James R. A. Davenport

_____Curriculum Vitae _____

University of Washington Department of Astronomy Box 358510, Seattle WA, 98195		jrad@uw.edu jradavenport.github.io ifweassume.com
	RESEARCH ASSISTANT PROFESSOR, DEPARTMENT OF ASTRONOMY ASSOCIATE DIRECTOR, DIRAC INSTITUTE University of Washington, Seattle, WA	
Postdoctoral Experience	RESEARCH SCIENTIST University of Washington, Seattle, WA	2018 - 2020
	DIRAC INSTITUTE POSTDOCTORAL FELLOW University of Washington, Seattle, WA	2017 - 2018
	NSF ASTRONOMY & ASTROPHYSICS POSTDOCTORAL FELLOWSHIP Western Washington University, Bellingham, WA	2015 - 2018
Education	Ph.D. in Astronomy	2015
	Thesis: Spots and Flares: Stellar Activity in the Time Domain Era M.S. IN ASTRONOMY University of Washington, Seattle, WA	2010
	M.S. IN ASTRONOMY San Diego State University, San Diego, CA	2009
	B.S. IN ASTRONOMY B.S. IN PHYSICS University of Washington, Seattle, WA	2007
Professional Experience	GRADUATE STUDENT INTERN (Microsoft Research, Redmond) 3.5-M OBSERVING SPECIALIST (Apache Point Observatory)	Summer 2013 Summer 2007
Teaching Experience	DATA SCIENCE SEMINAR INSTRUCTOR (WWU) STUDENT INSTRUCTOR (UW) TEACHING ASSISTANT (UW) TEACHING ASSISTANT (SDSU) UPWARD BOUND TEACHING ASSISTANT (UW)	$2016,\ 2018$ $2010,\ 2011$ $2005-2007,\ 2010-2013$ 2007 $Summer\ 2006$
Honors	SCIALOG FELLOW NSF ASTRONOMY & ASTROPHYSICS POSTDOCTORAL FELLOWSHIP AAS 225 RODGER DOXSEY TRAVEL PRIZE AAS CHAMBLISS POSTER AWARD (Honorable Mention) CLIFF E. SMITH & RUTH KINNELL GRADUATE FELLOWSHIP (SDSU) AWONA HARRINGTON ASTRONOMY SCHOLARSHIP (SDSU) JOHN BAER PRIZE (UW) MASONIC TRIBUTE AWARD	2018, 2019 $2015 - 2018$ 2015 $2011, 2012$ $2008 - 2009$ 2008 2006 2002

Professional Affiliations	LSSTC Board Institutional Rep NEXSS Steering Committee Member ISSI MEETING: Quasi-periodic Pulsations in Stellar Flares (Bern, Switzerland) KAVLI WORKSHOP ON MAXIMIZING SCIENCE IN THE ERA OF LSST (Tucson, AZ) LARGE SYNOPTIC SURVEY TELESCOPE SLOAN DIGITAL SKY SURVEY COLLABORATION AMERICAN ASTRONOMICAL SOCIETY	2020 - Present 2018 - Present 2016 - 2017 2016 2009 - Present 2007 - Present 2006 - Present
Invited Talks	Seminar, University of Delaware Colloquium, University of Washington video GeekWire Summit (Seattle, WA) video Colloquium, Lowell Observatory CEHW Seminar, The Pennsylvania State University Colloquium, University of Texas at Austin Colloquium, University of British Columbia Invited Speaker, Northwest Astronomers Meeting Data Visualization in Python, Code Fellows (Seattle, WA) Invited Splinter Talk, Cool Stars 19 Flares Splinter (Uppsala, Sweden) video Colloquium, High Altitude Observatory, UCAR (Boulder, CO) video Colloquium, Dept. of Physics & Astronomy, WWU (Bellingham, WA) Astronomy of Tap Seattle V Workshop, Data Science Training for Librarians (Harvard) Data Visualization in Python, Code Fellows (Seattle, WA) Keynote, Thinking with your Eyes (Harvard) video "Seattle NerdNite" 20 video "Seattle Ignite!" 19 video	2021 2019 2018 2018 2017 2017 2017 2016 2016 2016 2015 2015 2015 2015 2014 2014 2013 2013
Recent Awards &	NASA TESS Cycle 3 (\$40,000) GO 3227 "Detecting Activity Cycles Using Stellar Flares" (P-I: J. Davenport)	2020
Funding	NASA TESS Directors Discretionary Time (DDT 009) "New Eclipses from the Former Eclipsing Binary QX Cas" (P-I: J. Davenport)	2020
	Heising-Simons Foundation, Scialog (\$50,000) "A Galactic Census of Eclipsing Binaries" (P-I: J. Davenport & T. Brandt)	2019
	NASA TESS Cycle 2 (\$200,000) "Measuring Long Rotation Periods from TESS's Short Light Curves" (P-I: R. Angus)	2019
	NASA TESS Cycle 1 (\$50,000) "Superflare Rates in GKM Stars with TESS" (P-I: J. Davenport)	2018
	NASA TESS Cycle 1 (\$50,000) "Exploring The Variability Of Ultracool Dwarfs With Tess" (P-I: J. S. Pineda)	2018
	NASA ADAP (\$211,732) "Measuring Stellar Rotation with K2" (P-I: J. Davenport)	2017
	NASA K2 Cycle 5 GO14001 "Gyrochronology and Magnetic Activity in Wide Binaries with K2" (P-I: J. Davenpo	2017 rt)
	XSEDE Open Science Grid, Startup Allocation (100k SUs) "Exploring the Physics of Starspots with Kepler Data" (P-I: J. Davenport)	2016

