

Curriculum Vitae - Christoph Baranec

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Professional Preparation

California Institute of Technology	CA	Astronomy	B.S., 2001
University of Arizona	AZ	Optical Sciences	Ph. D., 2007

Appointments

2022-Present	Astronomer (tenured) at the University of Hawai'i at Mānoa
2018-2022	Associate Astronomer (tenured) at the University of Hawai'i at Mānoa
2013-2018	Assistant Astronomer (tenure-track) at the University of Hawai'i at Mānoa
2007-2013	Postdoctoral Scholar in Astronomy at the California Institute of Technology
2002-2007	Graduate Student in Optical Sciences at the University of Arizona
2001-2002	Associate Research Engineer at the California Institute of Technology

Awards

2014 - 2016	Alfred P. Sloan Research Fellowship
2017	University of Hawaii Board of Regents' Excellence in Research Award

Grants

Total competitive amount awarded to date as PI: \$5,773,195

Principal Investigator (PI) for the Robo-AO adaptive optics and science system. (NSF grant AST-0906060: \$576,782; IUCAA collaborator funds: \$615,000; gift funding from Samuel Oschin: \$100,000)

PI for "Research on Astrometric Error Sources in HgCdTe Arrays." (Office of Naval Research/DURIP grant N00014-11-1-0903: \$208,525)

PI for "A near-infrared science and tip-tilt camera for Robo-AO." (NSF grant AST-1207891: \$261,921)

PI for "Automation and initial science demonstration of the Robo-AO laser guide star and science system." (Mt. Cuba Astronomical Foundation: \$99,306)

PI for the real-time software development sub-award of Pomona College's Table mountain adaptive optics system. (NSF grant AST-0960343: \$100,000)

PI for "Extremely wide-field adaptive optics for precision astronomy of exoplanets." (Mt. Cuba Astronomical Foundation: \$96,400)

US-PI for "Workshop on astronomy with adaptive optics on moderate-sized telescopes" at IUCAA, Pune, India. (IUSSTF 75-2010-WS-Adaptive Optics: \$38,000)

PI for "Upgrade to Keck's interface with US Strategic Command regarding use of lasers." (W. M. Keck Observatory: \$32,861)

Institutional-PI for "The Robo-AO survey of Kepler exoplanet hosts." (NASA Exoplanets Research Program NNX15AC91G: \$168,161 out of \$437,362 total)

"Alfred P. Sloan Research Fellowship." (Alfred P. Sloan Foundation, \$50,000)

Instrument Scientist for "Science with Robo-AO at the Kitt Peak 2.1m telescope." (NOAO: Access to the Kitt Peak 2.1m telescope, \$0)

Subaward PI for "Mechanical Engineering support for Robo-AO Kitt Peak." (Rohan Murty prime-grantor; Caltech sub-grantor: \$64,288)

Subaward PI for "Infrared camera deployment in support of *Enriching the harvest of exoplanets*," (John Templeton Foundation prime-grantor; Caltech sub-grantor: \$56,611)

PI for "An infrared avalanche photodiode array camera for Robo-AO Kitt Peak." (Mt. Cuba Astronomical Foundation: \$100,000)

Subaward PI for "Robo-AO Kitt Peak observing support for *Disk Detective Follow-up Program*," (NASA Exoplanets Research Program NNX17AD64G, PI Marc Kuchner: \$22,128)

PI for "A robotic laser AO facility for rapid visible/near-infrared imaging and the demonstration of hybrid techniques," (NSF grant AST-1712014: \$981,497)

Co-PI for "Refining the Radii of Exoplanet Host Stars," (PI D. Huber: NSF grant AST-1717000: \$278,033)

PI for "Robotic laser adaptive optics system for 1.8m telescope," (ARL Contract N00024-08-D-6323: \$949,924; ARL Contract N00024-19-D-6400: \$959,863+\$327,853)

Co-PI for "A new adaptive secondary mirror for astronomy," (PI M. Chun: NSF grant AST-1910552; \$1,154,117)

