

Employment

- 2016–present **Torres Postdoctoral Fellow**, MIT KAVLI INSTITUTE FOR ASTROPHYSICS AND SPACE RESEARCH, Cambridge, MA.
Developing optimized radial velocity follow up observing strategies for transiting planets detected by NASA's TESS mission.
- 2010–2016 **Graduate Research Assistant**, ASTRONOMY & ASTROPHYSICS DEPARTMENT, University of California, Santa Cruz.
Lead observer on the Automated Planet Finder telescope, developed the telescope's dynamic scheduler, designed science observing strategies for exoplanet detection and characterization.
- 2008–2010 **Undergraduate Researcher**, ASTRONOMY DEPARTMENT, Cornell University.
Characterized the inclination and heliotropic behavior of Saturn's 'Charming' Ringlet.

Education

- 2016 **Doctor of Philosophy**, *University of California, Santa Cruz*.
Astronomy & Astrophysics, Advisors: Greg Laughlin, Steve Vogt
- 2013 **Masters of Science**, *University of California, Santa Cruz*.
Astronomy & Astrophysics
- 2010 **Bachelor of Arts**, *Cornell University, Ithaca, NY*.
Astronomy, Advisor: Joseph Burns, Matt Hedman

Awards

- 2015 ARCS FOUNDATION SCHOLAR
- 2014 SECOND PLACE, FAMELAB USA REGIONAL SCIENCE COMMUNICATION COMPETITION
- 2011 EXCELLENCE IN TEACHING AWARD, UCSC DEPT OF ASTRONOMY & ASTROPHYSICS
- 2011 CRANSON W. AND EDNA B. SHELLY AWARD FOR OUTSTANDING ACCOMPLISHMENT IN UNDERGRADUATE ASTRONOMICAL RESEARCH

Conference Presentations

Invited

- 2018 'TESS: AN (ALMOST) ALL SKY EXOPLANET MISSION', Astrophysics with the SPHEREX all-sky spectral survey II: SPHEREX synergies
- 2017 'TESS SCIENCE AND FOLLOW UP IN THE SOUTHERN HEMISPHERE', IAU 339S: Southern Horizons in Time Domain Astronomy
- 2017 'THE TESS MISSION AND SYNERGIES WITH SOAR', UNC Chapel Hill
- 2017 'TESS SCIENCE PREVIEW', 229th AAS Meeting Splinter: Science Opportunities with the NASA K2 and TESS Missions

Contributed

- 2017 'NEW PRIORITIZATION SCHEMES FOR RV FOLLOW UP OF TESS PLANETS', EPRV III
- 2017 'PRECISION RV MEASUREMENTS OF PREDICTED TESS PLANETS WITH THE AUTOMATED PLANET FINDER TELESCOPE', Precision Spectroscopy: Towards Earth 2.0

- 2016 ‘THE AUTOMATED PLANET FINDER’S AUTOMATION & FIRST TWO YEARS OF SCIENCE’, AAS Winter 2016
- 2015 ‘THE AUTOMATED PLANET FINDER’S DETECTION OF A 6-PLANET SYSTEM ORBITING THE BRIGHT, NEARBY STAR HD219134’, Extreme Solar Systems III
- 2014 ‘ACHIEVING AUTONOMOUS DATA FLOW OF THE AUTOMATED PLANET FINDER (APF)’, SPIE 2014
- 2010 ‘DYNAMICAL ANALYSIS OF THE HELIOTROPIC CHARMING RINGLET IN SATURN’S CASSINI DIVISION’, American Astronomical Society, DDA meeting # 41

Colloquia and Seminar Talks

- 2017 ‘SIMULATED RV TESS FOLLOW UP AND EVIDENCE OF A MASS MEASUREMENT BIAS’, Carnegie Observatories colloquium
- 2017 ‘DESIGNING OPTIMAL EXOPLANET MASS MEASUREMENT SURVEYS IN THE ERA OF TESS’, JPL colloquium
- 2017 ‘A NEW APPROACH TO RADIAL VELOCITY MEASUREMENTS OF EXOPLANET MASSES USING THE APF TELESCOPE’, MIT PICS seminar (invited)
- 2016 ‘GETTING OUR PRIORITIES IN ORDER: A NEW APPROACH TO AUTOMATED RV OBSERVING’, Princeton exoplanet lunch seminar (invited)

