

Christopher A. Theissen

University of California San Diego, Department of Physics
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EDUCATION	Boston University , Boston, Massachusetts, USA	
	Doctor of Philosophy (Ph.D.) in Astronomy	Jan 2018
	Thesis: <i>Low-mass Stars with Extreme Mid-Infrared Excesses: Potential Signatures of Planetary Collisions</i>	
	Advisor: Andrew West	
	Master of Arts (M.A.) in Astronomy	May 2013
	University of California San Diego , La Jolla, California, USA	
	Bachelor of Science (B.S.) in Physics	Jun 2010
	Specialization in Astrophysics	
	Bachelor of Arts (B.A.) in Mathematics	Jun 2010
	Applied Science	
PROFESSIONAL APPOINTMENTS	San Diego Mesa College , San Diego, California, USA	
	Associate of Arts (A.A.) in Transfer Studies	Jun 2007
	NASA Sagan Postdoctoral Fellow	Sep 2019–Present
	UC San Diego, Department of Physics	
	Visiting Scholar	Jan 2019–Sep 2019
	UC San Diego, Department of Physics	
	Postdoctoral Scholar – Konopacky Group	Jan 2018–Jan 2019
	UC San Diego, Department of Physics	
	Supervisor: Quinn Konopacky	
	Adjunct Professor – San Diego Mesa College	Jun 2017–Jan 2019
ACADEMIC AWARDS & HONORS	Department of Physical Sciences	
	NASA Hubble Fellowship Program Sagan Postdoctoral Fellowship	2019–2022
	NSF Astronomy & Astrophysics Postdoctoral Fellowship (declined)	2019
	Ford Foundation Dissertation Fellowship (Honorable Mention/Alternate)	2016
	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	Cool Star Lab , UC SAN DIEGO	2015–2017
	Visiting Graduate Research Student	
	Mentor: Adam Burgasser	
	West Group , BOSTON UNIVERSITY	2011–2017
	Graduate Research Student	
	Advisor: Andrew West	
	Palomar Transient Factory , CALIFORNIA INSTITUTE OF TECHNOLOGY	2009–2010
	Undergraduate Research Student	
	Advisors: Shrinivas Kulkarni and Robert Quimby	

High Energy Physics Group , UNIVERSITY OF CALIFORNIA SAN DIEGO	2009–2010
Undergraduate Research Student	
Advisors: Frank Würthwein and Igor Sfiligoi	
Cosmology Group , UNIVERSITY OF CALIFORNIA SAN DIEGO	2008–2009
Undergraduate Research Student	
Advisors: Brian Keating and Hans Paar	

TEACHING EXPERIENCE	Astronomy 101 , MESA COLLEGE, SAN DIEGO, CA	Summer 2017
	Adjunct Faculty	
	8th Grade Science , ATLANTIC MIDDLE SCHOOL, QUINCY, MASSACHUSETTS	2014–2015
	Resident Scientist (NSF GK-12 Fellow)	
	Astronomy 203 , BOSTON UNIVERSITY, BOSTON, MASSACHUSETTS	Spring 2012
	Teaching Fellow	
	Astronomy 101 , BOSTON UNIVERSITY, BOSTON, MASSACHUSETTS	Fall 2011
	Teaching Fellow	

