

JJ Hermes

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Employment

- **Hubble Fellow**, University of North Carolina at Chapel Hill, 2015–
- **ERC Postdoctoral Research Fellow**, University of Warwick, 2013–2015
- **Research/Teaching Assistant**, University of Texas at Austin, 2008–2013
- **Reporter**, The Chronicle of Higher Education, 2007–2008
- **Editor-in-Chief**, The Daily Texan, 2006–2007

Education

- **University of Texas at Austin**, Ph.D. Astronomy, August 2013
Dissertation: “Gravitational Waves and Pulsations from High-Speed Photometry of Low-Mass, Helium-Core White Dwarfs” Co-Advisors: [Don Winget](#) & [Mike Montgomery](#)
- **University of Texas at Austin**, M.A. Astronomy, August 2010
Thesis: “A Search for Planetary Companions in Pulsation Arrival Times of White Dwarfs”
- **University of Texas at Austin**, B.S. Physics, B.A. Astronomy, May 2007

Fellowships and Awards

- 2015: **Hubble Fellowship**, 2015-18
- 2015: **65th Lindau Nobel Laureate Meeting**, selected as participating young scientist
- 2013: **David Benfield Memorial Fellowship in Astronomy**, UT-Austin
- 2012: **Fred T. Goetting, Jr. Memorial Endowed Presidential Fellowship**, UT-Austin

Professional Service

- Deputy Chair, *K2* Users Panel, 2016–
- Co-Chair, *TESS* Asteroseismology Consortium, Working Group 8 (Compact Pulsators), 2017–
- Panelist, *HST* Cycle 25 TAC, 2017 June
- Scientific Organizing Committee, *Kepler* and *K2* Science Conference IV, NASA Ames, 2017 June 19-24
- Journal referee for *Science Advances*, *The Astrophysical Journal*, *MNRAS*, and *A&A*

Selected Successful Telescope Proposals

- 2017, 342 short-cadence targets, *K2* Campaigns 1-16, *Kepler* Space Telescope [**PI**, 5 GO programs]
- 2017, 145 orbits, Cycle 25, *Hubble* Space Telescope: COS [Co-I, Programs 15072 & 15073]
- 2016, 6 orbits, Cycle 24, *Hubble* Space Telescope: COS [**PI**, Program 14691]
- 2016, 5 nights NOAO, 4.1 m SOAR telescope: Goodman spectroscopy [**PI**, 2017A-0212]
- 2016, 6.25 hr, 9.8 m Southern African Large Telescope: RSS [**PI**, 2016-2-SCI-030]
- 2016, 5.5 hr, 9.8 m Southern African Large Telescope: SALTICAM [**PI**, 2016-1-SCI-017]
- 2015, 5 hr, 8 m Very Large Telescope: UVES [**PI**, ESO 095.D-0409]
- 2015, 3 hr, 8 m Gemini North Telescope: GMOS-N [**PI**, GN-2015B-FT-29]
- 2015, 4 nights, 3.6 m New Technology Telescope: EFOSC2 [**PI**, ESO 095.D-0406]
- 2015, 8 nights, 2.5 m Isaac Newton Telescope: IDS [**PI**, I/2015A/P04]
- 2014, 5 nights, 2.5 m Isaac Newton Telescope: IDS [**PI**, I/2014B/P06]
- 2014, 2 nights, 4.2 m William Herschel Telescope: ISIS [**PI**, W/2014A/P14]
- 2014, 2 nights, 4.2 m William Herschel Telescope: ULTRACAM [**PI**, W/2014A/P15]
- 2013, 19 orbits, Cycle 21, *Hubble* Space Telescope: COS [Co-I, Programs 13430 & 13319]
- 2013, 2.7 hr, 8 m Very Large Telescope: FORS2 [**PI**, ESO 093.D-0300(B)]
- 2012, 101 nights, 2.1 m Telescope, McDonald Observatory: Argos high-speed photometry [**PI**]