	NSF Astronomy & Astrophysics Postdoctoral Fellowship (\$278,000) "Using Stellar Activity to Measure the Ages of Stars in the Era of Giant Photometric Surveys" (P-I: J. Davenport)	2015
Media & Public	UW Press Release based on my AAS 237 presentation on HS Hydrae	2021
Engagement	My AAS 235 talk on stellar astrophysics with TESS was covered by $\ensuremath{SPACE.com}$	2020
	Results from Flares on Proxima Centauri have been reported on by PBS, Scientific American, and others.	2016
	My science and data visualization blog, ifweassume.com , has received over 2 million views. Featured data analysis projects including Airports of the World and The United States of Starbucks , have resulted in international media coverage.	2012 – Present
Service & Outreach	COOL STARS 20.5, LOC – GATHERTOWN ORGANIZER GAIA/TESS SATELLITE SPRINT ORGANIZER NORTHWEST X SOUTHWEST ASTRONOMERS MEETING 2018 SOC SPARCS SYSTEMS REQUIREMENTS REVIEW PANEL (ASU) NASA GRANT REVIEW PANEL NSF GRANT REVIEW PANEL AAS AGENTS PROGRAM (WWU) AAS CHAMBLISS POSTER JUDGE JOURNAL REFEREE (APJ, APJS, APJL, AJ, MNRAS, A&A, RMXAA, JAAVSO)	2021 2018, 2019 2018 2018, 2019
	Panelist, ComsciCon-PNW (Seattle, WA) Northwest Astronomers Meeting 2016 SOC Co-Chair Panelist, Mix It Up: The STEM Mosaic (WWU) ExoClimes 2016 Organizer (Quest University, British Columbia, CA) STEM Career Fair (Sammamish High School, Bellevue WA) Judge (John Hunter Python Plotting Contest) APO-UW Time Allocation Committee Graduate & Professional Student Library Advisory Committee (UW) Speaker (Everett Astro. Soc., Seattle Astro. Soc.) Astro Admissions Committee Grad Representative (UW) Cool Stars 16 LOC (UW) Science Olympiad Tutor (Aviation High School, Seattle) Volunteer Lecturer (Center for Talented Youth) Open House Speaker (Theodor Jacobson Observatory, UW)	$\begin{array}{c} 2017 \\ 2016 \\ 2016 \\ 2016 \\ 2014 \\ 2014 \\ 2014 - 2018 \\ 2012 - 2014 \\ 2012 - 2014 \\ 2013 \\ 2011 - 2012 \\ 2010 \\ 2006 \\ October 2006 \\ 2003 - 2006 \\ \end{array}$