Media/Science Communication & Public Lectures

- 2018 ‘NASA’S TRANSITING EXOPLANET SURVEY SATELLITE’, Boise State University First Friday Lecture
- 2017 ‘WHAT IF THERE IS LIFE IN SPACE?’, WGBH: BostonTalks
- 2017 ‘SEARCHING FOR PLANETS WITH AN AUTOMATED TELESCOPE’, Stellafane Convention: Hartness House Workshop
- 2017 ‘OUR STRANGE PLACE IN THE GALAXY’, MIT Museum Teen Science Cafe
- 2016 ‘STRANGE NEW WORLDS’, Astronomy on Tap Boston
- 2014 ‘DETECTING NEW WORLDS AT LICK OBSERVATORY’, Full Moon Astronomy Night at Henry Cowell Redwoods State Park

Teaching Experience

- 2014-2016 Instructor, AY205: UCSC graduate student teacher training course
- 2013-2014 UCSC Summer Internship Program research bootcamp for high school students
- 2013 Instructor AY2: UCSC undergraduate overview of the universe summer course
- 2010-2013 Teaching assistant in UCSC Astronomy & Astrophysics department
- 2010-2011 Team lead/instructor in the Institute for Scientist and Engineer Educators’ Professional Development Program

Student Advising

- 2017-present Advising MIT undergraduate Maude Gall on precision RV mass measurements
- 2013-2015 Advised three San Jose high school students during UCSC’s Summer Internship Program

Academic Service

- 2018-present EXPERT REVIEWER FOR NOVA
- 2018-present MEMBER MIT PHYSICS POST DOC ASSOCIATION
- 2016-present MEMBER OF TESS FOLLOW UP WORKING GROUP

- 2016-present ORGANIZER MIT EXOPLANET TEA TALK SERIES
- 2016-present PROPOSAL REVIEWER FOR NASA EXOPLANET SPACE SCIENCE FELLOWSHIP
- 2016-present REFEREE FOR THE ASTROPHYSICAL JOURNAL
- 2016-present PANEL REVIEWER FOR K2 GUEST OBSERVER PROGRAM
- 2014-2016 HEAD TA UCSC DEPT OF ASTRONOMY & ASTROPHYSICS
- 2015 GRADUATE STUDENT ADMISSIONS COMMITTEE, UCSC DEPT OF ASTRONOMY & ASTROPHYSICS
- 2014 DEVELOPMENT OF UCSC ASTRONOMY DEPARTMENT'S GRADUATE STUDENT TEACHER TRAINING COURSE

Competitively Awarded Observing Time & Telescope use

- 2016-present 10 nights awarded on the Magellan Clay telescope, 8 nights of telescope operation
- 2015-present 100+ nights awarded on the Automated Planet Finder telescope in observer-free mode
- 2012-2015 150+ nights of solo operation on the Automated Planet Finder telescope

Publications

Peer-reviewed journal publications

18. **Burt, J. A.**, Holden, B. P., Wolfgang, A., & Bouma, L. G., *Simulating the M-R Relation from APF followup of TESS targets: Survey design and strategies for overcoming mass biases*, ApJ, in review

17. Zhou, G., Rappaport, S., Nelson, L., Huang, C. X., Senhadji, A., Rodriguez, J. E., Vanderburg, A., Quinn, S., Johnson, C. I., Latham, D. W., Torres, G., Gary, B. L., Tan, T. G., Johnson, M. C., **Burt, J.**, Kristiansen, M. H., Jacobs, T. L., LaCourse, D., Schwengeler, H. M., Terentev, I., Bieryla, A., Esquerdo, G. A., Berlind, P., Calkins, M. L., Bento, J., Cochran, W. D., Karjalainen, M., Hatzes, A. P., Karjalainen, R., Holden, B., & Butler, R. P., *Occultations from an active accretion disk in a 72 day detached post-Algol system detected by K2*, ApJ, accepted for publication, 2018

