

Christopher A. Theissen

University of California San Diego, Department of Astronomy & Astrophysics
9500 Gilman Drive, La Jolla, California 92093, USA
ctheissen at ucsd.edu <https://ctheissen.github.io/>

PROFESSIONAL APPOINTMENTS	Assistant Professor UC San Diego, Department of Astronomy & Astrophysics	Jul 2023–Present
	UCSD Chancellor’s Postdoctoral Fellow	Sep 2021–Jun 2023
	NASA Sagan Postdoctoral Fellow	Sep 2019–Sep 2022
	Visting Scholar UC San Diego, Center for Astrophysics and Space Sciences	Jan 2019–Sep 2019
	Postdoctoral Scholar – Konopacky Group UC San Diego, Center for Astrophysics and Space Sciences PI: Quinn Konopacky	Jan 2018–Jan 2019
	Adjunct Professor – San Diego Mesa College Department of Physical Sciences	Jun 2017–Jan 2019
	EDUCATION	Boston University , Boston, Massachusetts, USA
	Doctor of Philosophy (Ph.D.) in Astronomy Thesis: <i>Low-mass Stars with Extreme Mid-Infrared Excesses: Potential Signatures of Planetary Collisions</i>	Jan 2018
	Master of Arts (M.A.) in Astronomy	May 2014
	University of California San Diego , La Jolla, California, USA	
	Bachelor of Science (B.S.) in Physics Specialization in Astrophysics	Jun 2010
	Bachelor of Arts (B.A.) in Mathematics Applied Science	Jun 2010
	San Diego Mesa College , San Diego, California, USA	
	Associate of Arts (A.A.) in Transfer Studies	Jun 2007
ACADEMIC AWARDS & HONORS	Hellman Fellow	2025–2026
	Scialog Fellow, Early Science with the LSST	2024–2025
	UC San Diego Chancellor’s Postdoctoral Fellowship	2021–2023
	UC San Diego Chancellor’s Outstanding Postdoctoral Scholar Award	2020–2021
	NASA Hubble Fellowship Program Sagan Postdoctoral Fellowship	2019–2022
	National Science Foundation Graduate K–12 Fellowship	2014–2015
	Excellent Teaching Fellow Award, Boston University	2012
	Ford Foundation Predoctoral Fellowship	2012–2016
	California Alliance for Minority Participation Graduate School Application Award	2011
	Minority Undergraduate Research Fellowship, California Institute of Technology	2009
Opportunity Grant, University of California San Diego	2009–2010	
RESEARCH EXPERIENCE	Konopacky Group , UC SAN DIEGO	2018–2019
	Postdoctoral Scholar PI: Quinn Konopacky	
	Cool Star Lab , UC SAN DIEGO	2015–2017
	Visiting Graduate Student Researcher Mentor: Adam Burgasser	

TEACHING
EXPERIENCE

Astronomy 223: Astrostatistics , UC SAN DIEGO, LA JOLLA, CA	Winter 2026
Astronomy 150: Observational Optical Laboratory , UC SAN DIEGO, LA JOLLA, CA	Winter 2025
Astronomy 20A: Introduction to Astrophysics I , UC SAN DIEGO, LA JOLLA, CA	Fall 2024
Physics 164: Observational Astrophysics Lab , UC SAN DIEGO, LA JOLLA, CA	Winter 2024
Physics 239: Astrophysical Statistics , UC SAN DIEGO, LA JOLLA, CA	Fall 2023
Astronomy 101: Descriptive Astronomy , MESA COLLEGE, SAN DIEGO, CA Adjunct Faculty	Summer 2017
8th Grade Science , ATLANTIC MIDDLE SCHOOL, QUINCY, MASSACHUSETTS Resident Scientist (NSF GK-12 Fellow)	2014–2015
Astronomy 203: Principles of Astronomy II , BOSTON UNIVERSITY Teaching Fellow	Spring 2012
Astronomy 101: The Solar System , BOSTON UNIVERSITY Teaching Fellow	Fall 2011

FIRST & SECOND
AUTHOR
REFEREED
PUBLICATIONS

*DIRECTLY MENTORED STUDENT CO-AUTHORS ARE UNDERLINED.

- A11 Zhou, T., Theissen, C. A. et al. (incl. Zhao, L.), “Classifying Cool Dwarfs: Comprehensive Spectral Typing of Field and Peculiar Dwarfs Using Machine Learning,” *Astrophysical Journal*, 992, 93, Oct 2025
- A10 Gan, T., Theissen, C. A. et al., “Metallicity Dependence of Giant Planets around M Dwarfs,” *Astrophysical Journal Supplement*, 276, 47, Feb 2025
- A9 Hoch, K. K. W., Theissen, C. A. et al., “JWST-TST High Contrast: Spectroscopic Characterization of the Benchmark Brown Dwarf HD 19467 B with the NIRSpec Integral Field Spectrograph,” *Astronomical Journal*, 168, 187, Oct 2024
- A8 Wei, L., Theissen, C. A. et al., “The 3D Kinematics of the Orion Nebula Cluster. II. Mass-dependent Kinematics of the Inner Cluster,” *Astrophysical Journal*, 962, 174, Feb 2024
- A7 Theissen, C. A. et al. (incl. Hsu, C., Wei, L.), “The 3-D Kinematics of the Orion Nebula Cluster: NIRSPA0 Radial Velocities of the Core Population,” *Astrophysical Journal*, 926, 141, Oct 2021
- A6 Theissen, C. A., “Parallaxes of Cool Objects with WISE: Filling in for Gaia,” *Astrophysical Journal*, 862, 173, Aug 2018
- A5 Theissen, C. A. et al., “2MASS J11151597+1937266: A Young, Dusty, Isolated, Planetary-Mass Object with a Potential Wide Stellar Companion,” *Astrophysical Journal*, 853, 75, Jan 2018
- A4 Theissen, C. A. & West, A. A., “Collisions of Terrestrial Worlds: The Occurrence of Extreme Mid-Infrared Excesses around Low-mass Field Stars,” *Astronomical Journal*, 153, 165, Apr 2017
- A3 Theissen, C. A. et al. (incl. Shippee, G.), “The Late-Type Extension to MoVeRS (LaTE-MoVeRS): Proper Motion Verified Low-mass Stars and Brown Dwarfs from SDSS, 2MASS, and WISE,” *Astronomical Journal*, 153, 92, Feb 2017
- A2 Theissen, C. A., West, A. A., & Dhital, S., “Motion Verified Red Stars (MoVeRS): A Catalog of Proper Motion Selected Low-mass Stars from WISE, SDSS, and 2MASS,” *Astronomical Journal*, 151, 41, Feb 2016
- A1 Theissen, C. A. & West, A. A., “Warm Dust around Cool Stars: WISE 12 and 22 μm Excesses around SDSS M Dwarfs,” *Astrophysical Journal*, 794, 146, Oct 2014

CO-AUTHOR
REFEREED
PUBLICATIONS

- B61 Baburaj, A., et al. (incl. Theissen, C. A.), “A High-resolution Spectroscopic Survey of Directly Imaged Companion Hosts. II. Diversity in C/O Ratios among Host Stars,” *Astronomical Journal*, 171, 21, Jan 2026

