

# Dino Chih-Chun Hsu

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University of California, San Diego, Center for Astrophysics and Space Sciences  
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<b>EDUCATION</b>	<i>Doctor of Philosophy (Ph.D.)</i> , Physics, Advisor: Prof. Adam Burgasser University of California, San Diego, La Jolla, CA, USA	Expected June 2022
	<i>Bachelor of Science (B.S.)</i> , Physics National Tsing Hua University, Hsinchu, Taiwan	June 2014
<b>RESEARCH EXPERIENCE</b>	<i>Graduate Student</i> Center for Astrophysics and Space Sciences, UC San Diego, La Jolla, CA	2016-present
	<ul style="list-style-type: none"><li>• Advisor: Prof. Adam Burgasser</li><li>• Research area: brown dwarfs</li></ul>	
	<i>Research Assistant</i> Institute of Astronomy, National Tsing Hua University, Hsinchu, Taiwan	2015-2016
	<ul style="list-style-type: none"><li>• Supervisor: Prof. Huei-Ru Chen</li><li>• Research area: star formation</li></ul>	
<b>RESEARCH INTERESTS</b>	<i>Undergraduate Research Student</i> Physics Department, National Tsing Hua University, Hsinchu, Taiwan	2013-2014
	<ul style="list-style-type: none"><li>• Advisor: Prof. Kingman Cheung</li><li>• Research area: dark matter</li></ul>	
	Lowest-mass stars, brown dwarfs, exoplanets; medium- and high-resolution spectroscopy; very low-mass binaries; stellar populations; stellar kinematics; stellar rotation	
<b>ACADEMIC HONORS &amp; AWARDS</b>	<i>Carol and George Lattimer Award for Graduate Excellence (\$2,000)</i> UC San Diego, La Jolla, CA	2019-2020
	<ul style="list-style-type: none"><li>• Awarded for 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.</li></ul>	
	<i>Physics Chair's Challenge Award *2 (\$500)</i> UC San Diego, La Jolla, CA	2017-2018
	<ul style="list-style-type: none"><li>• Awarded to support educational excellence and training for current physics students.</li></ul>	
	<i>College of Science Elite Student Award *3</i> National Tsing Hua University, Hsinchu, Taiwan	2012-2014
	<ul style="list-style-type: none"><li>• Awarded to one student per class based on academic achievements.</li></ul>	
	<i>Academic Achievement Award *5</i> National Tsing Hua University, Hsinchu, Taiwan	2011-2014
	<ul style="list-style-type: none"><li>• Awarded to top 5 % of class.</li></ul>	

- Awarded to one student in College of Science based on academic achievements.

**PUBLICATIONS** 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

**Hsu, C.**, Burgasser, A. J., Theissen, C. A., Birky, J. L., Gelino, C. R., Blake, C. H., "The Brown Dwarf Kinematics Project (BDKP). V. Radial and Rotational Velocities of T Dwarfs From Keck/NIRSPEC High-Resolution Spectroscopy", in prep.

**TALKS**

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

"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

**POSTERS**

"Precise Radial and Rotational Velocities for T Dwarfs Using NIRSPEC High-Resolution Spectrometer" September 2018  
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  
233rd AAS 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

**WORKSHOPS**

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

*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

## **OBSERVING & EXPERIENCE**

*W. M. Keck Telescopes, Instruments: NIRSPEC, NIRES, HIRES*

*NASA InfraRed Telescope Facility (IRTF), Instrument: iSHELL*

*Shane Telescope, Instrument: Kast Double Spectrograph*

## **TEACHING**

*Teaching assistant for PHYS 2BL* Fall 2016, Winter 2017  
UC San Diego, La Jolla, CA  
• lower-division electricity & magnetism lab for engineering and physical science majors

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

*Teaching assistant for PHYS 160* Winter 2018, Fall 2018  
UC San Diego, La Jolla, CA  
• upper-division introductory stellar astrophysics course for physical science majors

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

*California Professoriate for Access to Physics Careers (CPAPC)*  
*Southern California Physics GRE Bootcamp* August 2017  
UC San Diego, La Jolla, CA

*Python Workshop for Physics Undergraduate Students* November 2019  
UC San Diego, La Jolla, CA

## **PUBLIC OUTREACH**

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

**IOA Science Innovation Camp Physics Outreach** July 20 2017  
UC San Diego, La Jolla, CA  
• designed for Latin American high school students (14-18 years old)

**The Barrio Logan Science & Art Expo**

March 16 2019

Mercado del Barrio, San Diego, CA

- designed for Mexican families from around southern San Diego

**SKILLS**

Python (numpy, scipy, pandas, matplotlib, astropy), Markov Chain Monte Carlo

Languages: Mandarin (native), English (fluent)