External Research Support

- 2017, K2 Cycle 5 GO Proposal, **PI, \$50,000**: “K2 Observations of Variable WDs in Fields 14, 15 and 16”
- 2017, HST Cycle 24 #14912, Co-I, **\$5,085**: “High-precision asteroseismology of the accreting white dwarf in GW Lib through simultaneous HST and K2 observations”
- 2016, HST Cycle 24 #14691, **PI, \$61,962**: “Unraveling the oscillations of the richest pulsating WD”
- 2016, K2 Cycle 4 GO Proposal, **PI, \$50,000**: “K2 Observations of Variable WDs in Fields 11, 12 and 13”
- 2015, Hubble Fellowship, **\$348,157**: “Breaking New Ground: Measuring Interiors in the Stellar Graveyard”
- 2015, HST Cycle 23 #14076, Co-I, **\$12,273**: “A legacy UV spectroscopic survey of the 13pc WD sample”
- 2013, National Science Foundation, Co-I, **\$694,152**: “Collaborative Proposal: The ELM Survey, Short Period Binary WDs as SNe Progenitors, Gravitational Wave Sources, and Probes of Extreme Stellar Evolution”
- 2013, Kepler Cycle 5 GO Proposal, Co-I, **\$43,695**: “Kepler’s Active DAV”
- 2012, Kepler Cycle 4 GO Proposal, Co-I, **\$81,040**: “Kepler’s Unique DAV”
- 2011, UT-Austin, Longhorn Innovation for Teaching Grant, Co-PI, **\$74,090**: “Reaching Undergraduates with Research: Remote Observing on a 36” Telescope”

Invited Talks (Additional Contributed Talks Online: speakerdeck.com/jjhermes)

Colloquia:

- Joint NRAO / UVA (2017-11-09)
- University of Texas at Austin (2017-10-31)
- The Ohio State University (2017-10-19)
- University of Delaware (2017-10-05)
- Louisiana State University (2016-10-21)
- High Point University (2016-06-24)
- University of Montreal (2016-04-07)
- University of Toronto (2016-04-01)
- Wesleyan University (2016-02-24)
- Keele University (2014-11-19)
- Armagh Observatory (2014-03-13)
- University of Washington (2013-10-31)
- Harvard-Smithsonian CfA (2012-10-29)

Invited Reviews:

- 10th Kepler Asteroseismic Consortium (KASC) Workshop; Birmingham, UK (2017-07-18)
- Understanding the roles of rotation, pulsation & chemical peculiarities in the upper main sequence; Windermere, Cumbria, UK (2016-09-14)
- Annual Meeting, Sociedade Astronômica Brasileira; Ribeirão Preto, Brazil (2016-08-31)
- K2 SciCon; Santa Barbara, CA (2015-11-03)
- 8th KASC Workshop; Aarhus, Denmark (2015-06-15)
- RAS Specialist Meeting on Asteroseismology, London, UK (2015-05-08)
- 6th KASC Workshop; Sydney, Australia (2013-06-27)
- Planets Around Stellar Remnants; Arecibo, Puerto Rico (2012-01-24)

Press Coverage

- The fastest rotating white dwarf is the most massive ([Hermes et al. 2017c](#))
[AAS Nova](#): Rapid Rotation of a Heavy White Dwarf
- Confirmation of outbursts in the coolest pulsating white dwarfs ([Hermes et al. 2015b](#))
[Daily Mail](#): Dying stars suffer ‘irregular heartbeats’
- The cleanest indirect detection of gravitational waves using visible light ([Hermes et al. 2012c](#))
[Nature](#): Stellar duo tests Einstein’s theory
[BBC News](#): Gravitational waves spotted from white-dwarf pair
[Scientific American](#): White Dwarf Binary Stars Make Merger Plans
[SPIE Newsroom](#): 12.75-minute binary evidences gravitational waves in visible-light observations
- Discovery of the most massive pulsating white dwarf, GD 518 ([Hermes et al. 2013c](#))
[Astronomy Magazine](#): Astronomers discover pulsations from crystalized dying star
- Discovery of the 12.75-minute WD+WD binary J0651+2844 ([Brown et al. 2011](#))
[National Geographic](#): “Death Dance” Stars Found — May Help Prove Einstein Right