- B60 Draxl Giannoni, J. D., et al. (incl. **Theissen, C. A.**), “Identifying and Characterizing Very Low Mass Spectral Blend Binaries with Machine Learning Methods,” *Astronomical Journal*, in press, Dec 2025
- B59 Millar-Blanchaer, M. A., et al. (incl. **Theissen, C. A.**), “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. VI. Evidence for Radially Evolving Icy Grains in the HD 141569A Disk via NIRCcam Coronagraphic Imaging,” *Astrophysical Journal*, 994, 199, Nov 2025
- B58 Burgasser, A. J., et al. (incl. **Theissen, C. A.**), “Observation of undepleted phosphine in the atmosphere of a low-temperature brown dwarf,” *Science*, 390, 697, Nov 2025
- B57 Davoudi, F., et al. (incl. **Theissen, C. A.**), “Gravity-sensitive Spectral Indices in Ultracool Dwarfs: Investigating Correlations with Metallicity and Planet Occurrence Using SpeX and Fire Observations,” *Astronomical Journal*, 170, 213, Oct 2025
- B56 Gan, T., et al. (incl. **Theissen, C. A.**), “A New Brown Dwarf Orbiting an M Star and an Investigation of the Eccentricity Distribution of Transiting Long-period Brown Dwarfs,” *Astrophysical Journal Letters*, 988, 78, Aug 2025
- B55 Hoch, K. K. W., et al. (incl. **Theissen, C. A.**), “Silicate clouds and a circumplanetary disk in the YSES-1 exoplanet system,” *Nature*, 643, 938, Jul 2025
- B54 Zheng, W., et al. (incl. **Theissen, C. A.**), “SN 2023ixf in the Pinwheel Galaxy M101: From Shock Breakout to the Nebular Phase,” *Astrophysical Journal*, 988, 61, Jul 2025
- B53 Scott, M. G., et al. (incl. **Theissen, C. A.**), “TOI-6478 b: a cold underdense Neptune transiting a fully convective M dwarf from the thick disc,” *Monthly Notices of the Royal Astronomical Society*, 540, 1909, Jun 2025
- B52 Shrishmoy, R., et al. (incl. **Theissen, C. A.**), “Spectropolarimetric Evolution of SN 2023ixf: an Asymmetric Explosion in a Confined Aspherical Circumstellar Medium,” *Astrophysical Journal*, in press, Apr 2025
- B51 Shrishmoy, R., et al. (incl. **Theissen, C. A.**), “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. III. Aperture Masking Interferometric Observations of the Star HIP 65426 at 3.8 μm ,” *Astrophysical Journal Letters*, 983, 25, Apr 2025
- B50 Burgasser, A. J., et al. (incl. Karpoo, P. R., **Theissen, C. A.**), “New Cold Subdwarf Discoveries from Backyard Worlds and a Metallicity Classification System for T Subdwarfs,” *Astrophysical Journal Supplement*, 982, 79, Apr 2025
- B49 Barkaoui, K., et al. (**Theissen, C. A.**), “TOI-6508 b: A massive transiting brown dwarf orbiting a low-mass star,” *Astronomy & Astrophysics*, 696, 44, Apr 2025
- B48 Sappay, B. J., et al. (**Theissen, C. A.**), “HD 206893 B at High Spectral Resolution with the Keck Planet Imager and Characterizer,” *Astronomical Journal*, 169, 175, Mar 2025
- B47 Baburaj, A., et al. (incl. **Theissen, C. A.**), “A High-resolution Spectroscopic Survey of Directly Imaged Companion Hosts. I. Determination of Diagnostic Stellar Abundances for Planet Formation and Composition,” *Astronomical Journal*, 169, 55, Feb 2025
- B46 Hsu, C. C., et al. (incl. **Theissen, C. A.**), “The Brown Dwarf Kinematics Project (BDKP). VI. Ultracool Dwarf Radial and Rotational Velocities from SDSS/APOGEE High-resolution Spectroscopy,” *Astrophysical Journal Supplement*, 274, 40, Oct 2024
- B45 Franson, K., et al. (incl. **Theissen, C. A.**), “JWST/NIRCcam 4-5 μm Imaging of the Giant Planet AF Lep b,” *Astrophysical Journal Letters*, 974, 11, Oct 2024
- B44 Burgasser, A. J., et al. (incl. **Theissen, C. A.**, Karpoo, P. R.), “Discovery of a Hypervelocity L Subdwarf at the Star/Brown Dwarf Mass Limit,” *Astrophysical Journal Letters*, 971, 25, Aug 2024
- B43 Ruffio, J. B., et al. (incl. **Theissen, C. A.**), “JWST-TST High Contrast: Achieving direct spectroscopy of faint substellar companions next to bright stars with the NIRSpc IFU,” *Astronomical Journal*, 168, 73, Aug 2024
- B42 Gillon, M., et al. (incl. **Theissen, C. A.**), “Detection of an Earth-sized exoplanet orbiting the nearby ultracool dwarf star SPECULOOS-3,” *Nature Astronomy*, 8, 865, Jul 2024

