present]  
 M. Wang, **F. Dai**, et al., submitted  
*An Adolescent, Near-Resonant Planetary System Near the End of Photoevaporation*  
 M. Wang, **F. Dai**, et al., submitted  
*TOI-4495: A Pair of Aligned, Near-Resonant Sub-Neptunes that Experienced Overstable Migration*  
**Zhecheng Hu**, Visiting graduate student, Tsinghua University [2024-Present]  
 Z. Hu, **F. Dai**, et al., submitted  
*Unexpected Near-Resonant and Metastable States of Young Multi-Planet Systems*  
**Aaron Householder**, Graduate Student, NSF GRFP Fellow, Massachusetts Institute of Technology [2024-Present]  
 A. Householder, **F. Dai**, et al., in prep  
*The KPF SURFS-UP Survey I: Transmission Spectroscopy of WASP-76 b*

### Undergraduate Students:

- Finnegan Keller**, Visiting undergraduate student, Brown University; Finnegan's thesis (same title as the paper) won Brown's Smiley Prize for Excellent Contribution to the Astronomy Program. He also served as a student speaker at Brown's 2025 Commencement. [2024 Summer]  
 F. Keller, **F. Dai** & W. Xu, The Astronomical Journal, in press [ADS](#)  
*Higher-Order Mean-Motion Resonances Can Form in Type-I Disk Migration*  
**Diya Kumar**, Visiting undergraduate student, SURF, Caltech [2025 Summer]  
 D. Kumar, **F. Dai**, et al., in prep  
*Dynamical Disruption of Resonant Chains*  
**Quentin Charles**, REU Undergraduate Student, University of Hawaii [2025 Summer]  
 Q. Charles, **F. Dai**, et al., in prep  
*Formation of Hot Jupiters During Type-I Migration*  
**Barron Nguyen**, Visiting undergraduate student, Stanford University [2024 Summer]  
 B. Nguyen, L. Schaefer, **F. Dai**, et al., in prep  
*A Tidally-Enhanced Outgassed Secondary Atmosphere on 55 Cancri e*  
**Yuancheng Xu**, Visiting undergraduate student, Oxford University [2024 Summer]  
 Y. Xu & **F. Dai**, 2025, The Astrophysical Journal 981, 142 [ADS](#)  
*Amplifying Resonant Repulsion with Inflated Young Planets, Overlooked Inner Planets, and Nonzero Initial  $\Delta$*

### Former Students:

- Aida Behmard**, Caltech graduate student co-advised with Andrew Howard, now Kalbfleisch Fellow at American Museum of Natural History [2019-2023]  
 A. Behmard, **F. Dai**, et al., 2023, Monthly Notices of the Royal Astronomical Society, 521, 2, [ADS](#)  
*Planet engulfment detections are rare according to observations and stellar modelling*  
 A. Behmard, **F. Dai**, A. Howard, 2022, The Astronomical Journal, 163, 4 [ADS](#)



*Stellar Companions to TESS Objects of Interest: A Test of Planet-Companion Alignment*

Ryan Rubenzahl, Caltech graduate student co-advised with Andrew Howard, now Flatiron Fellow

[2019-2024]

R. Rubenzahl, **F. Dai**, et al., 2024, The Astronomical Journal, 167, 4, 16, [ADS](#)

*The TESS-Keck Survey. XII. A Dense 1.8 R Ultra-short-period Planet Possibly Clinging to a High-mean-molecular-weight Atmosphere after the First Gigayear*

R. Rubenzahl, **F. Dai**, et al., 2024, The Astronomical Journal 168, 189, [ADS](#)

*KPF Confirms a Polar Orbit for KELT-18 b*

R. Rubenzahl, **F. Dai**, et al., 2024, The Astrophysical Journal Letters 971, L40, [ADS](#)

*Obliquity Constraints for the Extremely Eccentric Sub-Saturn Kepler-1656 b*

R. Rubenzahl, **F. Dai**, et al., 2021, The Astronomical Journal, 161, 3, [ADS](#)

*TESS-Keck Survey. IV. A Retrograde, Polar Orbit for the Ultra-low-density, Hot Super-Neptune WASP-107b*