FIRST-AUTHOR REFEREED PUBLICATIONS	*DIRECTLY MENTORED STUDENT CO-AUTHORS ARE <u>UNDERLINED</u> .	
	Theissen, C. A. , “Parallaxes of Cool Objects with <i>WISE</i> : Filling in for <i>Gaia</i> ,” <i>ApJ</i> , 862, 173, Aug 2018.	
	Theissen, C. A. , Burgasser, A. J., Bardalez Gagliuffi, D. C., Hardegree-Ullman, K. K., Gagné, J., Schmidt, S. J., West, A. A., “2MASS J11151597+1937266: A Young, Dusty, Isolated, Planetary-Mass Object with a Potential Wide Stellar Companion,” <i>ApJ</i> , 853, 75, Jan 2018.	
	Theissen, C. A. , West, A. A., “Collisions of Terrestrial Worlds: The Occurrence of Extreme Mid-Infrared Excesses around Low-mass Field Stars,” <i>AJ</i> , 153, 165, Apr 2017.	
	Theissen, C. A. , West, A. A., Shippee, G., Burgasser, A. J., Schmidt, S. J., “The Late-Type Extension to MoVeRS (LaTE-MoVeRS): Proper Motion Verified Low-mass Stars and Brown Dwarfs from SDSS, 2MASS, and <i>WISE</i> ,” <i>AJ</i> , 153, 92, Feb 2017.	
	Theissen, C. A. , West, A. A., Dhital, S., “Motion Verified Red Stars (MoVeRS): A Catalog of Proper Motion Selected Low-mass Stars from <i>WISE</i> , SDSS, and 2MASS,” <i>AJ</i> , 151, 41, Feb 2016.	
	Theissen, C. A. , West, A. A., “Warm Dust around Cool Stars: <i>WISE</i> 12 and 22 μm Excesses around SDSS M Dwarfs,” <i>ApJ</i> , 794, 146, Oct 2014.	

CO-AUTHOR REFEREED PUBLICATIONS	Bardalez Gagliuffi, D. C., Burgasser, A. J., Schmidt, S. J., Theissen, C. A. , Gagné, J., Gillon, M., Sahlmann, J., Faherty, J. K., Gelino, C., Cruz, K., Skrzypek, N.,Looper, D., “The Ultracool SpeXtoscopic Survey. I. Volume-limited Spectroscopic Sample and Luminosity Function of M7–L5 Ultracool Dwarfs,” <i>ApJ</i> , 883, 205, Oct 2019.
	Kim, D., Lu, J. R., Konopacky, Q., Urban, L., Toller, E., Anderson, J., Theissen, C. A. , Morris, M. R., “Stellar Proper Motions in the Orion Nebular Cluster,” <i>AJ</i> , 157, 118, Feb 2019.
	Gagné, J., Allers, K. N., Theissen, C. A. , Faherty, J. K., Bardalez Gagliuffi, D. C., Artigau, É., “2MASS J13243553+6358281 is an Early T-Type Planetary-mass Object in the AB Doradus Moving Group,” <i>ApJL</i> , 854, L27, Feb 2018.
	Favia, A., West, A. A., Theissen, C. A. , “Runaway M Dwarf Candidates from the Sloan Digital Sky Survey,” <i>ApJ</i> , 813, 26, Nov 2015.
	Arcavi, I., Gal-Yam, A., Sullivan, M., Pan, Y. C., Cenko, S. B., Ofek, E. O., De Cia, A., Yan, L., Yang, C. W., Howell, D. A., Tal, D., Kulkarni, S. R., Tendulkar, S. P., Tang, S., Xu, D., Sternberg, A., Cohen, J. G., Bloom, J. S., Nugent, P. E., Kasliwal, M. M., Perley, D. A., Quimby, R. M., Miller, A. A., Theissen, C. A. , Laher, R. R., “A Continuum of H- to He-rich Tidal Disruption Candidates With a Preference for E+A Galaxies,” <i>ApJ</i> , 793, 38, Sep 2014.

Sfiligoi, I., Würthwein, F., **Theissen, C. A.**, Dost, J. M., “Scalability of network facing services used in the Open Science Grid,” *Journal of Physics: Conference Series*, 331, 062023, Dec 2011.

Quimby, R. M., Kulkarni, S. R., Kasliwal, M. M., Gal-Yam, A., Arcavi, I., Sullivan, M., Nugent, P., Thomas, R., Howell, D. A., Nakar, E., Bildsten, L., **Theissen, C. A.**, Law, N., Dekany, R., Rahmer, G., Hale, D., Smith, R., Ofek, E. O., Zolkower, J., Velur, V., Walters, R., Henning, J., Bui, K., McKenna, D., Poznanski, D., Cenko, S. B., Levitan, D., “Hydrogen-poor superluminous stellar explosions,” *Nature*, 474, 487, Jun 2011.