JJ Hermes: Publications

First-Author Refereed Publications

18. [“White Dwarf Rotation as a Function of Mass and a Dichotomy of Mode Line Widths: Kepler Observations of 27 Pulsating DA White Dwarfs through K2 Campaign 8,”](#) **Hermes, J. J.**, Gänsicke, B. T., Kawaler, S. D., Greiss, S., Tremblay, P.-E., Gentile Fusillo, N. P., Raddi, R., Fanale, S. M., Bell, K. J., Dennihy, E., Fuchs, J. T., Dunlap, B. H., Clemens, J. C., Montgomery, M. H., Winget, D. E., Chote, P., Marsh, T. R., & Redfield, S., 2017c, *ApJS*, 232, 23.
17. [“Evidence from K2 for Rapid Rotation in the Descendant of an Intermediate-mass Star,”](#) **Hermes, J. J.**, Kawaler, S. D., Romero, A. D., Kepler, S. O., Tremblay, P.-E., Bell, K. J., Dunlap, B. H., Montgomery, M. H., Gänsicke, B. T., Clemens, J. C., Dennihy, E., & Redfield, S., 2017d, *ApJ*, 841, L2.
16. [“When flux standards go wild: white dwarfs in the age of Kepler,”](#) **Hermes, J. J.**, Gänsicke, B. T., Gentile Fusillo, N. P., Raddi, R., Hollands, M. A., Dennihy, E., Fuchs, J. T., & Redfield, S., 2017b, *MNRAS*, 468, 1946.
15. [“A Deep Test of Radial Differential Rotation in a Helium-atmosphere White Dwarf. I. Discovery of Pulsations in PG 0112+104,”](#) **Hermes, J. J.**, Kawaler, S. D., Bischoff-Kim, A., Provencal, J. L., Dunlap, B. H., & Clemens, J. C., 2017, *ApJ*, 835, 277.
14. [“The search for ZZ Ceti stars in the original Kepler mission,”](#) Greiss, S., **Hermes, J. J.**, Gänsicke, B. T., Steeghs, D. T. H., Bell, K. J., Raddi, R., Tremblay, P.-E., Breedt, E., Ramsay, G., Koester, D., Carter, P. J., Vanderbosch, Z., Winget, D. E., & Winget, K. I., 2016, *MNRAS*, 457, 2855.
13. [“A Second Case of Outbursts in a Pulsating White Dwarf Observed by Kepler,”](#) **Hermes, J. J.**, Montgomery, M. H., Bell, K. J., Chote, P., Gänsicke, B. T., Kawaler, S. D., Clemens, J. C., Dunlap, B. H., Winget, D. E., & Armstrong, D. J., 2015c, *ApJ*, 810, L5.
12. [“Insights into internal effects of common-envelope evolution using the extended Kepler mission,”](#) **Hermes, J. J.**, Gänsicke, B. T., Bischoff-Kim, A., Kawaler, S. D., Fuchs, J. T., Dunlap, B. H., Clemens, J. C., Montgomery, M. H., Chote, P., Barclay, T., Marsh, T. R., Gianninas, A., Koester, D., Winget, D. E., Armstrong, D. J., Rebassa-Mansergas, A., & Schreiber, M. R., 2015a, *MNRAS*, 451, 1701.
11. [“Heavy metals in a light white dwarf: abundances of the metal-rich, extremely low-mass GALEX J1717+6757,”](#) **Hermes, J. J.**, Gänsicke, B. T., Koester, D., Bours, M. C. P., Townsley, D. M., Farihi, J., Marsh, T. R., Littlefair, S., Dhillon, V. S., Gianninas, A., Breedt, E., & Raddi, R., 2014c, *MNRAS*, 444, 1674.
10. [“Radius Constraints from High-speed Photometry of 20 Low-mass White Dwarf Binaries,”](#) **Hermes, J. J.**, Brown, W. R., Kilic, M., Gianninas, A., Chote, P., Sullivan, D. J., Winget, D. E., Bell, K. J., Falcon, R. E., Winget, K. I., Mason, P. A., Harrold, S. T., & Montgomery, M. H., 2014b, *ApJ*, 792, 39.
9. [“Precision Asteroseismology of the Pulsating White Dwarf GD 1212 Using a Two-wheel-controlled Kepler Spacecraft,”](#) **Hermes, J. J.**, Charpinet, S., Barclay, T., Pakštienė, E., Mullally, F., Kawaler, S. D., Bloemen, S., Castanheira, B. G., Winget, D. E., Montgomery, M. H., Van Grootel, V., Huber, D., Still, M., Howell, S. B., Caldwell, D. A., Haas, M. R., & Bryson, S. T., 2014a, *ApJ*, 789, 85.
8. [“A new class of pulsating white dwarf of extremely low mass: the fourth and fifth members,”](#) **Hermes, J. J.**, Montgomery, M. H., Gianninas, A., Winget, D. E., Brown, W. R., Harrold, S. T., Bell, K. J., Kenyon, S. J., Kilic, M., & Castanheira, B. G., 2013d, *MNRAS*, 436, 3573.