Michael Zhang, Caltech graduate student co-advised with Heather Knutson, now 51 Peg b Fellow at the University of Chicago [2019-2022]

M. Zhang, **F. Dai**, et al., 2023, The Astronomical Journal 165, 62, [ADS](#)

*Detection of atmospheric escape from four young mini-Neptunes*

M. Zhang, **F. Dai**, et al., 2023, The Astrophysical Journal Letters 953, L25 [ADS](#)

*Outflowing helium from a mature mini-Neptune*

## Awards & Honors

NSF Faculty Early Career Development Program (CAREER), <a href="#">\$691,228</a>	[2025-2029]
NASA Sagan Fellowship, <a href="#">~\$375,000</a>	[2022-2024]
51 Peg b Fellowship, Heising-Simons Foundation, Awarded but declined, <a href="#">~\$375,000</a>	[2022]
GPS Chair's Fellowship, Caltech, <a href="#">~\$300,000</a>	[2019-2022]
Carnegie Origins Fellowship, Carnegie Observatory, Awarded but declined, <a href="#">~\$350,000</a>	[2019]
David Thompson Award, Homerton College, University of Cambridge, UK	[2010-2014]
DAAD (Deutscher Akademischer Austauschdienst, German Academic Exchange) RISE Fellowship, Germany	[2013]
SM1 Scholarship, Ministry of Education, Singapore	[2006-2009]

## Grants & Telescope Time

PI, "The Formation and Disruption of Resonant Chains", NSF Faculty Early Career Development Program (CAREER), <a href="#">\$691,228</a>	[2025-2029]
PI, "Unveiling the Composition of Earth-sized Planets with the Keck Planet Finder", NSF/AAG Program, <a href="#">\$461,453</a>	[2025-2027]
Co-I, "Homogeneous High-Resolution Spectroscopy of Ariel Exoplanet Host Stars", NASA Contributions to Ariel Preparatory Science, <a href="#">\$267,603</a>	[2025-2027]
PI, "Composition, Origin, and Fate of the Four Newborn Planets in the V1298 Tau System", NASA James Webb Space Telescope, Awarded 18.7 hours, <a href="#">\$187,000</a>	[2023-2024]
PI, "Pinning Down Masses of JWST Ultra-short-period Planets with Keck Planet Finder", NASA Keck Key Strategic Mission Support, Awarded 10 nights, <a href="#">\$75,000</a>	[2023-2024]
Co-I, "Keck Planet Finder Stellar Obliquity Survey", NASA/XRP, <a href="#">\$663,394</a>	[2024-2027]
PI, "Catching a Proto-Hot Jupiters in High-eccentricity Migration", ESO/EPRESSO, 1 night	[2023]
PI, "Detecting Mass Loss from Two Ultra-Short-Period Planets", Keck, 2 nights	[2022]
PI, "Stellar obliquities of Warm Jupiters and Hot Neptunes", Keck, 8 nights	[2020-2022]
Co-I, "The First and Only Multi-wavelength Map of an Ultra-short-period sub-Earth" (PI: Michael Zhang), James Webb Space Telescope, 15.7 hours	[2021]
Co-I, "Mass Loss from Small Planets in metastable Helium" (PI: Heather Knutson), Keck/NIRSPEC, 8 nights	[2020-2022]
Co-I, "Lyman alpha absorption from the only mini Neptune with measured helium outflow?" (PI: Michael Zhang), Hubble Space Telescope Cycle 29, 15 orbits	[2021]
Collaborator, "The TESS-Keck Survey: Completing the Sample" (PI: Courtney Dressing), Keck, 22 nights	[2021]
Co-I, "The X-ray Spectra of Young, Active Stars Hosting Small Planets" (PI: Michael Zhang), XMM-Newton, 10 hours	[2021]
Co-I, "The Atmospheric and Dynamical Evolution of a Sub-Neptune Progenitor" (PI: Shreyas Vissapragada), WIYN/NEID, 1 night	[2021]