UNREFEREED PUBLICATIONS

Muirhead, P. S., Skinner, J. N., Radigan, J., Triaud, A., **Theissen, C. A.**, Bardalez Gagliuffi, D. C., Tamburo, P., Burgasser, A. J., Faherty, J. K., Stephens, D., “Searching for Exosatellites Orbiting L and T Dwarfs: Connecting Planet Formation to Moon Formation and Finding New Temperate Worlds,” *BAAS*, Astro2020 White Paper, 2019.

Dupuy, T. J., Kraus, A. L., **Theissen, C. A.**, Bardalez Gagliuffi, D. C., Burgasser, A. J., Girard, J., Gizis, J., “Establishing an Empirical Substellar Sequence to Planetary Masses,” *BAAS*, Astro2020 White Paper, 2019.

Kirkpatrick, J. D., Abdurrahman, F., Best, W. J., Dupuy, T. J., Faherty, J. K., Henderson, C. B., Marocco, F., Mróz, P., Sahlmann, J., Smart, R. L., **Theissen, C. A.**, Wright, E. L., “The Need for Infrared Astrometry of Brown Dwarfs in the Post-Gaia Era,” *BAAS*, Astro2020 White Paper, 2019.

Burgasser, A. J., **Theissen, C. A.**, Bardalez Gagliuffi, D. C., Schlawin, E., “Identification of WISE J000100.45+065259.6 as an M8.5+T5 Spectral Binary Candidate,” *RNAAS*, 1, 47, Dec 2017.

CONFERENCE PROCEEDINGS

Wilcomb, K. K.; Konopacky, Q.; Barman, T.; **Theissen, C. A.**; Brock, L. S.; Macintosh, B.; Ruffio, JB.; Marois, C., “Moderate Resolution Spectroscopy of Directly Imaged Planets,” *Extreme Solar Systems IV*, *BAAS*, 2019.

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.

Chakrabarti, S., Baumgardner, J., Dahlgren, H., **Theissen, C. A.**, Cook, T., “Laboratory and Field tests of a High Throughput and Multi-slit Imaging Spectrograph (HiT&MIS),” *39th COSPAR Scientific Assembly*, 293, Feb 2016.

Sfiligoi, I., Würthwein, F. and **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.

POSTERS & PRESENTATIONS

Theissen, C. A., “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.

Theissen, C. A., “Cooler than *Gaia*: Parallaxes of Ultracool Objects with *WISE*,” *UC San Diego Astrophysics Seminar* [Invited Talk], May 2018.

Theissen, C. A., West, A. A., “Low-mass Stars with Extreme Mid-Infrared Excesses: Potential Signatures of Planetary Collisions,” *AAS 231 (Winter Meeting)* [Talk], 2018.

Theissen, C. A., “Exoplanets and the Search for Life around Low-mass Stars,” *Mesa College STEM Lecture Series* [Invited Talk], 2017.

Theissen, C. A., West, A. A., “Cool Stars with Extreme Mid-Infrared Excesses: Potential Tracers of Planetary Collisions,” *AAS 228 (Summer Meeting) + Cool Stars 19* [Poster], 2016.

Theissen, C. A., West, A. A., Dhital, S., “The Motion Verified Red Stars (MoVeRS) Catalog and Low-Mass Field Stars with Warm Dust,” *AAS 227 (Winter Meeting)* [Poster], 2016.

Theissen, C. A., West, A. A., “The Occurrence of Warm Dust around Cool Stars,” *UC San Diego CASS Journal Club* [Talk], 2015.

Theissen, C. A., West, A. A., “*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.

Theissen, C. A., West, A. A., “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.

Sfligoi, I., Würthwein, F., **Theissen, C. A.,** “GlideTester - A framework for distributed testing of network-facing services using Condor glideins on Grid resources,” *TeraGrid Conference* [Poster], 2010.