Co-PI for "Development of a Robotic University of Hawaii 88" Telescope (Robo88): A new tool for large surveys, rapid transient classification, and multimessenger astronomy," (PI B. Shappee: NSF grant AST-1920392; \$991,297)

PI for "Complete automation of the Robo-AO-2 laser guide star and science system." (Mt. Cuba Astronomical Foundation: \$243,232)

PI for "Advancing Autonomous Adaptive Optics and Adaptive Secondary Mirror Technologies," (NSF grant AST-2509941; \$435,843)

Patents

Compact Laser Projection Systems and Methods

C. Baranec & R. Riddle

US Patent no. 9,279,977, March 8th, 2016.

Laser Beam Guidance Systems and Methods

R. Riddle & C. Baranec

US Patent no. 9,405,115, August 2nd, 2016.

Systems and Methods for Modularized Control of Robotic Adaptive Optics and Laser Systems

R. Riddle & C. Baranec

US Patent no. 9,563,053, February 7th, 2017.

Students

Graduate (First and second year projects are denoted as 699-1 and 699-2 respectively)

- Maxwell Service, (2013) 699-1, “Exploring diffraction effects in Shack-Hartmann wavefront sensors.”
- Dani Atkinson, (2014) 699-2, “Characterization of companions and implications for planet candidates of Kepler objects of interest.” (2017AJ....153...25A).
- Larissa Nofi, (2014) 699-1, “A measure of stellar binarity among Kepler target stars.” This project was presented as a poster at the 2015 IAU and 2015 AAS Extreme Solar Systems conferences.
- Maïssa Salama, (2015) 699-1, “Optimizing Robo-AO at Kitt Peak and Installing a New Infrared Camera.” Maïssa presented this work as a talk at 2016 SPIE Astronomical Telescopes and Instrumentation (2016SPIE.9909E..1AS). Maïssa won a competitive SPIE Optics and Photonics Education Scholarship for her work with Robo-AO.
- Maïssa Salama, (2016) 699-2, “Preparing a Large Adaptive Optics Survey Searching for Brown Dwarfs and Wide-Orbit Exoplanets with Robo-AO.”
- Maïssa Salama, (2017-2021) Dissertation, “A Large Imaging Survey for Young Brown Dwarfs and Exoplanets at Wide Separations.” (Co-advised with Michael Liu.)
- Jessica Schonhut-Stasik, (2017) 699-1, “The Effect of Stellar Multiplicity on Oscillations in Cool Stars.” (2020ApJ...888...34S; Co-advised with Dan Huber.)
- James Ou, (2017) 699-1, "Optimizing Robo-AO Data Reduction Pipelines in the Near-IR."
- James Ou, (2018) 699-2, "Implications of high-angular-resolution studies of asteroid families." (Co-advised with Bobby Bus.)
- James Ou, (2019+) Dissertation – in progress, "Mass Distributions of Main Belt Families via Binary Asteroids." (Co-advised with Bobby Bus.)
- Suzanne Zhang, (2022-2025) Dissertation, “The Rising Tide Floats All Boats: Improving Overall Telescope Performance With Robotized Adaptive Optics Systems and Adaptive Secondary Mirrors” (Co-advised with Mark Chun.)
- Zachary Werber (2024), 699-1, "Robo-AO 2 as an Autonomous Exoplanet Finder" (Co-advised with Michael Liu).
- Zachary Werber (2025), 699-2, "Scorpius-Centaurus as a Testbed for Wide-orbit Exoplanet Demographics" (Co-advised with Michael Liu).
- Zachary Werber (2025-), Dissertation "RASSCALS: Robotic AO Survey of Scorpius-Centaurus for Companions At Large Separations" (Co-advised with Michael Liu).

Undergraduate Intern mentor

- Jessica Schonhut-Stasik, (2015-2017), “Robo-AO Kepler Asteroseismic Survey. I. Adaptive optics imaging of 99 asteroseismic Kepler dwarfs and subgiants,” 2017ApJ...847...97S.
- Heather Situ (2018-2019). Mechanical engineering support for Robo-AO/Robo-AO-2.