16. Millholland, S., Laughlin, G., Teske, J., Butler, R. P., **Burt, J. A.**, Holden, B. P., Vogt, S. S., Crane, J., Shectman, S., & Thompson, I., *New Constraints on Gliese 876 – Exemplar of Mean-motion Resonance*, AJ, 155, 106M, 2018

15. Dai, F., Winn, J. N., Gandolfi, D., Wang, S. X., Teske, J. K., **Burt, J.**, Albrecht, S., Barragán, O., Cochran, W. D., Endl, M., Fridlund, M., Hatzes, A. P., Hirano, T., Hirsch, L. A., Johnson, M. C., Justesen, A. B., Livingston, J., Persson, C. M., Prieto-Arranz, J., Vanderburg, A., Alonso, R., Antoniciello, G., Arriagada, P., Butler, R. P., Cabrera, J., Crane, J. D., Cusano, F., Csizmadia, S., Deeg, H., Dieterich, S. B., Eigmüller, P., Erikson, A., Everett, M. E., Fukui, Akihiko, G., Sascha, Guenther, E. W., Henry, G. W., Howell, S. B., Johnson, J. A., Korth, J., Kuzuhara, M., Narita, N., Nespral, D., Nowak, G., Palle, E., Pätzold, M., Rauer, H., Montañés Rodríguez, P., Shectman, S. A., Smith, A. M. S., Thompson, I. B., Van Eylen, V., Williamson, M. W., & Wittenmyer, R. A., *The Discovery and Mass Measurement of a New Ultra-short-period Planet: K2-131b*, AJ, 154, 6, 2017

14. Guenther, E. W., Barragán, O., Dai, F., Gandolfi, D., Hirano, T., Fridlund, M., Fossati, L., Chau, A., Helled, R., Korth, J., Prieto-Arranz, J., Nespral, D., Antoniciello, G., Deeg, H., Hjorth, M., Grziwa, S., Albrecht, S., Hatzes, A. P., Rauer, H., Csizmadia, Sz., Smith, A. M. S., Cabrera, J., Narita, N., Arriagada, P., **Burt, J.**, Butler, R. P., Cochran, W. D., Crane, J. D., Eigmüller, Ph., Erikson, A., Johnson, J. A., Kiilerich, A., Kubyskhina, D., Palle, E., Persson, C. M., Pätzold, M., Sabotta, S., Sato, B., Shectman, St. A., Teske, J. K., Thompson, I. B., Van Eylen, V., Nowak, G., Vanderburg, A., Winn, J. N., & Wittenmyer, R. A., *K2-106, a system containing a metal-rich planet and a planet of lower density*, A&A, 608, id A93, 2017