Co-I, “Lyman alpha absorption from the only mini Neptune with measured helium outflow?” (PI: Michael Zhang), Hubble Space Telescope Cycle 29, 15 orbits	[2021]
Co-I, “Refining the Ephemeris of Young, Active Stars Hosting Small Planets” (PI: Michael Zhang), Las Cumbres Observatory, 3 nights	[2021]
Co-I, “How Common is Planet Engulfment?” (PI: Andrew Howard), Keck, 2 nights	[2020]
Co-I, “A Survey of Atmospheric Escape with WIRC” (PI: Shreyas Vissapragada), Palomar Observatory, 6 nights	[2020]
Co-I, “Probing mass loss from two mini- Neptunes orbiting a young solar analogue” (PI: Heather Knutson), Hubble Space Telescope Cycle 28, 36 orbits	[2020]
Collaborator, “Probing the Atmosphere of a Temperate Transiting Jovian Planet with an Orbital Period of 1.5 Years” (PI: Courtney Dressing), Hubble Space Telescope Cycle 28, 18 orbits	[2020]
Co-I, “Using the Metallicity Effect for Small Planets to Explore Planet Formation” (PI: Kevin Schlaufman), TESS Guest Investigator Program, \$50,000	[2019]
Collaborator, “A Southern Hemisphere RV Follow-up Program for TESS” (PI: Stephen Shectman), NASA/XRP, \$416,000	[2018]
Co-I, “A Search for Earth-like Planets in the Habitable Zone around Bright Low-mass Stars” (PI: Teruyuki Hirano), Astrobiology Center Research Project, \$22,000	[2018]
Co-I, “Finding the Shortest Period Planets with TESS” (PI: Joshua N. Winn), Heising-Simons Foundation, \$380,000	[2018]
Co-I, “ The KESPRINT radial velocity follow-up of TESS transiting planets: unveiling the nature of small worlds” (PI: Davide Gandolfi), ESO/HARPS, 78 nights	[2018 - 2020]
Co-I, “Radial velocity follow-up observations of K2 transiting small planets” (PI: Davide Gandolfi), Nordic Optical Telescope, 8 nights	[2018]
Co-I, “Validation of Exoplanets from K2 Campaigns 14–16” (PI Joshua N. Winn), WIYN/NESSI, 4 nights	[2018]
Co-I, “Spectroscopic follow-up observations of small transiting planets from the K2 mission” (PI: Artie Hatzes), Nordic Optical Telescope, 6 nights	[2018]
Co-I, “Short-Cadence Observations of Identified K2 Planet Candidates” (PI: Joshua Winn), K2 Guest Observer	[2016]
Co-I, “Spectroscopic Follow-up of Planets from the K2 Survey“(PI: Joshua N. Winn) Magellan/Clay, 11 nights	[2015-2016]

## Teaching and Outreach

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Instructor, Astrophysical Techniques (AST 633, Graduate Level), University of Hawaii	[2024-2025]
Organizer/Mentor for <a href="#">Intro2Astro Workshop</a> , 400+ participants	[2021-2025]
<a href="#">Introduction to Astronomy Research Youtube Channel</a>	
Institute for Astronomy Open House	[2024-2025]
Guest Lecturer, Astronomical Measurements and Instrumentation (ay122, Graduate Level), Caltech	[2021-2023]
Mentor for <a href="#">Caltech WAVE Undergraduate Summer Program</a>	[2021]
Public Webinar “ <a href="#">Exoplanet Detection Methods</a> ”	[2021]
Speaker for <a href="#">AstroSprint Online Workshop</a> , 100+ participants	[2021]
Public Talk “ <a href="#">Aperture Photometry and the Transiting Exoplanet Survey Satellite</a> ”	[2021]
Public Webinar “ <a href="#">Discovering Exoplanets with TESS Light Curves in Python</a> ”	[2021]
Astronomy on Tap, "The Least Habitable Planets", Caltech	[2021]
KAZN AM1300 Radio Station, "Life Outside Earth", Los Angeles	[2021]