1st Author Publications

- 26. The Rise and Fall of the Eclipsing Binary, HS Hydrae **Davenport**, **J.R.A.**, et al. *AJ submitted*
- 10 YEARS OF STELLAR ACTIVITY FOR GJ 1243
 Davenport, J.R.A., Tovar Mendoza, G., Hawley, S. L. AJ, 160, 36 (2020)
- 24. SETI IN THE SPATIAL-TEMPORAL SURVEY DOMAIN **Davenport**, J.R.A. arXiv # 1907.04443 (2019)
- 23. Photometric Metallicities for Low-Mass Stars with Gaia and WISE Davenport, J.R.A., Dorn-Wallenstein, T.Z. RNAAS, 3, 3, (2019)
- 22. THE EVOLUTION OF FLARE ACTIVITY WITH STELLAR AGE Davenport, J.R.A. et al. ApJ 871, 241 (2019)
- 21. ROTATING STARS FROM KEPLER OBSERVED WITH GAIA DR2 Davenport, J.R.A. & Covey, K. R., ApJ 868, 151 (2018)
- 20. The GALEX View of "Boyajian's Star" (KIC 8462852) **Davenport, J.R.A.** et al. *ApJ* 853, 130 (2018)
- 19. ROTATING STARS FROM KEPLER OBSERVED IN GAIA DR1 Davenport, J.R.A. ApJ 835, 16 (2017)
- 18. Infrared Flares from M Dwarfs: a Hinderance to Future Transiting Exoplanet Studies

Davenport, J.R.A., *RNAAS*, 1, 1 (2017)

- 17. MOST OBSERVATIONS OF OUR NEAREST NEIGHBOR: FLARES ON PROXIMA CENTAURI Davenport, J.R.A., Kipping, D.M., et al., ApJ 829L, 31 (2016)
- 16. THE KEPLER CATALOG OF STELLAR FLARES Davenport, J.R.A. ApJ, 829, 23 (2016)
- 15. SEARCHING FOR "TABBY'S STAR" ANALOGS IN STRIPE 82

 Davenport, J.R.A. & Ruan, J. J. (2016), The Journal of Brief Ideas
- 14. Measuring Differential Rotation & Starspot Evolution on the M Dwarf GJ 1243 with Kepler

Davenport, **J.R.A.** et al. *ApJ*, 806, 212 (2015)

13. SDSSJ14584479+3720215: A Benchmark JHK $_s$ Blazar Light Curve from the 2MASS Calibration Scans

Davenport, **J.R.A.**, Ruan, J.J., et al., *ApJ*, 803, 2 (2015)

12. THE GALACTIC ASTIGMATISM: CONSTRAINING THE MILKY WAY DARK MATTER HALO USING ULTRA-WEAK LENSING

Davenport, J.R.A. (2015), The Journal of Brief Ideas

- 11. KEPLER FLARES II: THE TEMPORAL MORPHOLOGY OF WHITE-LIGHT FLARES ON GJ 1243 **Davenport**, **J.R.A.** et al., *ApJ*, 797, 122 (2014)
- 10. Studying Gender in Conference Talks data from the 223rd meeting of the American Astronomical Society

Davenport, **J.R.A.**, et al. (2014), arXiv #1403.3091

- 9. The Readability of Tweets and their Geographic Correlation with Education Davenport, J.R.A. & DeLine, R. (2014), arXiv #1401.6058
- 8. The SDSS-2MASS-WISE 10 DIMENSIONAL STELLAR COLOR LOCUS **Davenport, J.R.A.**, et al., MNRAS, 440, 3430 (2014)
- 7. THE VERY SHORT PERIOD M DWARF BINARY SDSS J001641-000925 **Davenport**, **J.R.A.**, et al., *ApJ*, 764, 62 (2013)
- 6. Unidentified Moving Objects in Next Generation Time Domain Surveys **Davenport**, J.R.A., (2013) arXiv #1303.7433
- 5. VISIBLE IMPROVEMENTS, Review of Visual Strategies: a Practical Guide for Scientists and Engineers Davenport, J.R.A., Physics World, February 2013

4. Multi-wavelength characterization of stellar flares on low-mass stars using SDSS and 2MASS time domain surveys

Davenport, **J.R.A.**, et al. *ApJ*, 748, 58 (2012)

