# Chih-Chun "Dino" Hsu

Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA), Northwestern University
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**CURRENT POSITION**

**Postdoctoral Associate** September 2022–present
Center for Interdisciplinary Exploration and Research in Astrophysics, Northwestern University, Evanston, IL
Supervisor: Jason Jinfei Wang

**EDUCATION**

**University of California, San Diego**, La Jolla, CA, USA
Doctor of Philosophy (Ph.D.) in Physics August 2022
Thesis: "Kinematics, Multiplicity, Rotational Dynamics, and Population Properties of Ultracool Dwarfs Inferred from High-Resolution Near-Infrared Spectroscopy"
Advisor: Adam J. Burgasser

**National Tsing Hua University**, Hsinchu, Taiwan
Bachelor of Science (B.S) in Physics June 2014

**RESEARCH INTERESTS**

lowest-mass stars; brown dwarfs; exoplanets; medium-/high-resolution spectroscopy; very low-mass binaries; stellar populations; stellar kinematics; stellar rotation

**RESEARCH EXPERIENCE**

**Postdoctoral Associate** 2022–present
Center for Interdisciplinary Exploration and Research in Astrophysics, Northwestern University, Evanston, IL
Supervisor: Jason Jinfei Wang

**Graduate Research Student** 2016–2022
Center for Astrophysics and Space Sciences, UC San Diego, La Jolla, CA
Advisor: Adam J. Burgasser

**Research Assistant** 2015–2016
Institute of Astronomy, National Tsing Hua University, Hsinchu, Taiwan
Supervisor: Huei-Ru "Vivien" Chen

**Undergraduate Research Student** 2013–2014
Physics Department, National Tsing Hua University, Hsinchu, Taiwan
Advisor: Kingman Cheung

**ACADEMIC HONORS & AWARDS**

**Cool Stars 21 Travel Grant** July 2022
Cool Stars 21st Meeting, Toulouse, France

**Rodger Doxsey Travel Prize** June 2022
AAS 240th Meeting, Pasadena, CA
Awarded for providing graduate students/postdocs within one year of receiving or receipt of their PhD a monetary prize to enable the oral presentation of their dissertation research (transferred from the AAS 239 th Meeting).

**Friends of the International Center fellowship** 2020

UC San Diego, La Jolla, CA
Awarded for promoting international friendship, understanding, and cooperation.

**Carol and George Lattimer Award for Graduate Excellence** 2019–2020
UC San Diego, La Jolla, CA
Awarded to graduate students in the Divisions of Physical Sciences who seek interdisciplinary approaches to problem-solving and have a strong commitment to education, mentorship, and service.

**Physics Chair's Challenge Award** * 3 2017, 2018, 2022
UC San Diego, La Jolla, CA
Awarded for supporting educational excellence and training for physics students.

**Physics Excellence Award** 2016
UC San Diego, La Jolla, CA
Awarded to highly qualified students admitted to the Physics PhD program.

**College of Science Elite Student Award** * 3 2012–2014
National Tsing Hua University, Hsinchu, Taiwan
Awarded to the top student of class based on academic achievements.

**Academic Achievement Award** * 5 2011–2014
National Tsing Hua University, Hsinchu, Taiwan
Awarded to top 5 % of class.

**College of Science Scholarship** 2013
National Tsing Hua University, Hsinchu, Taiwan
Awarded to one student in College of Science based on academic achievements.

## FIRST AUTHOR PUBLICATIONS

[4] **Hsu, C.**; Burgasser, A. J.; Theissen, C. A.; Gelino, C. R.; Birky, J. L.; Diamant, S. J. M.; Bardalez Gagliuffi, D. C.; Aganze; C., Blake, C. H., Jacqueline K. Faherty,"The Brown Dwarf Kinematics Project (BDKP). VI. Radial and Rotational Velocities of late-M and L Dwarfs from Keck/NIRSPEC High-Resolution Spectroscopy", in prep.