7. *"Discovery of an Ultramassive Pulsating White Dwarf,"* **Hermes, J. J.**, Kepler, S. O., Castanheira, B. G., Gianninas, A., Winget, D. E., Montgomery, M. H., Brown, W. R., & Harrold, S. T., 2013c, ApJ, 771, L2.
6. *"A New Timescale for Period Change in the Pulsating DA White Dwarf WD 0111+0018,"* **Hermes, J. J.**, Montgomery, M. H., Mullally, F., Winget, D. E., & Bischoff-Kim, A., 2013b, ApJ, 766, 42.
5. *"Discovery of Pulsations, Including Possible Pressure Modes, in Two New Extremely Low Mass, He-core White Dwarfs,"* **Hermes, J. J.**, Montgomery, M. H., Winget, D. E., Brown, W. R., Gianninas, A., Kilic, M., Kenyon, S. J., Bell, K. J., & Harrold, S. T., 2013a, ApJ, 765, 102.
4. *"Rapid Orbital Decay in the 12.75-minute Binary White Dwarf J0651+2844,"* **Hermes, J. J.**, Kilic, M., Brown, W. R., Winget, D. E., Allende Prieto, C., Gianninas, A., Mukadam, A. S., Cabrera-Lavers, A., & Kenyon, S. J., 2012c, ApJ, 757, L21.
3. *"SDSS J184037.78+642312.3: The First Pulsating Extremely Low Mass White Dwarf,"* **Hermes, J. J.**, Montgomery, M. H., Winget, D. E., Brown, W. R., Kilic, M., & Kenyon, S. J., 2012b, ApJ, 750, L28.
2. *"Two New Tidally Distorted White Dwarfs,"* **Hermes, J. J.**, Kilic, M., Brown, W. R., Montgomery, M. H., & Winget, D. E., 2012a, ApJ, 749, 42.
1. *"Discovery of a ZZ Ceti in the Kepler Mission Field,"* **Hermes, J. J.**, Mullally, F., Østensen, R. H., Williams, K. A., Telting, J., Southworth, J., Bloemen, S., Howell, S. B., Everett, M., & Winget, D. E., 2011, ApJ, 741, L16.

Second- and Third-Author Refereed Publications

13. *"Destroying Aliases from the Ground and Space: Super-Nyquist ZZ Ceti in K2 Long Cadence Data,"* Bell, K. J., **Hermes, J. J.**, Vanderbosch, Z., Montgomery, M. H., Winget, D. E., Dennihy, E., Fuchs, J. T., & Tremblay, P.-E., 2017c, ArXiv e-prints.
12. *"Two white dwarfs in ultrashort binaries with detached, eclipsing, likely sub-stellar companions detected by K2,"* Parsons, S. G., **Hermes, J. J.**, Marsh, T. R., Gänsicke, B. T., Tremblay, P.-E., Littlefair, S. P., Sahman, D. I., Ashley, R. P., Green, M., Rattanasoon, S., Dhillon, V. S., Burleigh, M. R., Casewell, S. L., Buckley, D. A. H., Braker, I. P., Irawati, P., Dennihy, E., Rodríguez-Gil, P., Winget, D. E., Winget, K. I., Bell, K. J., & Kilic, M., 2017b, MNRAS, 471, 976.
11. *"Outbursts in Two New Cool Pulsating DA White Dwarfs,"* Bell, K. J., **Hermes, J. J.**, Montgomery, M. H., Gentile Fusillo, N. P., Raddi, R., Gänsicke, B. T., Winget, D. E., Dennihy, E., Gianninas, A., Tremblay, P.-E., Chote, P., & Winget, K. I., 2016, ApJ, 829, 82.
10. *"GW Librae: a unique laboratory for pulsations in an accreting white dwarf,"* Toloza, O., Gänsicke, B. T., **Hermes, J. J.**, Townsley, D. M., Schreiber, M. R., Szkody, P., Pala, A., Beuermann, K., Bildsten, L., Breedt, E., Cook, M., Godon, P., Henden, A. A., Hubeny, I., Knigge, C., Long, K. S., Marsh, T. R., de Martino, D., Mukadam, A. S., Myers, G., Nelson, P., Oksanen, A., Patterson, J., Sion, E. M., & Zorotovic, M., 2016, MNRAS, 459, 3929.
9. *"A search for variable white dwarfs in large-area time-domain surveys: a pilot study in SDSS Stripe 82,"* Pietro Gentile Fusillo, N., **Hermes, J. J.**, & Gänsicke, B. T., 2016, MNRAS, 455, 2295.
8. *"KIC 4552982: Outbursts and Asteroseismology from the Longest Pseudo-continuous Light Curve of a ZZ Ceti,"* Bell, K. J., **Hermes, J. J.**, Bischoff-Kim, A., Moorhead, S., Montgomery, M. H., Østensen, R., Castanheira, B. G., & Winget, D. E., 2015, ApJ, 809, 14.