- B41 Barkaoui, K., et al. (incl. [Karpoor, P. R.](#), [Softich, E.](#), [Theissen, C. A.](#)), “Three short-period Earth-sized planets around M dwarfs discovered by TESS: TOI-5720b, TOI-6008b and TOI-6086b,” *Astronomy & Astrophysics*, 687, 264, Jul 2024
- B40 Do Ó, C. R., et al. (incl. [Theissen, C. A.](#)), “Orbital and Atmospheric Characterization of the 1RXS J034231.8+121622 System using High-resolution Spectroscopy Confirms that the Companion is a Low-mass Star,” *Astronomical Journal*, 167, 287, Jun 2024
- B39 Rothermich, A., et al. (incl. [Softich, E.](#), [Karpoor, P. R.](#), [Theissen, C. A.](#)), “89 New Ultracool Dwarf Comoving Companions Identified with the Backyard Worlds: Planet 9 Citizen Science Project,” *Astronomical Journal*, 167, 253, Jun 2024
- B38 Petrus, S., et al. (incl. [Theissen, C. A.](#)), “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. V. Do Self-consistent Atmospheric Models Represent JWST Spectra? A Showcase with VHS 1256–1257 b,” *Astrophysical Journal Letters*, 966, 11, May 2024
- B37 Kirkpatrick, J. D., et al. (incl. [Theissen, C. A.](#)), “The Initial Mass Function Based on the Full-sky 20 pc Census of ~3600 Stars and Brown Dwarfs,” *Astrophysical Journal Supplement*, 271, 55, Apr 2024
- B36 McCarthy, A. M., et al. (incl. [Theissen, C. A.](#)), “Multiple Patchy Cloud Layers in the Planetary-mass Object SIMP 0136+0933,” *Astrophysical Journal*, 965, 83, Apr 2024
- B35 Sallum, S., et al. (incl. [Theissen, C. A.](#)), “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems. IV. NIRISS Aperture Masking Interferometry Performance and Lessons Learned,” *Astrophysical Journal Letters*, 963, 2, Mar 2024
- B34 Ray, S., et al. (incl. [Theissen, C. A.](#)), “The JWST Early Release Science Program for Direct Observations of Exoplanetary Systems III: Aperture Masking Interferometric Observations of the star HIP 65426 at 3.8 μm ,” *Astrophysical Journal Letters*, in press, Oct 2023
- B33 Vasylyev, S. S., et al. (incl. [Karpoor, P. R.](#), [Softich, E. R.](#), [Theissen, C. A.](#)), “Early Time Spectropolarimetry of the Aspherical Type II Supernova SN 2023ixf,” *Astrophysical Journal Letters*, 955, 37, Sep 2023
- B32 Jacobson-Galán, W. V., et al. (incl. [Karpoor, P. R.](#), [Softich, E. R.](#), [Theissen, C. A.](#)), “SN 2023ixf in Messier 101: Photo-ionization of Dense, Close-in Circumstellar Material in a Nearby Type II Supernova,” *Astrophysical Journal Letters*, 954, 42, Sep 2023
- B31 Hoch, K. K. W., et al. (incl. [Theissen, C. A.](#)), “Assessing the C/O Ratio Formation Diagnostic: A Potential Trend with Companion Mass,” *Astronomical Journal*, 166, 85, Sep 2023
- B30 Ghachoui, M., et al. (incl. [Aganze, C.](#), [Gerasimov, R.](#), [Hsu, C.](#), [Theissen, C. A.](#)), “TESS discovery of a super-Earth orbiting the M-dwarf star TOI-1680,” *Astronomy & Astrophysics*, 677, A31, Sep 2023
- B29 Franson, K., et al. (incl. [Theissen, C. A.](#)), “Astrometric Accelerations as Dynamical Beacons: A Giant Planet Imaged Inside the Debris Disk of the Young Star AF Lep,” *Astrophysical Journal Letters*, 950, 19, Jun 2023
- B28 Pozuelos, F. J., et al. (incl. [Aganze, C.](#), [Gerasimov, R.](#), [Theissen, C. A.](#)), “A super-Earth and a mini-Neptune near the 2:1 MMR straddling the radius valley around the nearby mid-M dwarf TOI-2096,” *Astronomy & Astrophysics*, 672, A70, Apr 2023
- B27 Hsu, C., Burgasser, A. J., & [Theissen, C. A.](#), “Discovery of the Exceptionally Short Period Ultracool Dwarf Binary LP 413-53AB,” *Astrophysical Journal Letters*, 945, 6, Mar 2023
- B26 Schneider, A. C., et al. (incl. [Aganze, C.](#), [Theissen, C. A.](#)), “Redder than Red: Discovery of an Exceptionally Red L/T Transition Dwarf,” *Astrophysical Journal Letters*, 943, 16, Feb 2023
- B25 Franson, K., et al. (incl. [Theissen, C. A.](#)), “Astrometric Accelerations as Dynamical Beacons: Discovery and Characterization of HIP 21152 B, the First T-Dwarf Companion in the Hyades,” *Astronomical Journal*, 165, 39, Feb 2023
- B24 Tamburo, P., et al. (incl. [Theissen, C. A.](#)), “The Perkins Infrared Exosatellite Survey (PINES) II. Transit Candidates and Implications for Planet Occurrence around L and T Dwarfs,” *Astronomical Journal*, 164, 252, Dec 2022

- B23 Delrez, L., et al. (incl. [Aganze, C.](#), [Theissen, C. A.](#)), “Two Temperate Super-Earths Transiting a Nearby Late-type M Dwarf,” *Astronomy & Astrophysics*, 667, 59, Nov 2022
- B22 Hoch, K. W. et al. (incl. [Theissen, C. A.](#)), “Moderate-Resolution *K*-Band Spectroscopy of the Substellar Companion VHS 1256 b,” *Astronomical Journal*, 164, 155, Oct 2022
- B21 Gan, T., et al. (incl. [Theissen, C. A.](#), [Aganze, C. A.](#)), “TESS discovery of a sub-Neptune orbiting a mid-M dwarf TOI-2136,” *Monthly Notices of the Royal Astronomical Society*, 514, 4120, Aug 2022
- B20 Aganze, C. et al. (incl. [Theissen, C. A.](#), [Tejada Arevalo, R. A.](#), [Hsu, C.](#)), “Beyond the Local Volume II: Population Scaleheights and Ages of Ultracool Dwarfs in Deep HST/WFC3 Parallel Fields,” *Astrophysical Journal*, 934, 73, Jul 2022
- B19 Tamburo, P., et al. (incl. [Theissen, C. A.](#)), “The Perkins Infrared Exosatellite Survey (PINES) I. Survey Overview, Reduction Pipeline, and Early Results,” *Astronomical Journal*, 163, 253, Jun 2022
- B18 Abdurro’uf et al. (incl. [Theissen, C. A.](#)), “The Seventeenth Data Release of the Sloan Digital Sky Surveys: Complete Release of MaNGA, MaStar and APOGEE-2 Data,” *Astrophysical Journal Supplement Series*, 259, 35, Apr 2022
- B17 Aganze, C. et al. (incl. [Theissen, C. A.](#), [Tejada Arevalo, R. A.](#), [Hsu, C.](#)), “Beyond the Local Volume: Surface Densities of Ultracool Dwarfs in Deep HST/WFC3 Parallel Fields,” *Astrophysical Journal*, 924, 114 Jan 2022
- B16 Hsu, C. et al. (incl. [Theissen, C. A.](#), [Birky, J.](#), [Aganze, C.](#)), “The Brown Dwarf Kinematics Project (BDKP). V. Radial and Rotational Velocities of T Dwarfs from Keck/NIRSPEC High-Resolution Spectroscopy,” *Astrophysical Journal*, 257, 45, Dec 2021
- B15 Faherty, J. K., et al. (incl. [Aganze, C.](#), [Hsu, C.](#), [Gerasimov, R.](#), [Theissen, C. A.](#)), “A Wide Planetary Mass Companion Discovered Through the Citizen Science Project Backyard Worlds: Planet 9,” *Astrophysical Journal*, 923, 48, Dec 2021
- B14 Schneider, A. C., et al. (incl. [Aganze, C.](#), [Gerasimov, R.](#), [Hsu, C.](#), [Theissen, C. A.](#)), “Ross 19B: An Extremely Cold Companion Discovered via the Backyard Worlds: Planet 9 Citizen Science Project,” *Astrophysical Journal*, 920, 140, Nov 2021
- B13 Wells, R. D., et al. (incl. [Theissen, C. A.](#)), “A large sub-Neptune transiting the thick-disk M4V TOI-2406,” *Astronomy & Astrophysics*, 653, A97 Sep 2021
- B12 Meisner, A. M., et al. (incl. [Theissen, C. A.](#), [Gerasimov, R.](#), [Aganze, C.](#), [Hsu, C.](#)), “New Candidate Extreme T Subdwarfs from the Backyard Worlds: Planet 9 Citizen Science Project,” *Astrophysical Journal*, 915, 120, May 2021
- B11 Kirkpatrick, J. D., et al. (incl. [Aganze, C.](#), [Gerasimov, R.](#), [Hsu, C.](#), [Theissen, C. A.](#)), “The Field Substellar Mass Function Based on the Full-sky 20-pc Census of 525 L, T, and Y Dwarfs,” *Astrophysical Journal Supplement Series*, 253, 7, May 2021
- B10 Wilcomb, K. K. et al. (incl. [Theissen, C. A.](#)), “Moderate-Resolution *K*-Band Spectroscopy of Substellar Companion κ Andromedae b,” *Astronomical Journal*, 160, 270, Nov 2020
- B9 Meisner, A. M., et al. (incl. [Hsu, C.](#), [Aganze, C.](#), [Gerasimov, R.](#), [Theissen, C. A.](#)), “*Spitzer* Follow-up of the Coldest Brown Dwarfs Discovered by the Backyard Worlds: Planet 9 Citizen Science Project,” *Astrophysical Journal*, 889, 123, Aug 2020
- B8 Muirhead, P. S., et al. (incl. [Theissen, C. A.](#)), “Magnetic Inflation and Stellar Mass. V. Intensification and saturation of M dwarf absorption lines with Rossby number,” *Astronomical Journal*, 159, 52, Feb 2020
- B7 Bardalez Gagliuffi, D. C., et al. (incl. [Theissen, C. A.](#)), “The Ultracool SpeXtoscopic Survey. I. Volume-limited Spectroscopic Sample and Luminosity Function of M7–L5 Ultracool Dwarfs,” *Astrophysical Journal*, 883, 205, Oct 2019
- B6 Kim, D., et al. (incl. [Theissen, C. A.](#)), “Stellar Proper Motions in the Orion Nebular Cluster,” *Astronomical Journal*, 157, 118, Feb 2019