Summer Undergraduate Research (SURF/MURF/REU/Akamai)

- 2008 - Matthew Feldman
- 2010 - Marland Sitt & Alexander Rudy
- 2011 - Ankit Arya & Athanasios Papadopoulos
- 2012 - Corinne Vassallo & Victoria "Ashley" Villar
- 2013 - Chatarin "Mee" Wong-u-railertkun
- 2017 - Jaren Ashcraft & Claire Lamman (AAS Chambliss Award winner)
- 2019 - Stacey Yanagihara
- 2020 - Victoria Cattlet
- 2021 - Dason Albano
- 2022 - Ryan Liu
- 2022 - Madelyn Latiolas
- 2023 - Kyla Lee

High School mentor

- Corbin Warmbier, Hilo High, 2020
- Alexandria Hamilton, Hawaii Preparatory Academy, 2022

Teaching

Fall 2015 – Optics (Physics 331) at UH Hilo, (substantially revised class)

Fall 2016 – Senior Research Projects (Astronomy 494) at UH Mānoa, (new class)

Fall 2017 – Optics (Physics 331) at UH Hilo

Fall 2018 – Senior Research Projects (Astronomy 494) at UH Mānoa

Fall 2019 – Optics (Physics 331) at UH Hilo

Fall 2021 – Optics (Physics 331) at UH Hilo, (all recorded lectures)

Fall 2022 – Senior Research Projects (Astronomy 494) at UH Mānoa

Fall 2023 – Optics (Physics 331) at UH Hilo

Fall 2024 – Senior Research Projects (Astronomy 494) at UH Mānoa

Fall 2024 – Optics (Physics 331) at UH Hilo

Fall 2025 – Optics (Physics 331) at UH Hilo

Service

- UCSC ISEE Professional Development Program: Participant, 2014 and 2015. Awarded a Certificate in Inclusive Inquiry STEM Education for design and teaching work on the ‘Escape from Zombieland’ computing inquiry at the Akami PREP course in 2015.

- Institute for Astronomy Outreach (2013-present): Featured speaker at public/outreach events ('Imiloa Mauna Kea Skies, IfA Open House, Frontiers in Astronomy Community Event, The Universe Tonight @ Maunakea Visitors' Center, HawaiiCon, Office Mauna Kea Management Weed Pull, Pacific Asian Consortium for International Business Education and Research conference, Hilo Bay Rotary Club) and participant in local outreach events (Journey Through the Universe, AstroDay, Hilo Robotics Competition, Waikaloa Village Winterfest, Onizuka Day, IfA Open House, Kealakehe Elementary School Science Night, Hilo Intermediate Science Fair, Panaewa Homestead Kuhio Day Celebration, Hawaii Science Museum Rocket Launch).
- Project reviewer: CHARA adaptive optics wavefront sensor design review, 2013; Giant Magellan Telescope adaptive optics system review, 2013.
- Proposal reviewer: NSF MRI, NSF ATI
- Organizer of the IfA-Hilo TechTalk Series (<http://ifa.hawaii.edu/~baranec/tt.shtml>) 2013-
- Referee: Optics Letters, Applied Optics, Optics Express, Optical Engineering, MNRAS, PASP (w/Outstanding Reviewer Award in 2018), JATIS.
- Member of Institute for Astronomy committees:
 - Computer Advisory Committee (Addresses computing issues), 2015-2018
 - Faculty Advisory Committee (Advises the director on important matters), 2016-2019, 2021-2023
 - Scientific Staff Screening Committee (Faculty hiring committee), 2016-2022
 - Graduate Admissions, 2017
 - Faculty Personnel Committee, 2018-2019-2020
 - Faculty Review Committee, 2019 (Chair), 2023 (Chair)
 - Time Allocation Committee, 2014-2017
 - Awards Committee, 2020-2023
 - Faculty Chair (member of ExCom), 2021-2023
- Member of local committees:
 - Maunakea Laser Operators Group (MLOG), 2013-
 - UH Hilo Physics and Astronomy Faculty Search Committee, 2016
 - AURA Solar Observatory Council, 2019-2021
- Program committee: SPIE AO 2016, 2018, 2020; Keck Science Meeting 2018

Memberships

- SPIE - The International Society for Optical Engineering (2004-lifetime; Senior Member in 2011).
- OSA - Optical Society of America (2005-lifetime; Senior Member in 2017).