- 3. Death of a cluster: the destruction of M67 as seen by the SDSS Davenport, J.R.A. & Sandquist, E. L, ApJ, 711, 559 (2010)
- 2. Improved Photometric Calibrations for Red Stars Observed with the SDSS Photometric Telescope

Davenport, J.R.A., Bochanski, Covey, Hawley, West, Schneider, AJ, 134, 2430 (2007)

1. SLOAN/JOHNSON-COUSINS/2MASS COLOR TRANSFORMATIONS FOR COOL STARS Davenport, J.R.A., West, A. A., et al., PASP, 118, 850 (2006)

Co-Author Publications

59. How to organize an online conference – Lessons learned from Cool Stars 20.5 (virtually cool)

Günther, H. M. Davenport, J.R.A., et al. arXiv # 2105.08795

- 58. Photometric Classifications of Evolved Massive Stars: Preparing for the Era of Webb and Roman with Machine Learning Dorn-Wallenstein, T. Z., **Davenport**, J.R.A., et al. *ApJ in press*
- 57. STELLAR ROTATION IN THE K2 SAMPLE: EVIDENCE FOR BROKEN SPINDOWN Gordon, A. A., **Davenport**, **J.R.A.**, et al. *ApJ submitted*
- 56. Flares in Open Clusters with K2. II. Pleiades, Hyades, Praesepe, Ruprecht 147, and M67

Ilin, E., et al. A&A 645, A42 (2021)

- 55. SHORT TERM VARIABILITY OF EVOLVED MASSIVE STARS WITH TESS II: A NEW CLASS OF COOL, PULSATING SUPERGIANTS
 Dorn-Wallenstein, T. Z., et al. ApJ 902, 24 (2020)
- 54. DECONFUSING THE CONFUSOGRAM: GETTING NEW INSIGHTS FROM ZEEMAN DOPPLER IMAGING Sebastian Pineda, J. & Davenport, J.R.A. RNAAS 4, 6 (2020)
- 53. Temporal Evolution of Spatially Resolved Individual Star Spots on a Planet-hosting Solar-type Star: Kepler-17 Namekata, K, **Davenport**, **J.R.A.**, et al. ApJ 891, 103 (2020)
- 52. A BLUEPRINT OF STATE-OF-THE-ART TECHNIQUES FOR DETECTING QUASI-PERIODIC PULSATIONS IN SOLAR AND STELLAR FLARES
- Broomhall, A-M, **Davenport**, **J.R.A.**, et al. *ApJS* 244, 44 (2019) 51. USING FLARE RATES TO SEARCH FOR STELLAR ACTIVITY CYCLES Scoggins, M., **Davenport**, **J.R.A.**, Covey, K.R., *RNAAS* 3, 137 (2019)
- 50. High Fidelity Imaging of the Inner AU Mic Debris Disk: Evidence of Differential Wind Sculpting?

Wisniewski, J. P., Kowalski, A. F., **Davenport**, **J.R.A.**, et al. *ApJL* 883, 8 (2019)

- 49. Do Kepler superflare stars really include slowly-rotating Sun-like stars? Results using APO 3.5m telescope spectroscopic observations and Gaia-DR2 data Notsu, Y., et al. ApJ 876, 58 (2019)
- 48. Rotation Period Evolution in Low-Mass Binary Stars: The Impact of Tidal Torques and Magnetic Braking

Fleming, D. P., Barnes, R., **Davenport**, **J.R.A.**, Luger, R., *ApJ* 881, 88 (2019)

- 47. SHORT TERM VARIABILITY OF EVOLVED MASSIVE STARS WITH TESS Dorn-Wallenstein, T. Z., Levesque, E. M., & Davenport, J.R.A., ApJ 878, 155 (2019)
- 46. The Solar Benchmark: Rotational Modulation of the Sun Reconstructed from Archival Sunspot Records

Morris, B. M. **Davenport**, **J.R.A.** et al. *MNRAS* 484, 3244 (2019)