- B5 Gagné, J., et al. (incl. **Theissen, C. A.**), “2MASS J13243553+6358281 is an Early T-Type Planetary-mass Object in the AB Doradus Moving Group,” *Astrophysical Journal Letters*, 854, 27, Feb 2018
- B4 Favia, A., West, A. A., & **Theissen, C. A.**, “Runaway M Dwarf Candidates from the Sloan Digital Sky Survey,” *Astrophysical Journal*, 813, 26, Nov 2015
- B3 Arcavi, I., et al. (incl. **Theissen, C. A.**), “A Continuum of H- to He-rich Tidal Disruption Candidates With a Preference for E+A Galaxies,” *Astrophysical Journal*, 793, 38, Sep 2014
- B2 Sfiligoi, I., et al. (incl. **Theissen, C. A.**), “Scalability of network facing services used in the Open Science Grid,” *Journal of Physics: Conference Series*, 331, 062023, Dec 2011
- B1 Quimby, R. M., et al. (incl. **Theissen, C. A.**), “Hydrogen-poor superluminous stellar explosions,” *Nature*, 474, 487, Jun 2011

**PREPRINTS &
OTHERS**

- C16 Loritsch, M., et al. (incl. **Theissen, C. A.**, Karpoor, P.), “Kast Optical Spectra of Unclassified Stars Within 20 pc of the Sun,” *Research Notes of the American Astronomical Society*, 9, 125, May 2025.
- C15 Alvarado, E., et al. (incl. **Theissen, C. A.**), “The Spectral ANalog of Dwarfs (SAND): New Model Atmospheres with Varying Chemistry for Galactic Archaeology with Ultracool Dwarfs,” *Research Notes of the American Astronomical Society*, 8, 134, May 2024.
- C14 Zhou, T., et al. (incl. **Theissen, C. A.**), “Spectral Typing with Artificial Intelligence: Classifying Low-resolution Near-infrared Spectra of Standard M/L/T Dwarfs,” *Research Notes of the American Astronomical Society*, 8, 102, Apr 2024.
- C13 Mainieri, V., et al. (incl. **Theissen, C. A.**), “The Wide-field Spectroscopic Telescope (WST) Science White Paper,” *White Paper*, Mar 2024.
- C12 Humphreys, A., et al. (incl. **Theissen, C. A.**), “Spectroscopic Confirmation of the Nearby, Wide-separation L Dwarf Pair CWISE J061741.79+194512.8AB,” *Research Notes of the American Astronomical Society*, 7, 184, Jul 2023.
- C11 Dage, K. C., et al. (incl. **Theissen, C. A.**), “Extragalactic Star Cluster Science with the Nancy Grace Roman Space Telescope’s High Latitude Wide Area Survey and the Vera C. Rubin Observatory,” *White Paper for the Roman Core Community Survey, submitted to BAAS*, Jun 2023.
- C10 Han, J. J., et al. (incl. **Theissen, C. A.**), “NANCY: Next-generation All-sky Near-infrared Community survey,” *White Paper for the Roman Core Community Survey, submitted to BAAS*, Jun 2023.
- C9 Zhou, T., et al. (incl. **Theissen, C. A.**), “Resolved Binaries with Late-M and L Dwarf Companions Identified in Gaia eDR3,” *Research Notes of the American Astronomical Society*, 7, 50, Mar 2023.
- C8 Desai, M., et al. (incl. Draxl Giannoni, J. D., Aganze, C., **Theissen, C. A.**), “Identifying Ultracool Binary Systems using Machine Learning Methods,” *Research Notes of the American Astronomical Society*, 6, 151, Jan 2023.
- C7 **Theissen, C. A.**, et al. (incl. Hsu, C.), “Keck NIRES Spectral Standards for L, T, & Y Dwarfs,” *Research Notes of the American Astronomical Society*, 6, 151, Jul 2022.
- C6 Low, R., et al. (incl. Gerasimov, R., Hsu, C., **Theissen, C. A.**), “Spectroscopic Confirmation of an M6 Dwarf Companion to the Nearby Star BD-08 2582,” *Research Notes of the American Astronomical Society*, 5, 26, Feb 2021.
- C5 **Theissen, C. A.**, et al., “WISE J135501.90-825838.9 is a Nearby, Young, Extremely Low-mass Substellar Binary,” *Research Notes of the American Astronomical Society*, 4, 67, May 2020.
- C4 Muirhead, P. S., et al. (incl. **Theissen, C. A.**), “Searching for Exosatellites Orbiting L and T Dwarfs: Connecting Planet Formation to Moon Formation and Finding New Temperate Worlds,” *Bulletin of the American Astronomical Society*, Astro2020 White Paper, 2019.
- C3 Dupuy, T. J., et al. (incl. **Theissen, C. A.**), “Establishing an Empirical Substellar Sequence to Planetary Masses,” *Bulletin of the American Astronomical Society*, Astro2020 White Paper, 2019.

- C2 Kirkpatrick, J. D., et al. (incl. **Theissen, C. A.**), “The Need for Infrared Astrometry of Brown Dwarfs in the Post-Gaia Era,” *Bulletin of the American Astronomical Society*, Astro2020 White Paper, 2019.
- C1 Burgasser, A. J., **Theissen, C. A.**, et al., “Identification of WISE J000100.45+065259.6 as an M8.5+T5 Spectral Binary Candidate,” *Research Notes of the American Astronomical Society*, 1, 47, Dec 2017.