## Talks

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Physics & Astronomy Colloquium, University of California Los Angeles	[2025]
Resonant State Workshop, University of Geneva	[2025]
Planets on the Edge Conference, University of Santa Barbara	[2025]
Solar System in Context, NOIRLab Science Conference	[2025]
PSAS Seminar, Georgia Tech	[2025]
Asia Oceania Geosciences Society Conference, Korea	[2024]
Astronomy Colloquium, University of Hawaii at Manoa	[2023]
PLUNCH talk, University of California Santa Cruz	[2023]
Planetary Science Seminar, University of California Los Angeles	[2023]
Physics Colloquium, University of Rochester	[2023]

Astronomy Colloquium, University of Toronto	[2023]
Astronomy Colloquium, University of Virginia	[2023]
Physics Colloquium, Tufts University	[2023]
Stars and Planets Lunch and Talks, University of Hawaii at Manoa	[2022]
TESS Science Meeting, MIT	[2022]
Astronomy Colloquium, Yale	[2022]
Exoplanet Journal Club, Jet Propulsion Lab	[2022]
Astro Seminar Series, Kansas University	[2022]
Physics Colloquium, Washington University in St Louis	[2022]
Keck Science Meeting, Caltech	[2022]
Hubble Symposium, Space Telescope Science Institute	[2022]
Exoplanet Meeting, Princeton University	[2022]
Exoplanet Group Meeting, University of Chicago	[2021]
KIAA Seminar, KIAA/Peking University	[2021]
Emerging Researchers in Exoplanet Science Symposium	[2021]
Planet Group Meeting, Ohio State University	[2021]
Exoplanet Demographics Conference, NExSci	[2020]
Exoplanet Meeting, Princeton University	[2020]
DIX Planetary Science Seminar, Caltech	[2020]
Boston Area Exoplanet Science Meeting, Harvard-Smithsonian Center for Astrophysics	[2019]
Exoplanet Group Meeting, University of Chicago	[2018]
IPAC Seminar, NExSci	[2018]
ExoCoffee, University of California, Berkeley	[2018]
Exoplanet Tea, Massachusetts Institute of Technology	[2018]
Stars & Planets Seminar, Harvard-Smithsonian Center for Astrophysics	[2018]
Exoplanet Pizza Lunch, Harvard-Smithsonian Center for Astrophysics	[2018]
Exoplanet Seminar, Yale University	[2018]
Center for Exoplanets and Habitable Worlds Seminar, Penn State University	[2018]
Emerging Researchers in Exoplanet Science Symposium IV	[2018]
Bahcall Lunch, Institute of Advanced Studies	[2018]
Kepler & K2 Science Conference IV, NASA Ames Research Center	[2017]

## Community Service

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Referee for AAS journals, Nature Astronomy, MNRAS, and Astronomy & Astrophysics	[2016-Present]
Panelist for National Science Foundation Astronomy & Astrophysics Program	[2024]
Reviewer for Hubble Space Telescope	[2021]
Reviewer for ESO Facilities	[2021]
Reviewer for National Science Foundation Astronomy & Astrophysics Program	[2020]
Reviewer for NASA FINESST Program	[2020]

## Press Coverage

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“Rare Six-Planet Star System Discovered in Milky Way”, <a href="#">Wall Street Journal</a>	[2023]
“TOI-1136 is a Young, Coplanar, Aligned Planetary System in a Pristine Resonant Chain”, <a href="#">AAS Journal Channel on Youtube</a>	[2023]
“Rogue Exomoons: On the Detection of Exomoons Transiting Isolated Planetary-Mass Objects”, <a href="#">Astrobite</a>	[2021]
“Inflating a Super-Puff Planet”, <a href="#">AAS Nova</a>	[2019]
“Binary stars with unexplainable dimming pattern”, <a href="#">Phys.org</a>	[2019]
“The Curious Case of the Mysterious Over-Luminous Brown Dwarf”, <a href="#">Astrobite</a>	[2018]
“Are you rocky or are you gassy?”, <a href="#">Carnegie Observatory</a>	[2017]
“K2-106 Astronomers characterize two ‘super-Earths’ in a distant planetary system”, <a href="#">Phys.org</a>	[2017]
“WASP-12b and Its Possible Fiery Demise”, <a href="#">AAS Nova</a>	[2017]
“K2-131 Discovery alert! A sizzling super Earth”, <a href="#">NASA</a>	[2017]

## References

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