13. Vogt, S. S., Butler, R. P., **Burt, J.**, Tuomi, M., Laughlin, G., Holden, B., Teske, J. K., Shectman, S. A., Crane, J. D., Díaz, M., Thompson, I. B., Arriagada, P., & Keiser, S., *A Six-planet System around the Star HD 34445*, AJ, 154, 5, 2017
12. Christiansen, J. L., Vanderburg, A., **Burt, J. A.**, Fulton, B. J.; and 45 coauthors, *Three's Company: An Additional Non-transiting Super-Earth in the Bright HD 3167 System, and Masses for All Three Planets*, AJ, 154, 122C, 2017
11. Butler, R. P., Vogt, S. S., Laughlin, G., **Burt, J. A.**, Rivera, E. J., Tuomi, M., Teske, J., Arriagada, P., Diaz, M., Holden, B. P., & Keiser, S., *The LCES HIRES/Keck Precision Radial Velocity Exoplanet Survey*, AJ, 153, 208B, 2017
10. Rowan, D., Meschiari, S., Laughlin, G., Vogt, S. S., Butler, R. P., **Burt, J.**, Wang, S., Holden, B., Hanson, R., Arriagada, P., Keiser, S., Teske, J., & Diaz, M., *The Lick-Carnegie Exoplanet Survey: HD 32963 – A New Jupiter Analog Orbiting a Sun-like Star*, ApJ, 817, 2, 2016
9. Vogt, S. S., **Burt, J. A.**, Meschiari, S., Butler, R. P., Henry, G. W., Wang, S., Holden, B., Gapp, C., Hanson, R., Arriagada, P., Keiser, S., Teske, J., & Laughlin, G., *A Six-Planet Systems Orbiting HD 219134*, ApJ, 814, 1, 2015
8. **Burt, J. A.**, Holden B., Hanson, R., Laughlin, G., Vogt, S.S., Butler, R.P., Keiser, S., & Deich, W., *The capabilities, performance and prospects for a dynamic scheduler on the Automated Planet Finder Telescope*, JATIS, 1, id 044003, 2015
7. Graham, M. L., Valenti, S., Fulton, B. J., Weiss, L. M., Shen, K. J., Kelly, P. L., Zheng, W., Filippenko, A. V., Marcy, G. W., Howell, D. A., **Burt, J.**, & Rivera, E. J., *Time-Varying Potassium in High-Resolution Spectra of the Type Ia Supernova 2014j*, ApJ, 801, 2, 2015
6. **Burt, J. A.**, Vogt, S. S., Butler, R.P., Hanson, R., Meschiari, S., Rivera, E., Henry, G., & Laughlin, G., *The Lick-Carnegie Exoplanet Survey: Gliese 687b – A Neptune-mass Planet Orbiting a Nearby Red Dwarf*, ApJ, 789, 2, 2014
5. Vogt, S. S., Butler, R. P., Rivera, E. J., Kibrick, R., **Burt, J. A.**, Hanson, R., Meschiari, S., Henry, G. W., & Laughlin, G., *A Four-planet System Orbiting The K0V Star HD 141399*, ApJ, 787, 2, 2014
4. Hedman, M. M., **Burt, J. A.**, Burns, J. A., & Showalter, M. R., *Non-circular features in Saturn's D ring: D68*, Icarus, 233, 2014
3. Vogt, S. S., Radovan, M., Kibrick, R., Butler, R. P., Alcott, B., Allen, S., Arriagada, P., Bolte, M., **Burt, J.**, Cabak, J., Chloros, K., Cowley, D., Deich, W., Dupraw, B., Earthman, W., Epps, H., Faber, S., Fischer, D., Gates, E., Hilyard, D., Holden, B., Johnston, K., Keiser, S., Kanto, D., Katsuki, M., Laiterman, L., Lanclos, K., Laughlin, G., Lewis, J., Lockwood, C., Lynam, P., Marcy, G., McLean, M., Miller, J., Misch, T., Peck, M., Pfister, T., Phillips, A., Rivera, E., Sandford, D., Saylor, M., Stover, R., Thompson, M., Walp, B., Ward, J., Wareham, J., Wei, M., & Wright, C., *APF – The Lick Observatory Automated Planet Finder*, PASP, 126, 938, 2014
2. Tegler, S. C., Cornelison, D. M., Grundy, W. M., Romanishin, W., Abernathy, M. R., Bovyn, M. J., **Burt, J. A.**, Evans, D. E., Maleszewski, C. K., Thompson, Z., & Vilas, F., *Methane and Nitrogen Abundances on Pluto and Eris*, Icarus, 210, 284, 2010
1. Hedman, M. M., **Burt, J. A.**, Burns, J. A., & Tiscareno, M. S., *The shape and dynamics of a heliotropic dusty ringlet in the Cassini Division*, Icarus, 210, 1, 2010

Conference proceedings

3. Holden, B. P., **Burt, J. A.**, & Deich, W. T. S., *Automated scheduler improvements and generalizations for the Automated Planet Finder*, SPIE, 9910, id 99102A, 2016
2. **Burt, J. A.**, Hanson, R., Rivera, E., Holden, B., Vogt, S. S., Butler, R. P., Arriagada, P., & Laughlin, G., *Achieving autonomous data flow of the Automated Planet Finder (APF)*, SPIE, 9152, id. 915211, 2014

1. Radovan, M. V., Lanclos, K., Holden, B. P., Kibrick, R. I., Allen, S. L., Deich, W. T. S., Rivera, E., **Burt, J.**, Fulton, B., Butler, P., & Vogt, S. S., *The automated planet finder at Lick Observatory*, SPIE, 9145, id 91452B, 2014