CONFERENCE PROCEEDINGS

- D8 Hoch, K., et al. (incl. **Theissen, C. A.**), “Direct Imaging Spectroscopy of Substellar Companions with JWST,” *Extreme Solar Systems V, Bulletin of the American Astronomical Society*, 2024.
- D7 McCarthy, A., et al. (incl. **Theissen, C. A.**), “Multiple Patchy Cloud Layers in the Planetary Mass Object SIMP0136+0933,” *Extreme Solar Systems V, Bulletin of the American Astronomical Society*, 2024.
- D6 Baburaj, A., et al. (incl. **Theissen, C. A.**), “Constraining Formation of Directly Imaged Planets through High-Resolution Spectroscopy of Host Stars,” *Extreme Solar Systems V, Bulletin of the American Astronomical Society*, 2024.
- D5 Franson, K., et al. (incl. **Theissen, C. A.**), “Astrometric Accelerations as Dynamical Beacons: Efficiently Imaging Planets Around Young Accelerating Stars,” *Extreme Solar Systems V, Bulletin of the American Astronomical Society*, 2024.
- D4 Wilcomb, K. K., et al. (incl. **Theissen, C. A.**), “Moderate Resolution Spectroscopy of Directly Imaged Planets,” *Extreme Solar Systems IV, Bulletin of the American Astronomical Society*, 2019.
- D3 Burgasser, A. J. & **SPLAT Development Team**, “The SpeX Prism Library Analysis Toolkit (SPLAT): A Data Curation Model,” *3rd International Workshop on Spectral Stellar Libraries*, 14, 7-22, Oct 2017.
- D2 Chakrabarti, S., et al. (incl. **Theissen, C. A.**), “Laboratory and Field tests of a High Throughput and Multi-slit Imaging Spectrograph (HiT&MIS),” *39th COSPAR Scientific Assembly*, 293, Feb 2016.
- D1 Sfiligoi, I., Würthwein, F., & **Theissen, C. A.**, “Using Condor Glideins for Distributed Testing of Network Facing Services,” *Third International Joint Conference on Computational Science and Optimization*, 327-331, May 2010.

PRESENTATIONS & POSTERS

- “Are the Lowest Mass Planet Hosts Odd?: Open Questions Surrounding the Smallest Planet Hosts in Our Galaxy,”
University of Florida Astronomy Colloquium [Invited Talk], Aug 2025.
- “Using the Smallest Stars to Explore Large-scale Habitability within the Milky Way Galaxy,”
Notre Dame Astrophysics Seminar [Invited Talk], Nov 2022.
Carnegie EPL Seminar [Invited Talk], Feb 2022.
UCSD Scripps IGPP Seminar [Invited Talk], Feb 2022.
UCSD Physics Colloquium [Invited Talk], Jan 2021.
- “The Three Dimensional Kinematics of the Low-mass Population within the ONC Core,”
NASA Hubble Fellowship Program Symposium [Talk], Nov 2021.
- “Investigating Spectral Peculiarities in the Lowest-mass Planet Hosts,”
AAS 237 (Winter Meeting) [Talk], Jan 2021.
- “Spectral Peculiarities in Ultracool Dwarf Planet Hosts,”
NASA SOFIA Colloquium [Invited Talk], Nov 2020.
- “The Dos and Don’ts of Writing a Successful (Fellowship) Application,”
UCSD IDEA Center Postdoc Talk [Invited Talk], Oct 2020.
- “The Connection Between Ultracool Dwarf Planet Hosts and Surface Gravity,”
NASA Hubble Fellowship Program Symposium [Talk], Sep 2020.
- “3-D Kinematics in the ONC Core,”
Keck Science Meeting [Poster], Sep 2020.

- “Supporting BIPOC Scientists through NHFP-organized Mentorship and Outreach,”
NASA Hubble Fellowship Program Symposium [Talk], Sep 2020.
- “Multiplicity at the Bottom of the Main Sequence,”
San Diego State University Astronomy & Physics Colloquium [**Invited Talk**], Nov 2019.
- “Planetary Collisions around Low-mass Stars: Constraining the Timescale for Collisions and Testing the Origin of the *Kepler* Dichotomy,”
NASA Hubble Fellowship Program Symposium [Talk], Oct 2019.
- “Cooler than *Gaia*: Parallaxes of Ultracool Objects with *WISE*,”
UC San Diego Astrophysics Seminar [**Invited Talk**], May 2018.
- “Low-mass Stars with Extreme Mid-Infrared Excesses: Potential Signatures of Planetary Collisions,”
AAS 231 (Winter Meeting) [Talk], Jan 2018.
- “Exoplanets and the Search for Life around Low-mass Stars,”
Mesa College STEM Lecture Series [**Invited Talk**], Nov 2017.
- “Cool Stars with Extreme Mid-Infrared Excesses: Potential Tracers of Planetary Collisions,”
AAS 228 (Summer Meeting) + *Cool Stars 19* [Poster], 2016.
- “The Motion Verified Red Stars (MoVeRS) Catalog and Low-Mass Field Stars with Warm Dust,”
AAS 227 (Winter Meeting) [Poster], 2016.
- “The Occurrence of Warm Dust around Cool Stars,”
UC San Diego CASS Journal Club [Talk], 2015.
- “*WISE* Infrared Excess Detections for SDSS M Dwarfs: Cool Field Stars with Evidence of Warm Circumstellar Material,”
AAS 224 (Summer Meeting) + *Cool Stars 18* [Poster], 2014.
- “SDSS M dwarfs with *WISE* Signatures of Infrared Excess: Evidence of Warm Circumstellar Material in Low-Mass Field Populations,”
AAS 223 (Winter Meeting) [Poster], 2014.
- “GlideTester - A framework for distributed testing of network-facing services using Condor glideins on Grid resources,”
TeraGrid Conference [Poster], 2010.
- “PyTracker: Automated Spectroscopic Target Acquisition using Cross-Correlation with Existing Astrometric Positions,”
University of California San Diego Undergraduate Research Conference [Talk], 2010.
- “Automated Cross-Correlative Spectroscopic Analysis of the Optical Transient Sky via Images Acquired using the Palomar Transient Factory,”
California Institute of Technology Summer Seminar [Poster], 2009.

**PRESS
COVERAGE**

Ultrashort Period Ultracool Binary

- “Ultracool Dwarf Binary Stars Break Records”
Keck Observatory, Feb 2023.
- “Record breakers! Super-close dwarf stars orbit each other in less than a day”
Space.com, Feb 2023.
- “Astronomers spot a tiny binary”
Sky & Telescope, Jan 2023.
- “Astronomers Discover Two Invisible Stars Spinning Around Each Other at Breakneck Speed”
Gizmodo, Jan 2023.
- “Binary Dwarf Stars Found Orbiting Each Other Every 20 Hrs. They Were Once Almost Touching”
Universe Today, Jan 2023.

Extremely Low-mass Binary

- “*WISE* J135501.90-825838.9 is a young, extremely low-mass substellar binary, study finds”
Phys.org, Mar 2020.

Planetary Collisions

- “Some planets ripe for life may be doomed by billions of years of violent collisions”
Astronomy Magazine, Jul 2016.