7. *"Discovery of ZZ Ceti in detached white dwarf plus main-sequence binaries,"* Pyrzas, S., Gänsicke, B. T., **Hermes, J. J.**, Copperwheat, C. M., Rebassa-Mansergas, A., Dhillon, V. S., Littlefair, S. P., Marsh, T. R., Parsons, S. G., Savoury, C. D. J., Schreiber, M. R., Barros, S. C. C., Bento, J., Breedt, E., & Kerry, P., 2015, MNRAS, 447, 691.
6. *"PSR J1738+0333: the first millisecond pulsar + pulsating white dwarf binary,"* Kilic, M., **Hermes, J. J.**, Gianninas, A., & Brown, W. R., 2015b, MNRAS, 446, L26.
5. *"KIC 11911480: the second ZZ Ceti in the Kepler field,"* Greiss, S., Gänsicke, B. T., **Hermes, J. J.**, Steeghs, D., Koester, D., Ramsay, G., Barclay, T., & Townsley, D. M., 2014, MNRAS, 438, 3086.
4. *"Found: the progenitors of AM CVn and supernovae Ia,"* Kilic, M., **Hermes, J. J.**, Gianninas, A., Brown, W. R., Heinke, C. O., Agüeros, M. A., Chote, P., Sullivan, D. J., Bell, K. J., & Harrold, S. T., 2014a, MNRAS, 438, L26.
3. *"SDSS J074511.56+194926.5: Discovery of a Metal-rich and Tidally Distorted Extremely Low Mass White Dwarf,"* Gianninas, A., **Hermes, J. J.**, Brown, W. R., Dufour, P., Barber, S. D., Kilic, M., Kenyon, S. J., & Harrold, S. T., 2014a, ApJ, 781, 104.
2. *"SDSS J163030.58+423305.8: a 40-min orbital period detached white dwarf binary,"* Kilic, M., Brown, W. R., **Hermes, J. J.**, Allende Prieto, C., Kenyon, S. J., Winget, D. E., & Winget, K. I., 2011b, MNRAS, 418, L157.
1. *"A 12 Minute Orbital Period Detached White Dwarf Eclipsing Binary,"* Brown, W. R., Kilic, M., **Hermes, J. J.**, Allende Prieto, C., Kenyon, S. J., & Winget, D. E., 2011, ApJ, 737, L23.

Other-Author Refereed Publications

30. *"Multiband photometry and spectroscopy of an all-sky sample of bright white dwarfs,"* Raddi, R., Gentile Fusillo, N. P., Pala, A. F., **Hermes, J. J.**, Gänsicke, B. T., Chote, P., Hollands, M. A., Henden, A., Catalán, S., Geier, S., Koester, D., Munari, U., Napiwotzki, R., & Tremblay, P.-E., 2017, MNRAS, 472, 4173.
29. *"Testing the white dwarf mass-radius relationship with eclipsing binaries,"* Parsons, S. G., Gänsicke, B. T., Marsh, T. R., Ashley, R. P., Bours, M. C. P., Breedt, E., Burleigh, M. R., Copperwheat, C. M., Dhillon, V. S., Green, M., Hardy, L. K., **Hermes, J. J.**, Irawati, P., Kerry, P., Littlefair, S. P., McAllister, M. J., Rattanasoon, S., Rebassa-Mansergas, A., Sahman, D. I., & Schreiber, M. R., 2017a, MNRAS, 470, 4473.
28. *"A catalogue of white dwarf candidates in VST ATLAS,"* Gentile Fusillo, N. P., Raddi, R., Gänsicke, B. T., **Hermes, J. J.**, Pala, A. F., Fuchs, J. T., Chehade, B., Metcalfe, N., & Shanks, T., 2017, MNRAS, 469, 621.
27. *"Using large spectroscopic surveys to test the double degenerate model for Type Ia supernovae,"* Breedt, E., Steeghs, D., Marsh, T. R., Gentile Fusillo, N. P., Tremblay, P.-E., Green, M., De Pasquale, S., **Hermes, J. J.**, Gänsicke, B. T., Parsons, S. G., Bours, M. C. P., Longa-Peña, P., & Rebassa-Mansergas, A., 2017, MNRAS, 468, 2910.
26. *"Pruning The ELM Survey: Characterizing Candidate Low-mass White Dwarfs through Photometric Variability,"* Bell, K. J., Gianninas, A., **Hermes, J. J.**, Winget, D. E., Kilic, M., Montgomery, M. H., Castanheira, B. G., Vanderbosch, Z., Winget, K. I., & Brown, W. R., 2017a, ApJ, 835, 180.
25. *"SDSS J105754.25+275947.5: a period-bounce eclipsing cataclysmic variable with the lowest-mass donor yet measured,"* McAllister, M. J., Littlefair, S. P., Dhillon, V. S., Marsh, T. R., Gänsicke, B. T., Bochinski, J., Bours, M. C. P., Breedt, E., Hardy, L. K., **Hermes, J. J.**, Kengkriangkrai, S., Kerry, P., Parsons, S. G., & Rattanasoon, S., 2017b, ArXiv e-prints.