BibliographyOptical Science and Technology (Refereed)**73. Automated Adaptive Optics****C. Baranec**, R. Riddle & N. Law

The WSPC Handbook of Astronomical Instrumentation, eds. D. Burrows and A. Moore, 279-294, 2021.

https://doi.org/10.1142/9789811203787_0015, <https://arxiv.org/abs/1709.07103>**72. Improved Image Quality Over 10' Fields with the `Imaka Ground Layer Adaptive Optics Experiment**F. Abdurrahman, J. Lu, M. Chun, M. Service, O. Lai, D. Föhring, D. Toomey, & **C. Baranec**

The Astronomical Journal, 155, 59, 2018.

71. Laser-only adaptive optics achieves significant image quality gains compared to seeing-limited observations over the entire skyW. Howard, N. Law, C. Ziegler, **C. Baranec**, & R. Riddle

The Astronomical Journal, 155, 59, 2018.

70. The performance of the Robo-AO laser guide star adaptive optics system at the Kitt Peak 2.1m TelescopeR. Jensen-Clem, D. Duev, R. Riddle, M. Salama, **C. Baranec**, N. Law, & S. Kulkarni

The Astronomical Journal, 155, 32, 2018.

69. High-speed imaging and wavefront sensing with an infrared avalanche photodiode array**C. Baranec**, D. Atkinson, R. Riddle, D. Hall, S. Jacobson, N. Law & M. Chun

The Astrophysical Journal, 809, 70, 2015.

68. High-efficiency autonomous laser adaptive optics**C. Baranec**, R. Riddle, N. Law, A. N. Ramaprakash, S. Tendulkar, K. Hogstrom, K. Bui, M. Burse, P.

Chordia, H. Das, R. Dekany, S. Kulkarni & S. Punnadi

The Astrophysical Journal Letters, 790, L8, 2014.

67. PALM-3000: Exoplanet adaptive optics for the 5-meter Hale TelescopeR. Dekany, J. Roberts, R. Burruss, A. Bouchez, T. Truong, **C. Baranec**, S. Guiwits, D. Hale, J. Angione,

T. Trinh, J. Zolkower, J. C. Shelton, D. Palmer, J. Henning, E. Croner, M. Troy, D. McKenna, J. Tesch,

S. Hildebrandt & J. Milburn

The Astrophysical Journal, 776, 130, 2013.

66. Bringing the Visible Universe into Focus with Robo-AO**C. Baranec**, R. Riddle, N. Law, A. N. Ramaprakash, S. Tendulkar, K. Bui, M. Burse, P. Chordia, H. Das,

J. Davis, R. Dekany, M. Kasliwal, S. Kulkarni, T. Morton, E. Ofek & S. Punnadi

The Journal of Visualized Experiments, 72, e50021, 2013.

65. A ground-layer adaptive optics system with multiple laser guide starsM. Hart, N. M. Milton, **C. Baranec**, K. Powell, T. Stalcup, D. McCarthy, C. Kulesa & E. Bendek

Nature, 466, 727-729, 2010.

64. Design considerations for low-light level low-Fresnel number optical systems**C. Baranec**

Applied Optics, 48, 6259-6263, 2009.

63. On-sky wide field adaptive optics correction using multiple laser guide stars at the MMT**C. Baranec**, M. Hart, N. M. Milton, T. Stalcup, K. Powell, M. Snyder, V. Vaitheeswaran, D. McCarthy

& C. Kulesa

The Astrophysical Journal, 693, 1814-1820, 2009.