Theissen, C. A., Tytler, D., “PyTracker: Automated Spectroscopic Target Acquisition using Cross-Correlation with Existing Astrometric Positions,” *University of California San Diego Undergraduate Research Conference* [Talk], 2010.

Theissen, C. A., Quimby, R. M., Kulkarni, S. R., “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**

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

**SERVICE AND
OUTREACH**

Summer Training Academy for Research Success (STARS), UC SAN DIEGO Summer 2018
Mentored undergraduate students conducting summer research.
Moderated research presentations.

Institute for Scientist & Engineer Educators (ISEE)
Professional Development Program (PDP), 2018
UC SANTA CRUZ/UC SAN DIEGO
Certificate in Inclusive Inquiry STEM Education (100 hours)

InterTribal Youth/Young Native Scholars Summer Program, Jul 2016
UC SAN DIEGO
Performed physics demos for middle school and high school students.

Cal-Bridge Workshop on Graduate School, UC SAN DIEGO May 2016
Answered undergraduate student questions about graduate student life and expectations.

STEM Fest, VISTA HIGH SCHOOL Mar 2016
Performed public demonstrations of various physics concepts.

High School Science Olympiad Coach, UNIVERSITY HIGH SCHOOL Oct 2015–Feb 2016
Coached the high school science olympiad team in Astronomy topics.

Chambliss Award Judge, AMERICAN ASTRONOMICAL MEETING 227 Jan 2016
Judged undergraduate presentations and posters.

Program on Student Success in Engineering (POSSE), Sep 2015–Jun 2016
UNIVERSITY OF CALIFORNIA SAN DIEGO/GOMPERS PREPARATORY ACADEMY
Designed curriculum to teach students physics and engineering concepts.
This program also included teaching high school students about applying to colleges.

Upward Bound , BOSTON UNIVERSITY	2013–2015
Mentored first-generation college and low-income high school students conducting summer research.	
Research in Science and Engineering (RISE) , BOSTON UNIVERSITY	2013–2015
Mentored high school students conducting summer research.	
U-Design , BOSTON UNIVERSITY, DEPARTMENT OF ENGINEERING	Jul 2014
Taught middle school and high school students programming (NXN) to build robots (LEGO Mindstorms) to complete a variety of tasks.	
Academy of the Pacific Rim Astronomy Day , BOSTON UNIVERSITY	Nov 2012
Outreach day with high school students presenting popular topics in Astronomy and hosting introductory Astronomy labs.	
Graduate Women in Science and Engineering - “How to Find a Fellowship” Panelist , BOSTON UNIVERSITY	Sep 2012
Answered undergraduate and graduate student questions about writing a successful fellowship application.	
Mathematics and Science Mentor , LINCOLN HIGH SCHOOL	Sep 2008–May 2009
Through the UCSD Center for Research on Educational Equity, Assessment & Teaching Excellence (CREATE). Assisted in a high school classroom teaching Trigonometry, Algebra, Chemistry, and Physics.	
Astronomy Night , ROSA PARKS ELEMENTARY SCHOOL	Oct 2008
Taught students about telescopes and astronomical objects.	
TekSprout/Grant School Rocketry Booth , SAN DIEGO SCIENCE FAIR	Apr 2008
Taught students and parents the basics of rocketry and propulsion using paper rockets.	
<i>Other:</i>	
Referee: Monthly Notices of the Royal Astronomical Society (MNRAS)	
Referee: The Astrophysical Journal (ApJ)	

LEADERSHIP EXPERIENCE

Founding Member	2013–2016
BOSTON UNIVERSITY ONLINE YIELD AND NOTORIETY TEAM (BOUYANT)	
Formed and served on a committee to redesign the BU Astronomy Department website and departmental brochure. We also increased the social media presence of the department via Twitter, Tumblr, and Facebook.	
President	2008–2010
UC SAN DIEGO ASTROPHYSICS CLUB	
Organized field trips to local observatories; spread interest in astronomy to UC San Diego students; organized funding for a telescope building project; organized outreach events to local high schools, junior high schools, and elementary schools.	