24. *"Using Gaussian processes to model light curves in the presence of flickering: the eclipsing cataclysmic variable ASASSN-14ag,"* McAllister, M. J., Littlefair, S. P., Dhillon, V. S., Marsh, T. R., Ashley, R. P., Bours, M. C. P., Breedt, E., Hardy, L. K., **Hermes, J. J.**, Kengkriangkrai, S., Kerry, P., Rattanasoon, S., & Sahman, D. I., 2017a, MNRAS, 464, 1353.
23. *"Long-term eclipse timing of white dwarf binaries: an observational hint of a magnetic mechanism at work,"* Bours, M. C. P., Marsh, T. R., Parsons, S. G., Dhillon, V. S., Ashley, R. P., Bento, J. P., Breedt, E., Butterley, T., Caceres, C., Chote, P., Copperwheat, C. M., Hardy, L. K., **Hermes, J. J.**, Irawati, P., Kerry, P., Kilkeny, D., Littlefair, S. P., McAllister, M. J., Rattanasoon, S., Sahman, D. I., Vučković, M., & Wilson, R. W., 2016, MNRAS, 460, 3873.
22. *"Constraining the Angular Momentum Evolution of V455 Andromedae,"* Mukadam, A. S., Pyrzas, S., Townsley, D. M., Gänsicke, B. T., **Hermes, J. J.**, Szkody, P., Kemp, J., Patterson, J., Ding, C., Wolf, K., Gemma, M., Karamehmetoglu, E., & Rock, J., 2016, ApJ, 821, 14.
21. *"A search for white dwarfs in the Galactic plane: the field and the open cluster population,"* Raddi, R., Catalán, S., Gänsicke, B. T., **Hermes, J. J.**, Napiwotzki, R., Koester, D., Tremblay, P.-E., Barentsen, G., Farnhill, H. J., Mohr-Smith, M., Drew, J. E., Groot, P. J., Guzman-Ramirez, L., Parker, Q. A., Steeghs, D., & Zijlstra, A., 2016, MNRAS, 457, 1988.
20. *"A large, long-lived structure near the trojan L5 point in the post common-envelope binary SDSS J1021+1744,"* Irawati, P., Richichi, A., Bours, M. C. P., Marsh, T. R., Sanguansak, N., Chanthorn, K., **Hermes, J. J.**, Hardy, L. K., Parsons, S. G., Dhillon, V. S., & Littlefair, S. P., 2016, MNRAS, 456, 2446.
19. *"A Dark Spot on a Massive White Dwarf,"* Kilic, M., Gianninas, A., Bell, K. J., Curd, B., Brown, W. R., **Hermes, J. J.**, Dufour, P., Wisniewski, J. P., Winget, D. E., & Winget, K. I., 2015a, ApJ, 814, L31.
18. *"3D Model Atmospheres for Extremely Low-mass White Dwarfs,"* Tremblay, P.-E., Gianninas, A., Kilic, M., Ludwig, H.-G., Steffen, M., Freytag, B., & **Hermes, J. J.**, 2015, ApJ, 809, 148.
17. *"A double white dwarf with a paradoxical origin?,"* Bours, M. C. P., Marsh, T. R., Gänsicke, B. T., Tauris, T. M., Istrate, A. G., Badenes, C., Dhillon, V. S., Gal-Yam, A., **Hermes, J. J.**, Kengkriangkrai, S., Kilic, M., Koester, D., Mullally, F., Prasert, N., Steeghs, D., Thompson, S. E., & Thorstensen, J. R., 2015, MNRAS, 450, 3966.
16. *"Likely detection of water-rich asteroid debris in a metal-polluted white dwarf,"* Raddi, R., Gänsicke, B. T., Koester, D., Farihi, J., **Hermes, J. J.**, Scaringi, S., Breedt, E., & Girven, J., 2015, MNRAS, 450, 2083.
15. *"Precise Atmospheric Parameters for the Shortest-period Binary White Dwarfs: Gravitational Waves, Metals, and Pulsations,"* Gianninas, A., Dufour, P., Kilic, M., Brown, W. R., Bergeron, P., & **Hermes, J. J.**, 2014b, ApJ, 794, 35.
14. *"Seven-period Asteroseismic Fit of the Kepler DBV,"* Kim, A., Ostensen, R., **Hermes, J. J.**, & Provencal, J., 2014, ApJ, 794, 39.
13. *"A new 20-minute period gravitational wave verification source,"* Kilic, M., Brown, W. R., Gianninas, A., **Hermes, J. J.**, Allende Prieto, C., & Kenyon, S. J., 2014b, MNRAS, 444, L1.
12. *"Enigmatic Recurrent Pulsational Variability of the Accreting White Dwarf EQ Lyn,"* Mukadam, A. S., Townsley, D. M., Szkody, P., Gänsicke, B. T., Southworth, J., Brockett, T., Parsons, S., **Hermes, J. J.**, Montgomery, M. H., Winget, D. E., Harrold, S., Tovmassian, G., Zharikov, S., Drake, A. J., Henden, A., Rodriguez-Gil, P., Sion, E. M., Zola, S., Szymanski, T., Pavlenko, E., Aungwerojwit, A., & Qian, S.-B., 2013b, AJ, 146, 54.