62. Study of a MEMS-based Shack-Hartmann wavefront sensor with adjustable pupil sampling for astronomical adaptive optics

C. Baranec & R. Dekany

Applied Optics, 47, 5155-5162, 2008.

61. Ground-layer wavefront reconstruction from multiple natural guide stars

C. Baranec, M. Lloyd-Hart & N. M. Milton

The Astrophysical Journal, 661, 1332-1338, 2007.

60. Experimental results of ground-layer and tomographic wavefront reconstruction from multiple laser guide stars

M. Lloyd-Hart, C. Baranec, N. M. Milton, T. Stalcup, M. Snyder & J. R. P. Angel

Optics Express, 14, 7541-7551, 2006.

59. First tests of wavefront sensing with a constellation of laser guide beacons

M. Lloyd-Hart, C. Baranec, N. M. Milton, T. Stalcup, M. Snyder, N. Putnam & J. R. P. Angel

The Astrophysical Journal, 634, 679-686, 2005.

58. Concept for a laser guide beacon Shack-Hartmann wave-front sensor with dynamically steered subapertures

C. Baranec, B. Bauman & M. Lloyd-Hart

Optics Letters, 30, 693-695, 2005.

Astronomy Science (Refereed; Robo-AO)

--. Haro 5-2: A New Pre-main-sequence Quadruple Stellar System

B. Reipurth, C. Briceño, Geballe, T., C. Baranec, et al.

The Astronomical Journal, 168, 4, 2024.

57. An Adaptive Optics Census of Companions to Northern Stars Within 25 pc with Robo-AO

M. Salama, C. Ziegler, C. Baranec, M. Liu, N. Law, R. Riddle, T. Henry, J. Winters, W.-C. Jao, J. Ou, and A. Ruiz

The Astronomical Journal, 163, 200, 2022.

56. Large Adaptive Optics Survey for Substellar Objects (LASSO) Around Young, Nearby, Low-mass Stars with Robo-AO

M. Salama, J. Ou, C. Baranec, M. Liu, B. Bowler, P. Barnes, M. Bonnet, M. Chun, D. Duev, S. Goebel, D. Hall, S. Jacobson, R. Jensen-Clem, N. Law, C. Lockhart, R. Riddle, H. Situ, and E. Warmbier

The Astronomical Journal, 162, 102, 2021.

55. Robo-AO and SOAR High-resolution Surveys of Exoplanet Hosting Stars

C. Ziegler, N. Law, C. Baranec, R. Riddle, and N. Law

Frontiers in Astronomy and Space Sciences, 8, 3, 2021.

54. When Do Stalled Stars Resume Spinning Down? Advancing Gyrochronology with Ruprecht 147

J. Curtis, M. Agüeros, S. Matt, K. Covey, S. Douglas, R. Angus, S. Saar, A. Cody, A. Vanderburg, N.

Law, A. Kraus, D. Latham, C. Baranec, R. Riddle, C. Ziegler, M. Lund, G. Torres, S. Meibom, V. Silva Aguirre, J. Wright

The Astrophysical Journal, 904, 140, 2020.

53. Robo-AO Kepler Asteroseismic Survey. II. Do stellar companions inhibit stellar oscillations?

J. Schonhut-Stasik, D. Huber, C. Baranec, C. Lamman, M. Salama, R. Jensen-Clem, D. Duev, R. Riddle, S. Kulkarni, and N. Law

The Astrophysical Journal, 888, 34, 2020.

52. Robo-AO M dwarf multiplicity survey: Catalog

C. Lamman, C. Baranec, Z. Berta-Thompson, N. Law, J. Schonhut-Stasik, C. Ziegler, M. Salama, R. Jensen-Clem, D. Duev, R. Riddle, S. Kulkarni, J. Winters, and J. Irwin
The Astronomical Journal, 159, 139, 2020.