[3] **Hsu, C.**; Burgasser, A. J.; Theissen, C. A.; Birky, J. L.; Aganze, C.; Gerasimov, R.; Schmidt, S. J.; Blake, C. H.; Covey, K. R.; Moreno-Hilario, E.,"*Ultracool Dwarf Radial and Rotational Velocity Survey with SDSS/APOGEE High-Resolution Spectrometer*", in prep.

[2] **Hsu, C.**; Burgasser, A. J.; Theissen, C. A.,"*Discovery of the Exceptionally Short Period Ultracool Dwarf Binary LP 413-53AB*", ApJL, 945, L6, March 2023

[1] **Hsu, C.**; Burgasser, A. J.; Theissen, C. A.; Gelino, C. R.; Birky, J. L.; Diamant, S. J. M.; Bardalez Gagliuffi, D. C.; Aganze, C.; Blake, C. H.; Faherty, J. K.,"The Brown Dwarf Kinematics Project (BDKP). V. Radial and Rotational Velocities of T Dwarfs From Keck/NIRSPEC High-Resolution Spectroscopy", ApJS 257, 45, December 2021.

## CONTRIBUTING AUTHOR PUBLICATIONS

[14] Schneider, Adam C.; Burgasser, Adam J.; Bruursema, Justice; Munn, Jeffrey A.; Vrba, Frederick J.; Caselden, Dan; Kabatnik, Martin; Rothermich, Austin; Sainio, Arttu; Bickle, Thomas P.; Dahm, Scott E.; Meisner, Aaron M.; Kirkpatrick, J. Davy; Suarez, Genaro; Gagne, Jonathan; Faherty, Jacqueline K.; Vos, Johanna M.; Kuchner, Marc J.; Williams, Stephen J.; Bardalez Gagliuffi,

Daniella; Aganze, Christian; **Hsu, Chih-Chun**; Theissen, Christopher; Cushing, Michael C.; Marocco, Federico; Casewell, Sarah; Backyard Worlds: Planet 9 Collaboration, "Redder than Red: Discovery of an Exceptionally Red L/T Transition Dwarf", ApJL, 943, L16, February 2023

[13] Kiwy, Frank; Faherty, Jacqueline K.; Meisner, Aaron; Schneider, Adam C.; Kirkpatrick, J. Davy; Kuchner, Marc J.; Burgasser, Adam J.; Casewell, Sarah; Kiman, Rocio; Calamari, Emily; Aganze, Christian; **Hsu, Chih-Chun**; Sainio, Arttu; Thakur, Vinod; The Backyard Worlds: Planet 9 Collaboration, "Discovery of 34 low-mass comoving systems using NOIRLab Source Catalog DR2", AJ, 164, 3, July 2022

[12] Aganze, Christian; Burgasser, Adam J ; Malkan, Mathew; Theissen, Christopher A; Tejada Arevalo, Roberto A; **Hsu, Chih-Chun**; Bardalez Gagliuffi, Daniella C; E Ryan, Russell, Jr; Holwerda, Benne, "Beyond the Local Volume II: Population Scaleheights and Ages of Ultracool Dwarfs in Deep HST/WFC3 Parallel Fields", ApJ, 934, 73, July 2022

[11] Softich, Emma; Schneider, Adam C.; Patience, Jennifer; Burgasser, Adam J.; Shkolnik, Evgenya; Faherty, Jacqueline K.; Caselden, Dan; Meisner, Aaron M.; Kirkpatrick, J. Davy; Kuchner, Marc J.; Gagne, Jonathan; Bardalez-Gagliuffi, Daniella; Cushing, Michael C.; Casewell, Sarah L.; Aganze, Christian; **Hsu, Chih-Chun**; Andersen, Nikolaj Stevnbak; Kiwy, Frank; Thevenot, Melina; The Backyard Worlds: Planet 9 Collaboration, "CWISE J014611.20-050850.0AB: The Widest Known Brown Dwarf Binary in the Field", ApJL, 922, L12, February 2022