45. Flares in Open Clusters with K2. I. M45 (Pleiades), M44 (Praesepe) and M67 Ilin, E. et al. A&A in press (2018)

- 44. A Significant Over-Luminosity in the Transiting Brown Dwarf CWW 89Ab Beatty, T. G. et al. AJ 156, 168 (2018)
- 43. ZTF Bright Transient Survey classifications Graham, M. L. et al., ATEL, 11745 (2018)
- 42. Possible Bright Starspots on TRAPPIST-1 Morris, B. M. et al. ApJ 857, 39 (2018)
- 41. Spotting Stellar Activity Cycles in Gaia Astrometry Morris, B. M. et al. MNRAS 476, 5408 (2018)
- 40. The First Post-Kepler Brightness Dips of KIC 8462852 Boyajian, T. S. et al. ApJL 853, 8 (2018)
- 39. Flare Activity of Wide Binary Stars with Kepler Clarke, R. W., **Davenport**, **J.R.A.**, et al., ApJ 853, 59 (2018)
- 38. Who asks questions at astronomy meetings? Schmidt, S. J., & Davenport, J.R.A., Nature Astronomy 1, 0153 (2017)
- 37. Modeling Repeated M-dwarf Flaring at an Earth-like Planet in the Habitable Zone: Atmospheric Effects for an Unmagnetized Planet Tilley, M. A. et al. Astrobiology (2018)
- 36. Chromospheric Activity of HAT-P-11: an Unusually Active Planet-Hosting K Star Morris, B. M., et al. ApJ 848, 58 (2017)
- 35. The Role of Gender in Asking Questions at Cool Stars 18 and 19 Schmidt, S. J., et al. (2017) arXiv #1704.05260
- 34. Tidal Synchronization and Differential Rotation of Kepler Eclipsing Binaries Lurie, J. C., et al. AJ 154, 250 (2017)
- 33. The Starspots of Hat-P-11: Evidence for a Solar-Like Dynamo Morris, B. M., et al. ApJ 846, 99 (2017)
- 32. Orbiting Clouds of Material at the Keplerian Co-Rotation Radius of Rapidly Rotating Low Mass WTTs in Upper Sco Stauffer, J. et al. (2017) AJ, 153, 152 (2017)
- 31. No Conclusive Evidence For Transits Of Proxima B In MOST Photometry; Kipping, D. M. et al. AJ, 153, 93 (2017)
- 30. Kepler Flares IV: A Comprehensive Analysis of the Activity of GJ 1243; Silverberg, S. M., et al., ApJ, 829, 129, (2016)
- 29. MAXIMIZING SCIENCE IN THE ERA OF LSST, STARS STUDY GROUP REPORT: ROTATION AND MAGNETIC ACTIVITY IN THE GALACTIC FIELD POPULATION AND IN OPEN STAR CLUSTERS Hawley, S.L, et al. (2016) Kavli Workshop White Paper
- 28. Examining the relationships between colour, T_{eff} , and [M/H] for APOGEE K and M DWARFS; Schmidt, S. J. et al., MNRAS, 460, 2611 (2016)
- 27. The Time-Domain Spectroscopic Survey: Understanding the Optically Variable Sky with SEQUELS in SDSS-III; Ruan, J. J. et al., ApJ 825, 137 (2016)
- 26. The MUSCLES Treasury Survey I: Motivation and Overview; France, K., et al., ApJ, 820, 89 (2016)
- 25. Characterizing the Rigidly Rotating Magnetosphere Stars HD 345439 and HD 23478; Wisniewski, J. P., et al., ApJL, 811, 26 (2015)
- 24. The Time Domain Spectroscopic Survey: Variable Object Selection and Anticipated Results; Morganson, E., et al., ApJ, 806, 244 (2015)

23. THE ELEVENTH AND TWELFTH DATA RELEASES OF THE SLOAN DIGITAL SKY SURVEY: FINAL DATA FROM SDSS-III;

Alam, S., et al., ApJS, 219, 12 (2015)

22. Testing the recovery of stellar rotation signals from Kepler light curves using a blind hare-and-hounds exercise; Aigrain, S., et al., MNRAS, 450, 3211 (2015)