51. [A Hot Saturn Near \(but unassociated with\) the Open Cluster NGC 1817](#)

R. Rampalli, A. Vanderburg, A. Bieryla, D. Latham, S. Quinn, C. Baranec, P. Berlind, M. Calkins, W. Cochran, D. Duev, M. Endl, G. Esquerdo, R. Jensen-Clem, N. Law, A. Mayo, R. Riddle, and M. Salama
The Astronomical Journal, 158, 62, 2019.

50. [Investigating the origin of the spectral line profiles of the Hot Wolf-Rayet Star WR2](#)

A.-N. Chené, A. Moffat, N. St.-Louis, O. Schnurr, P. Crowther, É. Artigau, G. Wade, N. Richardson, C. Baranec, C. Ziegler, N. Law, R. Riddle, É. Alecian, and the BinaMICs collaboration
MNRAS, 484, 5834, 2019.

49. [The Elusive Majority of Young Moving Groups. I. Young Binaries and Lithium-Rich Stars in the Solar Neighborhood](#)

B. P. Bowler, S. Hinkley, C. Ziegler, C. Baranec, J. Gizis, N. Law, M. Liu, E. Shkolnik, B. Riaz, & R. Riddle
The Astrophysical Journal, 877, 60, 2019.

48. [Follow-up Imaging of Disk Candidates from the Disk Detective Citizen Science Project: New Discoveries and False-Positives in WISE Circumstellar Disk Surveys](#)

S. Silverberg, M. Kuchner, J. Wisniewski, A. Bans, J. Debes, S. Kenyon, C. Baranec, R. Riddle, N. Law, J. Teske, E. Burns-Kaurin, M. Bosch, T. Cernohous, K. Doll, H. Durantini-Luca, M. Hyogo, J. Hamilton, J. Finnemann, & L. Wah
The Astrophysical Journal, 868, 43, 2018.

47. [Measuring the recoverability of close binaries in GAIA DR2 with the Robo-AO Kepler Survey](#)

C. Ziegler, N. Law, C. Baranec, T. Morton, R. Riddle, D. Huber, & J. Pepper
The Astronomical Journal, 156, 259, 2018.

46. [Robo-AO Kepler Survey V: The effect of physically associated stellar companions planetary systems](#)

C. Ziegler, N. Law, C. Baranec, W. Howard, T. Morton, R. Riddle, D. Duev, M. Salama, R. Jensen-Clem, & S. Kulkarni
The Astronomical Journal, 156, 83, 2018.

45. [Robo-AO Kepler Survey IV: The effect of nearby stars on 3857 planetary candidate systems](#)

C. Ziegler, N. Law, C. Baranec, R. Riddle, D. Duev, W. Howard, R. Jensen-Clem, S. Kulkarni, T. Morton, & M. Salama
The Astronomical Journal, 155, 161, 2018.

44. [Robo-AO Discovery and Basic Characterization of Wide Multiple Star Systems in the Pleiades, Praesepe, and NGC 2264 Clusters](#)

L. A. Hillenbrand, C. Zhang, R. Riddle, C. Baranec, C. Ziegler, N. Law, & J. Stauffer
The Astronomical Journal, 155, 51, 2018.

43. [K2-104b - An eccentric 6.57 day transiting hot Jupiter in Virgo](#)

H. A. C. Giles, D. Bayliss, N. Espinoza, R. Brahm, S. Blanco-Cuaresma, A. Shporer, D. Armstrong, C. Lovis, S. Udry, F. Bouchy, M. Marmier, A. Jordán, J. Bento, A. Collier Cameron, R. Sefako, W. D. Cochran, F. Rojas, M. Rabus, J.S. Jenkins, M. Jones, B. Pantoja, M. Soto, R. Jensen-Clem, D. A. Duev, M. Salama, R. Riddle, C. Baranec, and N. M. Law
MNRAS, 475, 1809, 2017.

42. [Robo-AO Kepler Asteroseismic Survey. I. Adaptive optics imaging of 99 asteroseismic Kepler dwarfs and subgiants](#)

J. Schonhut-Stasik, **C. Baranec**, D. Huber, C. Ziegler, D. Atkinson, E. Gaidos, N. Law, R. Riddle, J. Hagelberg, N. van der Marel, and K. Hodapp
The Astrophysical Journal, 847, 97, 2017.