RESEARCH COLLABS	Institutional Representative for UCSD on the LSST-Discovery Alliance Board Member of the LSST Stars, Milky Way & Local Volume Science Collaboration Member of the TESS Follow-up Observing Program (TFOP) Working Group (WG) Member of the Wide-Field Spectroscopic Telescope Science Team Member of the Perkins INfrared Exosatellite Survey (PINES)	
SERVICE & OUTREACH	Keck Galactic TAC - Member, UCO	Feb 2025–Present
	LSST-Discovery Alliance Catalyst Steering Committee - Member, LSST-DA	Nov 2024–Present
	Cal-Bridge - Mentor, UC SAN DIEGO	Sep 2023–Present
	Cosmic Tours - Volunteer/Presenter, UC SAN DIEGO	Oct 2022–Present
	Research Affairs Advisory Committee - Member, UC SAN DIEGO	Oct 2022–Present
	Robotics Olympiad - Coach, SOLANA HIGHLANDS ELEMENTARY SCHOOL	Nov 2025–Apr 2026
	Science Olympiad - Coach, SOLANA HIGHLANDS ELEMENTARY SCHOOL	Oct 2025–Feb 2026
	Yo Soy STEM Plática - Speaker, “Navigating Community College (Or: Figuring out the rest of your life)”, SAN DIEGO CITY COLLEGE	Aug 2025
	Cool Stars 22 Meeting - SOC Chair and LOC Chair, UC SAN DIEGO	Jun 2022–Jun 2024
	NASA Hubble Fellowship Program Anti-Racism Initiative - Co-organizer, LEAD FOR THE MENTORING AND OUTREACH SUBGROUP	2020–2022
	NHFP DEI Session - Presenter, NASA HUBBLE FELLOWSHIP PROGRAM SYMPOSIUM	Nov 2021
	2021 Chancellor’s Award Review Committee - Reviewer, UC SAN DIEGO	Aug 2021
	Coalition NSF Advocacy Day - Advocate, REMOTE MEETINGS	Jun 2021
	UCSD Spring STEM Transfer Seminar 2021 - Panelist, “Traversing Postdocs and Industry Positions”, UC SAN DIEGO	May 2021
	UCSD Career Center - Panelist, “PhD Career Summit: Applying to Postdoc Positions”, UC SAN DIEGO	Mar 2021
	UCSD IDEA Center - Postdoctoral Scholarly Talks, “Developing a Successful Ford Fellowship Application”, UC SAN DIEGO	Oct 2020
	Summer Training Academy for Research Success (STARS)/ California-Arizona Minority Partnership for Astronomy Research and Education (CAMPARE), UC SAN DIEGO	2018, 2019, 2020
	High Tech High Internship, UC SAN DIEGO	Jan 2020
	Career Paths Session - Chair/Panelist, NASA HUBBLE FELLOWSHIP PROGRAM SYMPOSIUM	Oct 2019

Institute for Scientist & Engineer Educators (ISEE) Professional Development Program (PDP), UC SANTA CRUZ/UC SAN DIEGO	2018
InterTribal Youth/Young Native Scholars Summer Program, UC SAN DIEGO	Jul 2016
Cal-Bridge Workshop on Graduate School, UC SAN DIEGO	May 2016
STEM Fest, VISTA HIGH SCHOOL	Mar 2016
High School Science Olympiad Coach, UNIVERSITY HIGH SCHOOL	Oct 2015–Feb 2016
Chambliss Award Judge, AMERICAN ASTRONOMICAL SOCIETY MEETING 227	Jan 2016
Program on Student Success in Engineering (POSSE), UNIVERSITY OF CALIFORNIA SAN DIEGO/GOMPERS PREPARATORY ACADEMY	Sep 2015–Jun 2016
Upward Bound, BOSTON UNIVERSITY	2013–2015
Research in Science and Engineering (RISE), BOSTON UNIVERSITY	2013–2015
U-Design, BOSTON UNIVERSITY, DEPARTMENT OF ENGINEERING	Jul 2014
Academy of the Pacific Rim Astronomy Day, BOSTON UNIVERSITY	Nov 2012
Graduate Women in Science and Engineering (GWISE) - “How to Find a Fellowship” Panelist, BOSTON UNIVERSITY	Sep 2012
<i>Other:</i>	
• OPTICON-Radionet Pilot TAC	2023
• Subject-matter expert reviewer in a NASA peer review	2020, 2021, 2022
• Panelist for a NASA review	2023
• Panelist for a NASA review	2021
Referee: The Astrophysical Journal (ApJ)	2018–Present
The Astrophysical Journal Supplement Series (ApJS)	
Monthly Notices of the Royal Astronomical Society (MNRAS)	

MENTORSHIP

POSTDOCS	
Rayna Rampalli, UCSD	2026–Present
Lyra Cao, UCSD	2026–Present
Julie Inglis, UCSD	2025–Present
GRADUATES	
Ana Victoria Ojeda Vera, CITEDIPN (Visiting Masters Student)	2026–Present
Arthur Berberyan, UCSD	2025–Present
Phil Van-Lane, U. Toronto (Visiting Graduate Student)	2025–Present
Sarah Jiang, UCSD	2024–Present
Aman Parikh, UCSD (Masters in Data Science)	2023–2024
Preethi Karpoor, UCSD (Masters in Astronomy)	2022–2024
Aneesh Baburaj, UCSD (→ Postdoc @ Northwestern)	2021–2025
Lingfeng Wei, UCSD (→ Postdoc @ UCLA)	2020–2025
Christian Aganze, UCSD (→ Science Fellow @ Stanford)	2018–2023
Kielan Wilcomb, UCSD (→ Giacconi Fellow @ STScI)	2018–2022
Chih-Chun Hsu, UCSD (→ Postdoc @ Northwestern)	2018–2022
UNDERGRADUATES	
Madison Fierro, UCSD	2026–Present
Madhav Krishna, UCSD	2026–Present
Ily Rubio, UWYO (STARS)	2026–Present
Brighton Liu, UCSD	2026–Present
Johanna Sanchez, UCSD	2026–Present

Tue Thai, UCSD	2025–Present
Julia Zhang, UCSD	2025–Present
Barron Nguyen, Stanford (→ NSF @ Stanford)	2025–2026
Piper Lentz, Amherst College (STARS → Northeastern)	2025–2026
Nishtha Panging, UCSD	2025–2026
Aadhithiya Anbalagan, UCSD (STARTastro)	2025
Aditya Rao, SJSU (Cal-Bridge Scholar)	2025
Danny Nguyen, UMass Amherst	2025
Tianxing “Sky” Zhou, UCSD (→ BYU)	2022–2025
Arturo Sorensen, UCSD (→ UNIMIB)	2024–2025
Hanan Sayes, UCSD	2024–2025
Jackie Scullin, UCSD	2023–2025
Ashleann Chen, UCSD	2024
Jacob Craighead, UCSD	2024
Weston Chester, UCSD	2024
So Hirota, UCSD (→ Stanford)	2023–2024
Lexu “Gavin” Zhao, UCSD (→ UFL)	2022–2024
Malina Desai, UCSD (→ Carnegie post-bac → MIT)	2022–2023
Chelsea Adelman, Cal Poly Pomona (Cal-Bridge Scholar → UCI)	2020
Roberto Tejada Arevalo, CSULA (Cal-Bridge Scholar → Princeton)	2018–2020
Dennis H. Calderon, CSUEB (Cal-Bridge Scholar → OSU)	2018–2019
Russell Van Linge, UCSD (→ Scripps Health)	2018
Jessica Birky, UCSD (→ NSF @ UW)	2016–2019
Guillaume Shippee, UCB (→ Qualcomm)	2016

HIGH SCHOOL STUDENTS

Siddharth Thambidurai, Intern	2026
Sven Andersen, Intern (→ UCSD)	2022
Angeli Solis, Intern (→ UCSD)	2020
Victor Zhang, BU RISE (Princeton → U. Chicago)	2015
Katie Melbourne, BU RISE (Yale → Ball Aerospace)	2014
Isabella Trierweiler, BU RISE (Yale → UCLA)	2013