11. *"Measuring the Evolutionary Rate of Cooling of ZZ Ceti,"* Mukadam, A. S., Bischoff-Kim, A., Fraser, O., Córscico, A. H., Montgomery, M. H., Kepler, S. O., Romero, A. D., Winget, D. E., **Hermes, J. J.**, Riecken, T. S., Kronberg, M. E., Winget, K. I., Falcon, R. E., Chandler, D. W., Kuehne, J. W., Sullivan, D. J., Reaves, D., von Hippel, T., Mullally, F., Shipman, H., Thompson, S. E., Silvestri, N. M., & Hynes, R. I., 2013a, *ApJ*, 771, 17.
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8. *"Seismic evidence for non-synchronization in two close sdb+dM binaries from Kepler photometry,"* Pablo, H., Kawaler, S. D., Reed, M. D., Bloemen, S., Charpinet, S., Hu, H., Telting, J., Østensen, R. H., Baran, A. S., Green, E. M., **Hermes, J. J.**, Barclay, T., O'Toole, S. J., Mullally, F., Kurtz, D. W., Christensen-Dalsgaard, J., Caldwell, D. A., Christiansen, J. L., & Kinemuchi, K., 2012, *MNRAS*, 422, 1343.
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4. *"HST and Optical Data Reveal White Dwarf Cooling, Spin, and Periodicities in GW Librae 3-4 Years after Outburst,"* Szkody, P., Mukadam, A. S., Gänsicke, B. T., Henden, A., Sion, E. M., Townsley, D., Chote, P., Harmer, D., Harpe, E. J., **Hermes, J. J.**, Sullivan, D. J., & Winget, D. E., 2012, *ApJ*, 753, 158.
3. *"The shortest period detached binary white dwarf system,"* Kilic, M., Brown, W. R., Kenyon, S. J., Allende Prieto, C., Andrews, J., Kleinman, S. J., Winget, K. I., Winget, D. E., & **Hermes, J. J.**, 2011a, *MNRAS*, 413, L101.
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9. [“The First Six Outbursting Cool DA White Dwarf Pulsators,”](#) Bell, K. J., **Hermes, J. J.**, Montgomery, M. H., Winget, D. E., Gentile Fusillo, N. P., Raddi, R., & Gänsicke, B. T., 2017b, in 20th European White Dwarf Workshop, P.-E. Tremblay, B. Gänsicke, & T. Marsh, eds., Vol. 509 of *Astronomical Society of the Pacific Conference Series*, 303.
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6. [“GW Lib: a Unique Laboratory for White Dwarf Pulsations,”](#) Toloza, O., Gänsicke, B. T., **Hermes, J. J.**, Townsley, D. M., Szkody, P., Beuermann, K., Bildsten, L., de Martino, D., Godon, P., Henden, A. A., Hubeny, I., Knigge, C., Long, K. S., Marsh, T. R., Patterson, J., Schreiber, M. R., Sion, E. M., & Zorotovic, M., 2015, in 19th European Workshop on White Dwarfs, P. Dufour, P. Bergeron, & G. Fontaine, eds., Vol. 493 of *Astronomical Society of the Pacific Conference Series*, 253.
5. [“Ultra-Compact Binaries: eLISA Verification Sources,”](#) Kilic, M., Brown, W. R., & **Hermes, J. J.**, 2013, in *Astronomical Society of the Pacific Conference Series*, G. Auger, P. Binétruy, & E. Plagnol, eds., Vol. 467 of *Astronomical Society of the Pacific Conference Series*, 47.
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3. [“Limits of Perturbative Nonlinear Light Curve Analyses: the Case of G117-B15A,”](#) Montgomery, M. H., **Hermes, J. J.**, & Winget, D. E., 2010, in *American Institute of Physics Conference Series*, K. Werner & T. Rauch, eds., Vol. 1273 of *American Institute of Physics Conference Series*, 512–515.
2. [“A Status Report on a Planet Search Around White Dwarf Stars,”](#) **Hermes, J. J.**, Mullally, F., Winget, D. E., Montgomery, M. H., Miller, G. F., & Ellis, J. L., 2010, in *American Institute of Physics Conference Series*, K. Werner & T. Rauch, eds., Vol. 1273 of *American Institute of Physics Conference Series*, 446–449.
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Textbooks