41. Magnetic Inflation and Stellar Mass I: Revised Parameters for the Component Stars of the Kepler Low-mass Eclipsing Binary T-Cyg1-12664

E. Han, P. Muirhead, J. Swift, C. Baranec, N. Law, R. Riddle, D. Atkinson, G. Mace, and D. DeFelippis
The Astronomical Journal, 154, 3, 2017.

40. Neptune long-lived atmospheric features in 2013-2015 from small (28-cm) to large (10-m) telescopes

R. Hueso, I. de Pater, A. Simon, A. Sánchez-Lavega, M. Delcroix, M. Wong, J. Tollefson, C. Baranec, K. de Kleer, S. Luszcz-Cook, G. Orton, H. Hammel, J. Gómez-Forrellad, I. Ordoñez-Etxeberria, L. Sromovsky, P. Fry, F. Colas, J. Rojas, S. Pérez-Hoyos, P. Gorczynski, J. Guarro, W. Kivits, P. Miles, D. Millika, P. Nicholas, J. Sussenbach, A. Wesley, K. Sayanagi, S. Ammons, E. Gates, D. Gavel, E. Garcia, N. M. Law, I. Mendikoa & R. Riddle
Icarus, 295, 89, 2017.

39. Ultra Short Period Planets in K2 with companions: a double transiting system for EPIC 220674823

E. R. Adams, B. Jackson, M. Endl, W. Cochran, P. MacQueen, D. Duev, R. Jensen-Clem, M. Salama, C. Ziegler, **C. Baranec**, S. Kulkarni, N. Law & R. Riddle
The Astronomical Journal, 153, 82, 2017.

38. Two small planets transiting HD 3167

A. Vanderburg, A. Bieryla, D. Duev, R. Jensen-Clem, D. Latham, A. Mayo, **C. Baranec**, P. Berlind, S. Kulkarni, N. Law, M. Nieberding, R. Riddle & M. Salama
The Astrophysical Journal Letters, 829, L9, 2016.

37. Robo-AO Kepler Planetary Candidate Survey III: Adaptive Optics Imaging of 1629 Kepler Exoplanet Candidate Host Stars

C. Ziegler, N. Law, T. Morton, **C. Baranec**, R. Riddle, D. Atkinson, A. Baker, S. Roberts & D. Ciardi
The Astronomical Journal, 153, 66, 2017.

36. 197 Candidates and 104 Validated Planets in K2's First Five Fields

I. Crossfield, D. Ciardi, E. Petigura, E. Sinukoff, J. Schlieder, A. Howard, C. Beichman, H. Isaacson, C. Dressing, J. Christiansen, B. J. Fulton, S. Lépine, L. Weiss, L. Hirsch, J. Livingston, **C. Baranec**, N. Law, R. Riddle, C. Ziegler, S. Howell, E. Horch, M. Everett, J. Teske, A. Martinez, C. Obermeier, B. Benneke, N. Scott, K. Aller, B. Hansen, L. Mancini, S. Ciceri, R. Brahm, A. Jordán, H. Knutson, T. Henning, M. Bonnefoy, M. Liu, J. Crepp, J. Lothringer, P. Hinz, V. Bailey, A. Skemer & D. Defrere
The Astrophysical Journal Supplement, 226, 7, 2016.

35. Five Planets Transiting a Ninth Magnitude Star

A. Vanderburg, J. Becker, M. Kristiansen, A. Bieryla, D. Duev, R. Jensen-Clem, T. Morton, D. Latham, F. Adams, **C. Baranec**, P. Berlind, M. Calkins, G. Esquerdo, S. Kulkarni, N. Law, R. Riddle, M. Salama, A. Schmitt
The Astrophysical Journal Letters, 827, L10, 2016.