[10] Faherty, Jacqueline K; Gagne, Jonathan; Popinchalk, Mark; Vos, Johanna M.; Burgasser, Adam J.; Schumann, Jorg; Schneider, Adam C.; Kirkpatrick, J. Davy; Meisner, Aaron M.; Kuchner, Marc J.; Bardalez Gagliuffi, Daniella C.; Marocco, Federico; Caselden, Dan; Gonzales, Eileen C.; Rothermich, Austin; Casewell, Sarah L.; Debes, John H.; Aganze, Christian; Ayala, Andrew; **Hsu, Chih-Chun**; Cooper, William J.; Smart, R. L.; Gerasimov, Roman; Theissen, Christopher A.; The Backyard Worlds: Planet 9 Collaboration, "A Wide Planetary Mass Companion Discovered Through the Citizen Science Project Backyard Worlds: Planet 9", ApJ, 923, 48, December 2021

[9] Aganze, Christian; Burgasser, Adam J ; Malkan, Mathew; Theissen, Christopher A; Tejada Arevalo, Roberto A; **Hsu, Chih-Chun**; Bardalez Gagliuffi, Daniella C; E Ryan, Russell, Jr; Holwerda, Benne, "Beyond the Local Volume I: Surface Densities of Ultracool Dwarfs in Deep HST/WFC3 Parallel Fields", ApJ, 924, 144, January 2022

[8] Schneider, Adam C.; Meisner, Aaron M.; Gagne, Jonathan; Faherty, Jacqueline K.; Marocco, Federico; Burgasser, Adam J.; Kirkpatrick, J. Davy; Kuchner, Marc J.; Gramaize, Leopold; Rothermich, Austin; Brooks, Hunter; Vrba, Frederick J.; Bardalez Gagliuffi, Daniella; Caselden, Dan; Cushing, Michael C.; Gelino, Christopher R.; Line, Michael R.; Casewell, Sarah L.; Debes, John H.; Aganze, Christian Ayala, Andrew; Gerasimov, Roman; Gonzales, Eileen C.; **Hsu, Chih-Chun**; Kiman, Rocio; Popinchalk, Mark; Theissen, Christopher; Backyard Worlds: The Planet 9 Collaboration, "Ross 19B: An Extremely Cold Companion Discovered via the Backyard Worlds: Planet 9 Citizen Science Project", ApJ, 921, 150, November 2021

[7] Theissen, C. A.; Konopacky , Q. M.; Lu, J. R.; Kim D.; Zhang, S. Y.; **Hsu, C.**; Chu, L.; Wei, L., "The 3-D Kinematics of the Orion Nebula Cluster: NIRSPEC-AO Radial Velocities of the Core Population", ApJ, 926, 141, February 2022

[6] Meisner, Aaron M.; Schneider, Adam C.; Burgasser, Adam J.; Marocco, Federico; Line, Michael R.; Faherty, Jacqueline K.; Kirkpatrick, J. Davy; Caselden, Dan; Kuchner, Marc J.; Gelino, Christopher R.; Gagne, Jonathan; Theissen, Christopher; Gerasimov, Roman; Aganze, Christian; **Hsu, Chih-Chun**; Wisniewski, John P.; Casewell, Sarah L.; Bardalez Gagliuffi, Daniella C.; Logsdon, Sarah E.; Eisenhardt, Peter R. M., "New Candidate Extreme T Subdwarfs from the Backyard Worlds: Planet 9 Citizen Science Project", ApJ, 915, 120, July 2021

[5] J. Davy Kirkpatrick; Christopher R. Gelino; Jacqueline K. Faherty; Aaron M. Meisner; Dan Caselden; Adam C. Schneider; Federico Marocco; Alfred J. Cayago; R. L. Smart; Peter R. Eisenhardt; Marc J. Kuchner; Edward L. Wright; Michael C. Cushing; Katelyn N. Allers; Daniella C. Bardalez Gagliuffi; Adam J. Burgasser; Jonathan Gagne; Sarah E. Logsdon; Emily C. Martin; James G. Ingalls; Patrick J. Lowrance; Ellianna S. Abrahams; Christian Aganze; Roman Gerasimov; Eileen C. Gonzales; **Chih-Chun Hsu**; Nikita Kamraj; Rocio Kiman; Jon Rees; Christopher Theissen; Kareem Ammar; Nikolaj Stevnbak Andersen; Paul Beaulieu; Guillaume Colin; Charles A. Elachi; Samuel J. Goodman; Leopold Gramaize; Leslie K. Hamlet; Justin Hong; Alexander Jonkeren; Mohammed Khalil; David W. Martin; William Pendrill; Benjamin Pumphrey; Austin Rothermich; Arttu Sainio; Andres Stenner; Christopher Tanner; Melina Thevenot; Nikita V. Voloshin; Jim Walla; Zbigniew Wedracki; "The Field Substellar Mass Function Based on the Full-sky 20-pc Census of 525 L, T, and Y Dwarfs", ApJS, 253, 7, March 2021