- 21. BOSS Ultracool Dwarfs I: Colors and Magnetic Activity of M and L dwarfs; Schmidt, S. J., et al., AJ, 149, 158 (2015)
- 20. KEPLER FLARES III: STELLAR ACTIVITY ON GJ 1245 A AND B; Lurie, J. C., **Davenport**, **J.R.A.**, Hawley, S. L., et al., ApJ, 800, 95 (2015)
- 19. Hα EMISSION FROM ACTIVE EQUAL-MASS, WIDE M DWARF BINARIES; Gunning, H. C., Schmidt, S. J, **Davenport**, **J.R.A.** et al., *PASP*, 126, 108 (2014)
- 18. KEPLER FLARES I: ACTIVE AND INACTIVE M DWARFS; Hawley, S. L., **Davenport**, **J.R.A.** et al., ApJ, 797, 121 (2014)
- 17. DISCOVERY OF TWO RARE RIGIDLY-ROTATING MAGNETOSPHERE STARS IN THE APOGEE SURVEY;

Eikenberry, S. S., et al., ApJL, 748, 30 (2014)

- 16. High-Precision 2MASS JHK_s Light Curves and Other Data for RR Lyrae Star SDSSJ 015450+001501: Strong Constraints for Non-Linear Pulsation Models; Szabó, R., et al., ApJ, 780, 92 (2013)
- 15. TIME-RESOLVED PROPERTIES AND GLOBAL TRENDS IN DME FLARES FROM SIMULTANEOUS PHOTOMETRY AND SPECTRA; Kowalski, A. K., et al., ApJS, 207, 15 (2013)
- 14. The Multi-object, Fiber-fed Spectrographs for the Sloan Digital Sky Survey and the Baryon Oscillation Spectroscopic Survey; Smee, S. A., et al., AJ, 146, 32 (2013)
- 13. The Baryon Oscillation Spectroscopic Survey of SDSS-III; Dawson, K., et al., AJ, 145, 10 (2013)
- 12. The Ninth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Baryon Oscillation Spectroscopic Survey; Ahn, C. P., et al., ApJS, 203, 21 (2012)
- 11. Characterizing the Optical Variability of Bright Blazars: Variability-based Selection of Fermi Active Galactic Nuclei; Ruan, J. J., et al., ApJ, 760, 51 (2012)
- 10. A Multi-survey Approach to White Dwarf Discovery; Sayres, C., et al., AJ, 143, 103 (2012)
- 9. H α EMISSION VARIABILITY IN ACTIVE M DWARFS; Bell, K. J.; Hilton, E.J.; **Davenport**, **J.R.A.**; et al. *PASP*, 124, 14 (2012)
- 8. SDSS-III: MASSIVE SPECTROSCOPIC SURVEYS OF THE DISTANT UNIVERSE, THE MILKY WAY GALAXY, AND EXTRA-SOLAR PLANETARY SYSTEMS; Eisenstein, D. J., et al. AJ, 142, 72 (2011)
- 7. THE EIGHTH DATA RELEASE OF THE SLOAN DIGITAL SKY SURVEY: FIRST DATA FROM SDSS-III; Aihara, H., et al., ApJS, 193, 29 (2011)
- 6. The Sloan Digital Sky Survey DR7 Spectroscopic M Dwarf Catalog. I: Data; West, A. A., et al., AJ 141, 97 (2011)
- 5. THE NUMBER OF ROTATIONS PER STELLAR ACTIVITY CYCLE IN G AND K MAIN SEQUENCE STARS; Erika Böhm-Vitense & J.R.A. Davenport Cool Stars 16 Conference, 2010 (Seattle, WA)
- 4. The Seventh Data Release of the Sloan Digital Sky Survey; Abazajian, K. N. et al., ApJS, 182, 543 (2009)

3. The Luminosity and Mass Functions of Low-Mass Stars in the Galactic Disk: I. The Calibration Region;

Covey, K. R., et al., AJ, 136, 1778 (2008)

- 2. Time-Resolved Photometry of the Optical Counterpart of Swift J2319.4+2619; Shafter, A. W., **Davenport**, **J.R.A.**, et al., *PASP*, 120, 374-379, (2008)
- 1. The Sixth Data Release of the Sloan Digital Sky Survey; Adelman-McCarthy, J. K, et al., ApJS, 175, 297-313 (2008)