34. Probability of physical association of 104 blended companions to Kepler objects of interest using visible and near-infrared adaptive optics photometry

D. Atkinson, **C. Baranec**, C. Ziegler, N. Law, R. Riddle & T. Morton
The Astronomical Journal, 153, 25, 2016.

33. Robo-AO Kepler Planetary Candidate Survey II: Adaptive Optics Imaging of 969 Kepler Exoplanet Candidate Host Stars

C. Baranec, C. Ziegler, N. Law, T. Morton, R. Riddle, D. Atkinson, J. Schonhut & J. Crepp
The Astronomical Journal, 152, 18, 2016.

32. Eleven multi-planet systems from K2 campaigns 1 & 2 and the masses of two hot super-Earths
E. Sinukoff, A. Howard, E. Petigura, J. Schlieder, I. Crossfield, D. Ciardi, B. J. Fulton, H. Isaacson, K. Aller, **C. Baranec**, C. Beichman, B. Hansen, H. Knutson, N. Law, M. Liu & R. Riddle
The Astrophysical Journal, 827, 78, 2016.

31. Two small temperate planets transiting nearby M dwarfs in K2 campaigns 0 and 1
J. Schlieder, I. Crossfield, E. Petigura, A. Howard, K. Aller, E. Sinukoff, H. Isaacson, B. J. Fulton, D. Ciardi, M. Bonnefoy, C. Ziegler, T. Morton, S. Lépine, C. Obermeier, M. Liu, V. Bailey, **C. Baranec**, C. Beichman, D. Defrère, T. Henning, P. Hinz, N. Law, R. Riddle & A. Skemer
The Astrophysical Journal, 818, 87, 2016.

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Selected Colloquia/Invited Talks

Center for Adaptive Optics Retreat, Monterey, CA, January 23-25, 2026.

Wide-field Adaptive Optics for Astronomy and Astrophysics, NAOJ, March 27, 2025.

UC Berkeley Colloquium, October 31st, 2024.

Ground-layer Adaptive Optics double-header, Caltech, October 8-9, 2024.

IEEE/SICE International Symposium on System Integration, Honolulu, January 14th, 2020.

Dunlap Institute Summer School, Toronto, Canada, July 10th, 2019.

University of North Carolina Colloquium, Chapel Hill, NC, April 22nd, 2019.

NASA/NSF 2018 UV-Vis Program Review Meeting, Washington, D.C., September 14th, 2018.

College of Optical Sciences, University of Arizona, Tucson, AZ, May 16th, 2018.

IRTF Future Directions Workshop, Biosphere 2, AZ, Feb 13th, 2018.

22nd International Microlensing Conference (Invited), Auckland, NZ, January 26, 2018.

University of Michigan Astronomy Seminar, Ann Arbor, MI, May 10th, 2017.

UCSC Astronomy Colloquium, Santa Cruz, CA, April 5th, 2017.

NOAO/Steward Observatory Joint Colloquium, Tucson, AZ, April 21st, 2016.

Future AO for the VLT, ESO HQ, Garching, Germany, September 16th, 2015.

Canada-France-Hawai'i Telescope Headquarters, Waimea, HI, April 30th, 2015.

UCSB Astrophysics Seminar, Santa Barbara, CA, May 21st, 2014.

Yale Astronomy Colloquium, New Haven, CT, April 17th, 2014.

Boston University Astrophysics Colloquium, Boston, MA, April 16th, 2014.

Caltech Astronomy Colloquium, Pasadena, CA, December 4th, 2013.

UCLA Astrophysics Colloquium, Los Angeles, CA, November 13th, 2013.

Keck Observatory Headquarters, Waimea, HI, September 26th, 2013.

Rochester Institute of Technology, Physics and Center for Detectors Colloquium, Rochester, NY, April 30th, 2013.

Institute for Astronomy Colloquium, Mānoa, HI, September 24th, 2012.

Carnegie Institution for Science, Pasadena, CA, September 21st, 2012.

Las Cumbres Observatory Global Telescope Network Science Seminar, Goleta, CA, September 20th, 2012.

Naval Postgraduate School, Monterey, CA, July 20th, 2012.