GRANTS, FUNDING, & COMPUTE

The Better Benchmark Bureau: A New Generation of Wide Binary Systems to Characterize the Most Abundant Planet Hosts in the Galaxy PI, Gordon and Betty Moore Foundation Fellowship, \$171k	2026–2028
Finding Stellar Dance Partners: Identifying the Rarest Multiple Systems as Optimal Benchmarks for the Smallest Stars PI, Hellman Fellowship, \$50k	2025–2027
Developing Simulations and Real-Time Alert Systems for Rare Transiting Events: Exoplanets around Brown Dwarfs as a Case Study PI, LSST-DA Science Catalyst Small Grant, \$6k	2024–2025
It Takes Two Planets to Tango: Constraining the Orbit of a Planetary-Mass Binary PI, HST Cycle 32 (& 33) Guest Observer, \$100k	2024–2026
A Magnitude Limited Sample of M dwarfs to Study the Super-Earth Rate across the Fully Convective Boundary PI, TESS Cycle 7 Guest Investigator, \$70k	2024–2025
Cool Stars Meeting 22: Support for Hybrid and Early Career Researchers PI, NASA TWSC, \$50k	2024–2025

Cool Stars Meeting 22: Support for the Longest Running Independently Organized Conference in Astronomy PI, NSF AST Conference Grant, \$50k	2024–2025
Cool Stars Meeting 22: Support for Early Career Researchers PI, NAASC Support for Conferences and Workshops program, \$14k	2024–2025
Machine Learning Classification for Ultracool Dwarfs PI, NSF ACCESS Explore allocation PHY240253, 200,000.0 ACCESS Credits	2025–2026
Characterizing the Lowest-mass Planet Hosts and Investigating the Potential Link between Stellar Surface Gravity and Planet Occurrence PI, NASA XRP, \$618k	2024–2026
A Magnitude Limited Sample of M dwarfs to Study the Super-Earth Rate across the Fully Convective Boundary PI, TESS Cycle 5 Guest Investigator, \$70k	2022–2023
Recalibrating Fundamental Parameters for Low-Mass Stars for Current and Future Planet Hunting Surveys PI, XSEDE Research allocation PHY220048, 8,314,035 SUs (~\$100k)	2022–2023
Recalibrating the Ultracool Dwarfs in the Transiting Exoplanet Survey Satellite Input Catalog PI, XSEDE Startup allocation PHY200052, 100,000 SUs (~\$1k)	2022–2023
Infrared Gold: A Student-Centered Program to Extract, Analyze, and Disseminate 20 Years of IRTF/SpeX Point-Source Spectroscopy Co-I, NASA ADAP (PI: Adam Burgasser), \$666,511	2022–2025
Simulating Ultracool Dwarf Populations in LSST DP0 and in the Main LSST Survey Co-I, LSST Kickstarter Grant (PI: Adam Burgasser), \$19k	2022
A Search for Distant Ultracool Dwarfs in Hubble Space Telescope Spectral Surveys PI, XSEDE Startup allocation PHY200052, 50,000 SUs (~\$1k)	2020–2021
Planetary Collisions around Low-Mass Stars: Constraining the Timescale for Collisions and Testing the Origin of the Kepler Dichotomy PI, NASA Sagan Postdoctoral Fellowship, \$349k	2019–2022
Spectroscopic Analysis of Ultracool Dwarfs Co-I, SDSS FAST (PI: Adam Burgasser), \$60K	2016–2017
Low-mass Field Stars with Infrared Excesses: Possible Signatures of Planetary Collisions Co-I, NASA ADAP (PI: Andrew West; Admin PI: Phil Muirhead), \$125K	2016–2017

**TELESCOPE
TIME AWARDED
(ORDERED BY
APERTURE)**

Keck I & II 10-meters	
PI: “Abundances and Kinematics of Ultracool Dwarf Planet Host Twin Stars” • 7 nights (NIRSPEC)	2022–2025
Co-I: “Newly Discovered Planetary Mass Objects in the Solar Neighborhood ” • 4 nights (NIRES)	2023–2025
Co-I: “Unresolved Binaries in the Core of the Orion Nebula Cluster” • 3 night (NIRSPAO)	2023–2025
Co-I: “Very High Velocity Stars and Brown Dwarfs Uncovered by Backyard Worlds ” • 2 nights (NIRES)	2024–2025
PI: “Precise Abundances of Ultracool Dwarfs using FGK Wide Binaries” • 2 nights (NIRSPEC)	2024
Co-I: “Keck/NIRSPEC Cadence Program: NIRSPEC Observations of Ultrashort Period Ultracool Binaries” • 0.8 nights (NIRSPEC)	2024

Co-I: “Resolving Elemental Abundances of a Remarkable Hierarchical Exoplanet-host System Observed by a JWST ERS Program”	2024
• 0.5 nights (NIRSPA0)	
Co-I: “Detailed Chemical Composition and Binarity of the Hyper Metal Poor Dwarf ” Star SDSS J0815 + 4729”	2023
• 0.5 nights (HIRES)	
Co-I: “The Old and the Quick: A Search for Halo Brown Dwarfs with Backyard Worlds”	2022–2023
• 2 nights (NIRES)	
Co-I “Galactic Archaeology with Ultracool Dwarfs: Kinematic Structure Among L Dwarfs”	2021–2022
• 3.5 nights (NIRSPEC)	
PI: “Resolving Tertiary Components of Wide, Very Low-mass Binaries with AO”	2020–2021
• 3 nights (NIRC2)	
Co-I: “Searching for Our Coldest Young Neighbors with Backyard Worlds”	2018–2021
• 10 nights (NIRES)	
Co-I “Testing Pre-Main Sequence Evolutionary Models in the First 10 Myr”	2020–2021
• 2.5 nights (OSIRIS)	
Co-I “Completing the Kinematic Census of Local L and T Dwarfs”	2019–2020
• 5.5 nights (NIRSPEC)	
Co-I: “Secondary Radial Velocities in Short-Period Star/Brown Dwarf Spectral Binaries”	2019–2020
• 0.5 nights (NIRSPEC)	
Co-I: “Dynamics of the Orion Nebula Cluster: Mass-Dependent Kinematics”	2019–2020
• 6 nights (NIRSPA0)	
PI: “Characterizing Low-mass Binaries and Searching for Hierarchical Triples: NIR Spectra of Low-mass, Wide, Common Proper Motion Pairs”	2019
• 1 night (NIRES)	
CHARA Array	
PI: “Investigating Radius Inflation in the Lowest Mass Planet Hosts: CHARA Observations of Teegarden’s Star”	2020
• 4 nights (CLASSIC)	
Gemini North & South 8-meters	
PI: “Abundances and Kinematics of Ultracool Dwarf Planet Host Twin Stars”	2022–2025
• 13.5 hours (IGRINS/IGRINS2)	
PI: “High-resolution Near-infrared Observations of a Planetary-mass Binary”	2023–2024
• 6.8 hours (IGRINS)	
Co-I: “The BASS-Ultracool Search for Isolated Giant Exoplanet Analogs”	2018–2019
• 22 hours (GNIRS Spectrograph)	
Co-I: “Confirming a new L/T transition planetary-mass object in AB Doradus”	2018
• Fast turnaround single object observation (GNIRS Spectrograph)	
James Webb Space Telescope 6.5-meter	
Co-I: Cycle 3: “How big can you make a planet? Spectroscopic characterization of HD 206893B”	2024
• 9.9 hours (NIRSpec)	
Co-I: Cycle 3: “Arcana of the Ancients: A Spectral Metallicity Survey of the Lowest-Mass Stars and Brown Dwarfs”	2024
• 83.2 hours (NIRSpec and MIRI)	
Co-I: Cycle 2: “Establishing the Formation of AF Lep b with NIRCcam: The Lowest-Mass Imaged Exoplanet with a Dynamical Mass”	2023
• 6.5 hours (NIRCcam)	
Co-I: Cycle 1: “Direct Imaging Spectroscopy of Two Jovian Exoplanets: Characterization of the TYC 8998-760-1 Multi-Planetary System”	2021
• 5.2 hours (NIRSpec and MIRI)	