[4] Sahlmann, Johannes; Dupuy, Trent J.; Burgasser, Adam J.; Filippazzo, Joseph C.; Martín, Eduardo L.; Bardalez Gagliuffi, Daniella C.; **Hsu, Chih-Chun**; Lazorenko, Petro F.; Liu, Michael C., "Individual Dynamical Masses of DENIS J063001.4−184014AB Reveal A Likely Young Brown Dwarf Triple", MNRAS, 500, 5453, January 2021

[3] Meisner, Aaron M.; Faherty, Jacqueline K.; Kirkpatrick, J. Davy; Schneider, Adam C.; Caselden, Dan; Gagné, Jonathan; Kuchner, Marc J.; Burgasser, Adam J.; Casewell, Sarah L.; Debes, John H.; Artigau, Étienne; Bardalez Gagliuffi, Daniella C.; Logsdon, Sarah E.; Kiman, Rocio; Allers, Katelyn; **Hsu, Chih-Chun**; Wisniewski, John P.; Allen, Michaela B.; Beaulieu, Paul; Colin, Guillaume Durantini Luca, Hugo A.; Goodman, Sam; Gramaize, Léopold; Hamlet, Leslie K.; Hinckley, Ken; Kiwy, Frank; Martin, David W.; Pendrill, William; Rothermich, Austin; Sainio, Arttu; Schümann, Jörg; Andersen, Nikolaj Stevnbak; Tanner, Christopher; Thakur, Vinod; Thévenot, Melina; Walla, Jim; Wędracki, Zbigniew; Aganze, Christian; Gerasimov, Roman; Theissen, Christopher; The Backyard Worlds: Planet 9 Collaboration, "Spitzer Follow-up of Extremely Cold Brown Dwarfs Discovered by the Backyard Worlds: Planet 9 Citizen Science Project", ApJ, 889, 123, August 2020

[2] Schneider, Adam C.; Burgasser, Adam J.; Gerasimov, Roman; Marocco, Federico; Gagné, Jonathan; Goodman, Sam; Beaulieu, Paul; Pendrill, William; Rothermich, Austin; Sainio, Arttu; Kuchner, Marc J.; Caselden, Dan; Meisner, Aaron M.; Faherty, Jacqueline K.; Mamajek, Eric E.; **Hsu, Chih-Chun**; Greco, Jennifer J.; Cushing, Michael C.; Kirkpatrick, J. Davy; Bardalez-Gagliuffi, Daniella Logsdon, Sarah E.; Allers, Katelyn; Debes, John H.; Backyard Worlds: Planet 9 Collaboration, "WISEA J041451.67-585456.7 and WISEA J181006.18-101000.5: The First Extreme T-type Subdwarfs?", ApJ, 989, 77, July 2020

[1] Paudel, R. R., Gizis, J. E., Burgasser, A. J., **Hsu, C.**, "2MASS J10274572+0629104: the very short period young M6 dwarf binary system identified in K2 data", MNRAS, 486, 4144, July 2019

**NON-REFEREED PUBLICATIONS**

[4] Valencia, Julissa Villalobos ; Burgasser, Adam J.; **Hsu, Chih-Chun**; Aganze, Christian, "Spectral Characterization of the Low-mass Companion $\mu$ Virgenes B", RNAAS, 6, 670, December 2022