2. [“Timing by Stellar Pulsations as an Exoplanet Discovery Method,”](#) Hermes, J. J., 2017, ArXiv e-prints.

Invited review to appear in 'Handbook of Exoplanets,' Springer Reference Works, edited by Hans J. Deeg and Juan Antonio Belmonte [Handbook of Exoplanets, 2018, Springer, in press](#)

1. Winget, D. E., **Hermes, J. J.**, Shawl, S. J., Ashman, K., & Hufnagel, B., 2011, We're Texas: Astronomy (Kendall Hunt).

Don Winget and I adapted an astronomy textbook for non-major undergraduates. I contributed a section at the end of each chapter localizing the subject matter to research being done at UT-Austin, and the textbook retails for significantly less than most introductory astronomy texts. [Amazon link](#), ISBN-10: 0757599192

Selected Scientific Interests

White dwarf stars; gravitational wave sources; merging compact binaries; stellar evolution; high-speed photometry; extremely low-mass ($\leq 0.30 M_{\odot}$) white dwarfs; precision determinations of stellar parameters in binary systems; planetary survival around post-main-sequence stars

Outreach and Teaching Experience

- Founding organizer and host: Astronomy on Tap Triangle (<https://twitter.com/aottriangle>)
- Co-supervision of graduate students Zach Vanderbosch (UT-Austin) & Ben Kaiser (UNC), undergraduates Brandon Castillo (UNC) and Stephen Fanale (UNC), and high school student Ayesha Darekar
- Outreach talk: Staunton River Star Party, 2017 October
- Outreach talk: CHAOS Chapel Hill Astronomical and Observational Society, 2016 March
- Outreach talks at *Astronomy Days*, North Carolina Museum of Natural Sciences, 2016 & 2017 January
- Outreach talk: National Space Academy careers event, Leicester, UK, 2013 November
- Outreach talks: Elm Grove Elementary School, Austin, TX, 2011 April
- **Instructor:** Hermes, AST 152M (upper-division undergraduate Stellar Astronomy laboratory)
- TA: Winget, AST 301 (undergraduate Introduction to Astronomy course); 6 sections over 4 terms
- TA: Montgomery, AST 210K (undergraduate Freshmen Research Initiative course); 2 terms
- TA: Yoachim, AST 392G (graduate student Observing Techniques course); 1 term

Selected Collaborators

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