MENTORSHIP

PHD STUDENTS	Kielan Wilcomb, UC San Diego	2019–Present
	Chih-Chun (Dino) Hsu, UC San Diego	2018–Present
	Christian Aganze, UC San Diego	2018–Present

UNDERGRAD	Roberto Tejada Arevalo, CSULA (now Cal-Bridge Scholar)	2018–Present
	Dennis H. Calderon, CSUEB (now Cal-Bridge Scholar/OSU APS Bridge student)	2018–2019
	Russell Van Linge, UC San Diego	2018
	Jessica Birky, UC San Diego (now NSF & Univ. of Washington grad)	2016–2019
	Guillaume Shippee, UC Berkeley	2016
HIGH SCHOOL	Victor Zhang, BU RISE/Siemens Competition semifinalist (now Princeton undergrad)	2015
	Katie Melbourne, BU RISE	2014
	Isabella Trierweiler, BU RISE (now UCLA grad)	2013
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GRANTS	Planetary Collisions around Low-Mass Stars: Constraining the Timescale for Collisions and Testing the Origin of the Kepler Dichotomy	2019–2022
	PI, NASA Sagan Postdoctoral Fellowship, \$330K	
	Spectroscopic Analysis of Ultracool Dwarfs	2016–2017
	Co-writer, SDSS FAST Grant (PI: Adam Burgasser), \$60K	
	Low-mass Field Stars with Infrared Excesses: Possible Signatures of Planetary Collisions	2016–2017
TELESCOPE TIME AWARDED	Co-writer, NASA ADAP Grant (PI: Andrew West), \$118K	
	Undergraduate Scholastic Grant, UC San Diego	2009
	Funds to build a Newtonian telescope for the UCSD Astro Club, \$1000	
	Keck II 10-meter	
	Co-I: “Dynamics of the Orion Nebula Cluster: Mass-Dependent Kinematics”	2019–2020
	• 8 half-nights (NIRSPAO)	
	Co-I: “Characterizing Low-mass Binaries and Searching for Hierarchical Triples: NIR Spectra of Low-mass, Wide, Common Proper Motion Pairs”	2019
	• 1 night (NIREs)	
	Gemini North 8-meter	
	Co-I: “The BASS-Ultracool Search for Isolated Giant Exoplanet Analogs”	2018
	• 27 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)	
	DCT 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)	
	IRTF 3-meter	
	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
	• 9 half-nights (SpeX NIR Spectrograph + MORIS)	
	Co-I: “Training the Cannon: Calibrating APOGEE Observations of Ultracool Dwarfs”	2018–2020
	• 12 half-nights (iSHELL Spectrograph)	
	Shane 3-meter	
	Co-I: “Optical Spectroscopy of LaTE-MoVeRS M and L Dwarfs”	2017–2019
	• 27 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	

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 (NIRSPAO).	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	American Astronomical Society	2009–Present
	American Physical Society	2008–Present
	National Society of Hispanic Physicists	2008–Present
	National Society of Black Physicists	2011–Present
	Society for the Advancement of Chicanos and Native Americans in Science	2016–Present
OTHER WORK EXPERIENCE	Booz Allen Hamilton (BAH) , San Diego, California, USA	2019
	Strategic Innovation Group - Lead Data Scientist	
	Aeronautical Radio, Incorporated (ARINC) , San Diego, California, USA	2007–2011
	Analyst/Network Engineer	
REFERENCES	Dr. Quinn Konopacky Assistant Professor of Physics University of California San Diego 9500 Gilman Drive 0424, La Jolla, California 92093-0424, USA qkonopacky at ucsd.edu +1 (858) 246-0241	
	Dr. Adam Burgasser Professor of Physics University of California San Diego 9500 Gilman Drive 0424, La Jolla, California 92093-0424, USA aburgasser at ucsd.edu +1 (858) 822-6958	
	Dr. Philip Muirhead Assistant Professor of Astronomy Boston University 725 Commonwealth Ave, Boston, Massachusetts 02215, USA philipm at bu.edu +1 (617) 353-6553	

[CV compiled on 2019-10-23]