[3] Schapera, Noah; Caselden, Dan; Meisner, Aaron M.; Burgasser, Adam J.; Schneider, Adam C.; Humphreys, Austin; **Hsu, Chih-Chun**; Softich, Emma; Smith, Leigh C.; Lucas, Philip W.; Kirkpatrick, J. Davy; Marocco, Federico; Faherty, Jacqueline K.; Kuchner, Marc J.; Cushing, Michael C.; Backyard Worlds: Cool Neighbors Collaboration, "VVV J165507.19-421755.5: A Nearby T Dwarf Hidden in the Galactic Plane", RNAAS, 6, 189, September 2022

[2] Theissen, Christopher A.; Burgasser, Adam J.; Martin, Emily C.; Cushing, Michael C.; Konopacky, Quinn M.; McLean, Ian S.; **Hsu, Chih-Chun**; Bardalez Gagliuffi, Daniella C.; Schneider, Adam C.; Kuchner, Marc J.; Faherty, Jacqueline K.; Beichman, Charles A.; Miles, Brittany; Skemer, Andy; Logsdon, Sarah E.; Meisner, Aaron M.; Kirkpatrick, J. Davy, "Keck NIRES Spectral Standards for L, T, and Y Dwarfs", RNAAS, 6, 151, July 2022

[1] Low, Ryan; Burgasser, Adam J.; Reylé, Céline; Gerasimov, Roman; **Hsu, Chih-Chun**; Theissen, Christopher A, "Spectroscopic Confirmation of an M6 Dwarf Companion to the Nearby Star BD-08 2582", RNAAS, 5, 26, February 2021

**TALKS**

*"Discovery of the Shortest-Period Ultracool Dwarf Binary"* January 11, 2022
AAS 241 Meeting, Seattle Convention Center, Seattle, WA

*"Discovery of the Shortest-Period Ultracool Dwarf Binary"* January 10, 2022
AAS 241 Meeting Press Conference, Seattle Convention Center, Seattle, WA

*"Kinematics and Multiplicity of Ultracool Dwarfs with High-Resolution Near-Infrared Spectroscopy"* November 16, 2022
Northwestern CIERA Observational Astronomy Meeting, Evanston, IL

*"Kinematics, Rotation, and Multiplicity of Ultracool Dwarfs with High-Resolution Near-Infrared Spectroscopy"* June 14, 2022
AAS 240 Meeting, Pasadena Convention Center, Pasadena, CA

*"Forward-Modeling High-Resolution Spectroscopic Data of Ultracool Dwarfs with Large Public Archives"* June 3, 2022
HDSI Internal Talk, Halicioglus Data Science Institute, UC San Diego, Virtual

*"Kinematics, Rotation, and Multiplicity of Ultracool Dwarfs with High-Resolution Near-Infrared Spectroscopy"* May 25, 2022
IPAC Seminar Series, Infrared Processing and Analysis Center, Virtual

*"Radial and Rotational Velocities of T Dwarfs from Keck/NIRSPEC High-Resolution Spectroscopy"* September 9, 2021
Keck Science Meeting, UC San Diego

*"Precise Radial and Rotational Velocities of Ultracool Dwarfs with the APOGEE High-Resolution Spectrometer"* August 11, 2021
2021 SDSS Collaboration Meeting, Virtual

*"Radial Velocities and Kinematic Ages of Nearby T Dwarfs from Keck/NIRSPEC High-Resolution Spectroscopy"* January 15, 2021

AAS 237 Meeting, Virtual

*"Ultracool Dwarf Kinematics and Ages Revealed by High-Resolution Spectroscopy"*
November 13, 2020
CASS Journal Club, UC San Diego, La Jolla, CA

*"Precise Radial and Rotational Velocities of Ultracool Dwarfs Using a Forward-Modeling Method with High-Resolution Spectroscopy"* February 4, 2020
High-Resolution Infrared Spectroscopy for Exoplanet Characterization Hackathon, Caltech, Pasadena, CA

*"Radial and Rotational Velocities of Ultracool Dwarfs From High-Resolution Spectroscopy"* March 5, 2019
AMNH Astrophysics seminar, American Museum of Natural History, New York, NY

*"Radial and Rotational Velocities of Ultracool Dwarfs From High-Resolution Spectroscopy"* February 15, 2019
CASS Journal Club, UC San Diego, La Jolla, CA