LDT 4.3-meter	
PI: “Pre-main Sequence or Field Stars?: Searching for Traces of Youth in Low-mass Stars with Extreme Mid-infrared Excesses”	2016
• 2 nights (DeVeny Optical Spectrograph)	
CFHT 3.6-meter	
Co-I: “Precision NIR RVs for WISE J1624-3212: A Nearby, Potentially Unresolved Low-mass Binary”	2021
• 2.4 hours (SPIRou NIR Spectrograph)	
IRTF 3.2-meter	
PI: “Characterizing the Ultracool <i>TESS</i> Targets: Investigating the Role of Gravity in Planet Hosts”	2020–2025
• 421 hours (SpeX NIR Spectrograph)	
Co-I: “Characterizing Cool Hosts of Candidate Transiting Exoplanets with IRTF/SpeX”	2024–2025
• 6 nights (SpeX NIR Spectrograph)	
Co-I: “Characterizing the Ultracool Dwarf Benchmark Wide Binaries”	2024–2025
• 1 night (SpeX NIR Spectrograph)	
Co-I: “Homogeneous stellar characterization for M dwarfs with confirmed giant planets”	2023
• 1 night (SpeX NIR Spectrograph)	
Co-I: “Radial Velocity Monitoring of an Exceptionally Short-Period Very Low Mass Binary”	2022–2023
• 6 nights (iSHELL Spectrograph)	
Co-I: “Searching for Hierarchical Triples in Wide, Common Proper Motion, Very Low-Mass Binaries”	2018–2020
• 4.5 nights (SpeX NIR Spectrograph)	
Co-I: “Training the Cannon: Calibrating APOGEE Observations of Ultracool Dwarfs”	2018–2020
• 6 nights (iSHELL Spectrograph)	
Co-I: “LaTE-MoVeRS: New Nearby Very Low-Mass Stars and Brown Dwarfs Verified by Proper Motion from SDSS + 2MASS + <i>WISE</i> ”	2017–2019
• 4.5 nights (SpeX NIR Spectrograph + MORIS)	
Shane 3-meter	
PI: “Optimizing Target Selection of Direct Imaging Planet Campaigns using Accelerating Stars”	2022–2024
• 9 nights (ShARCS AO NIR Imager)	
Co-I: “Optical Spectroscopy of New and Benchmark M & L Dwarfs from Gaia and Backyard Worlds, and Potential Exoplanet Hosts from <i>TESS</i> and <i>SPECULOOS</i> ”	2022–2024
• 31 nights (Kast Optical Spectrograph)	
PI: “AO Observations of Overluminous members of Wide, Low-mass Binaries: Searching for Hierarchical Triples”	2019–2021
• 17 nights (ShARCS AO NIR Imager)	
Co-I: “Optical Spectroscopy of LaTE-MoVeRS M and L Dwarfs”	2017–2022
• 63 nights (Kast Optical Spectrograph)	
SDSS 2.5-meter	
Co-I: “APOGEE-2 Survey of the Lowest-mass Stars and Brown Dwarfs: Composition, Chemistry and Companions”	2017–2018
• ~500 APOGEE fibers awarded for ancillary science call	
Hubble Space Telescope 2.4-meter	
PI: Cycle 32 (& 33) - “It Takes Two Planets to Tango: Constraining the Orbit of a Planetary-Mass Binary”	2024– 2025
• 6 (+4) orbits (WFC3)	
Co-I: Cycle 30 - “Completing the stellar census of Westerlund 1”	2022
• 7 orbits (WFC3)	

	APF 2.4-meter	
	Co-I: “Abundances of Directly Imaged Planet Host Stars”	2021–2024
	• 3 nights (Levy Optical Spectrograph)	
	Co-I: “Calibrations of Chemical Abundances of Ultracool Dwarfs in Wide Binary Systems with Optical High-Resolution Spectroscopy of G-Type Primaries”	2022
	• 1 nights (Levy Optical Spectrograph)	
	Co-I: “Benchmarking Chemical Abundances of Ultracool Dwarfs in Binary Systems with Optical Spectroscopy of Bright AFGK Primaries”	2022
	• 2.5 nights (Levy Optical Spectrograph)	
	Co-I: “Radial Velocity Monitoring of WISE J1624-3212: A Potential Low-mass Binary Hiding at 18 pc”	2021
	• 1 nights (Levy Optical Spectrograph)	
	Nickel 1-meter	
	PI: “UCSD Observational Astrophysics Course: Proper Motions of Asteroids”	2024–2025
	• 14 nights (Direct Imaging Camera)	
	Transiting Exoplanet Survey Satellite 4×0.1-meter	
	PI: “A Magnitude Limited Sample of M dwarfs to Study the Super-Earth Rate across the Fully Convective Boundary”	2022–2025
	• GO Cycle 5: 658 short cadence targets	
	• GO Cycle 7: 621 short cadence targets	
ADDITIONAL OBSERVING EXPERIENCE	Keck I 10-meter	
	3 nights on the optical spectrometer (LRIS).	2009–2010
	Keck II 10-meter	
	4 half-nights on the high-res NIR spectrometer (NIRSPEC) with AO (NIRSPA0).	2018
	Palomar Hale 200-inch	
	1 night on the optical spectrograph (DBSP).	2009
	CTIO SMARTS 0.9-meter	
	27 nights on the optical imager.	2014–2016
PROFESSIONAL AFFILIATIONS	International Astronomical Union (IAU)	2025–Present
	Society of Senior Ford Fellows (SSFF)	2024–Present
	Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)	2016–Present
	National Society of Black Physicists (NSBP)	2011–Present
	American Astronomical Society	2009–Present
	American Physical Society (APS)	2008–Present
	National Society of Hispanic Physicists (NSHP)	2008–Present
OTHER WORK EXPERIENCE	Booz Allen Hamilton (BAH) , San Diego, California, USA	2019
	Strategic Innovation Group - Lead Data Scientist	
	Co-organizer of the 2019 Kaggle Data Science Bowl	
	Aeronautical Radio, Incorporated (ARINC) , San Diego, California, USA	2007–2011
	Analyst/Network Engineer	
REFERENCES	Dr. Quinn Konopacky	
	Associate Professor of Astronomy & Astrophysics	
	University of California San Diego	
	9500 Gilman Drive #0424, La Jolla, California 92093-0424, USA	
	qkonopacky at ucsd.edu	

Dr. Adam Burgasser

Professor of Astronomy & Astrophysics
University of California San Diego
9500 Gilman Drive #0424, La Jolla, California 92093-0424, USA
aburgasser at ucsd.edu

Dr. Philip Muirhead

Associate Professor of Astronomy
Boston University
725 Commonwealth Ave, Boston, Massachusetts 02215, USA
philipm at bu.edu

[CV compiled on 2026-06-11]