**POSTERS**

*"Kinematics, Rotation, and Multiplicity of Ultracool Dwarfs with High-Resolution Near-Infrared Spectroscopy"* July 2022
The 21 Cambridge Workshops of Cool Stars, Stellar Systems and the Sun, Toulouse, France

*"Radial Velocities and Kinematic Ages of Nearby T Dwarfs from Keck/NIRSPEC High-Resolution Spectroscopy"* March 2021
The 20.5 Cambridge Workshops of Cool Stars, Stellar Systems and the Sun, Virtual

*"Precise Radial and Rotational Velocities for over 440 Ultracool Dwarfs Observed with NIRSPEC"* September 2020
Keck Science Meeting 2020, Virtual

*"Precise Radial and Rotational Velocities for T Dwarfs Using NIRSPEC High-Resolution Spectrometer"* September 2019
Keck Science Meeting 2019, UCLA, Los Angeles, CA

*"Precise Radial and Rotational Velocities of Ultracool Dwarfs with APOGEE High-Resolution Spectra"* June 2019
SDSS-IV/V Collaboration Meeting 2019, Ensenada, Mexico

*"Radial and Rotational Velocities for 300+ Ultracool Dwarfs from NIRSPEC High-Resolution Spectroscopy"* January 2019
AAS 233 Meeting, Seattle, WA

*"Toward Measurements of Radial and Rotational Velocities of 300+ Ultracool Dwarfs from NIRSPEC High-Resolution Spectroscopy"* September 2018
Keck Science Meeting 2018, Caltech, Pasadena, CA

*"Precise Radial Velocities to Detect Exoplanets around Ultracool Dwarfs Using the NIRSPEC High-Resolution Spectrograph"* September 2018
ExSoCal 2018, Caltech, Pasadena, CA

*"Refined Measurements of Radial and Rotational Velocities of 300+ Ultracool Dwarfs*

*from NIRSPEC High-Resolution Spectroscopy"* July 2018
Cool Stars 20, Boston University, Cambridge, MA

**PRESS COVERAGE**

"*Record breakers! Super-close dwarf stars orbit each other in less than a day* ",
Space.com, March 2023

"*Ultracool dwarf binary stars break records* ",
Northwestern News, January 2023

"*Astronomers Spot A Tiny Binary System*",
Sky & Telescope, January 2023

"*Ultracool dwarf binary stars break records*",
Earth Sky, January 2023

"*This Record-Breaking Star System's Year Is Shorter Than One Earth Day*",
CNET, January 2023

"*Here's how cool a star can be and still achieve lasting success*",
Science News, August 2021

**WORKSHOPS**

*Future Keck IR Spectroscopy Workshop* January 27 2021
Virtual

*High-Resolution Infrared Spectroscopy for Exoplanet Characterization Hackathon* February 4–6 2020
Caltech, Pasadena, CA

*Telluric Line Hack Week Workshop* February 25–28 2019
Flatiron Institute, New York, NY

*2017 Kraft Observational Astronomy Workshop* October 12–16 2017
Lick Observatory, Mount Hamilton, CA

*SciCoder Workshop* July 31–August 4 2017
Vanderbilt University, Nashville, TN

**TELESCOPE TIME AWARDED**

*Lick Observatory*
PI: **2022B**: "Calibrations of Chemical Abundances of Ultracool Dwarfs in Wide Binary Systems with Optical High-Resolution Spectroscopy of G-Type Primaries"
- 1 night awarded (APF)

*W. M. Keck Telescopes, Keck II 10-meter*
Co-I: **2021B–2022B**: "Galactic Archaeology with Ultracool Dwarfs: Kinematic Structure Among L Dwarfs"
- 5.25 nights awarded (NIRSPEC)

Co-I: **2021B–2022B**: "The Old and the Quick: A Search for Halo Brown Dwarfs with Backyard Worlds"
- 5.5 nights awarded (NIRES)

Co-I: **2019B–2020B**: "Completing the Kinematic Census of Local T Dwarfs"
- 5.75 nights awarded (NIRSPEC)

Co-I: **2018B–2021A**: "NIRES Follow-up of Young T Dwarfs from Backyard Worlds"
- 9 nights awarded (NIRES)

*NASA InfraRed Telescope Facility (IRTF)*
Co-I: **2018A–2019B**: "Training the Cannon: Calibrating APOGEE Observations of Ultracool Dwarfs"
- 6 nights awarded (iSHELL)

**ADDITIONAL OBSERVING EXPERIENCE**

*Keck II 10-meter/NIRSPEC 7 nights* 2017–2018

*Keck I 10-meter/HIRES 0.5 nights* 2018

*Shane Telescope 3-meter*
- Kast Double Spectrograph: 22 nights 2018–2021
- ShaneAO/ShARCS: 1 night 2019

*NASA InfraRed Telescope Facility (IRTF)/SpeX 2 nights* 2021–2022

**UNDERGRAD MENTORSHIP**

Brigette Vazquez, UC San Diego 2021–2022
Delilah Jacobsen, UC San Diego 2021–2022
Tianxing "Sky" Zhou, UC San Diego 2021–2022

**TEACHING**

*Guest lectures for ASTRON 441* October 25 and 27 2022
Northwestern University, Evanston, IL
- workshops on Overleaf and reading academic papers for first- and second-year astronomy Ph.D. students

*Teaching assistant for PHYS 2D* Spring 2021
UC San Diego, La Jolla, CA
- lower-division modern physics lecture for engineering/physical science majors

*Teaching assistant for PHYS 5* Fall 2020
UC San Diego, La Jolla, CA
- lower-division introductory stellar astrophysics lecture for non-physics major

*Teaching assistant for PHYS 2DL* Spring & Fall 2017, 2019, Spring 2020, Fall 2021
UC San Diego, La Jolla, CA
- lower-division modern physics lab for engineering/physical science majors

*Teaching assistant for PHYS 1A* Spring 2018
UC San Diego, La Jolla, CA
- lower-division mechanics lab for life-science majors

*Teaching assistant for PHYS 160* Winter 2018, Fall 2018
UC San Diego, La Jolla, CA
- upper-division introductory stellar astrophysics lecture for physics major

*Teaching assistant for PHYS 2BL* Fall 2016, Winter 2017
UC San Diego, La Jolla, CA
- lower-division electricity & magnetism lab for engineering/physics major

*California Professoriate for Access to Physics Careers (CPAPC)*

*Southern California Physics GRE Bootcamp* August 2017
- UC San Diego, La Jolla, CA

**PUBLIC OUTREACH**

**Astronomy on Tap Chicago (invited)** February 9th, 2023
Begyle Brewing, Chicago, IL
- Famous astronomy outreach program to general public
- "Discovery of the Closest-Separated, Fastest-Orbiting Ultracool Dwarf Couple"

**Python Workshop for Physics Undergraduate Students**
UC San Diego, La Jolla, CA 2019–2021 November
- Python-programming bridge program for transferred students to UC San Diego

**2019 Institute for Scientist & Engineer Educators (ISEE) Professional Development Program (PDP)** March–September 2019
UC Santa Cruz/UC Los Angeless, CA
- Professional development team focused on effective and inclusive teaching, including mentoring, and also includes training in professional skills such as communication, teamwork, collaboration, and leadership.

**Institute of the Americas (IOA) Science Innovation Camp** July 20 2017
UC San Diego, La Jolla, CA
- Physics outreach for Latin American high school students (14–18 year old)

**The Barrio Logan Science & Art Expo** March 16 2019
Mercado del Barrio, San Diego, CA
- Physics outreach for Mexican families from around southern San Diego

**PROFESSIONAL AFFILIATIONS** **American Astronomical Society (AAS)** 2018–Present

**SKILLS** Python, LaTeX, Github, HTML; Languages: Mandarin (native), English (fluent)

**REFERENCES**

**Dr. Adam Burgasser**
Professor of Physics
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**Dr. Quinn Konopacky**
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**Dr. Cullen Blake**
Associate Professor of Physics and Astronomy
University of Pennsylvania
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[*CV compiled on 2023/03/07*]