

Jim Fuller

Curriculum Vitae

POSITION: Professor of Astronomy, California Institute of Technology

CONTACT:

California Institute of Technology
TAPIR 350-17
1200 E. California Boulevard
Pasadena, California 91125-0001 USA

Phone: (720) 840-9559
E-mail: jfuller@caltech.edu
Web: www.tapir.caltech.edu/~fuller/

RESEARCH INTERESTS:

I am interested in theoretical astrophysics, especially stellar and planetary systems. Much of my work focuses on magnetohydrodynamical processes within stars and planets. Applications include binary stellar evolution, tidal interactions, stellar and planetary structure, stellar rotation, stellar magnetism, asteroseismology, eruptive transients, and supernovae.

EDUCATION:

Ph.D., 2014	Cornell University	<i>Astronomy and Space Sciences</i> <i>Minor Field: Physics</i> <i>Ph.D. Advisor: Professor Dong Lai</i>
M.S., 2011	Cornell University	<i>Astronomy and Space Sciences</i>
B.A., 2008	Whitman College	<i>Physics-Astronomy</i>

RESEARCH EXPERIENCE:

2023-	Professor of Astronomy	California Institute of Technology
2017-2023	Assistant Professor of Astronomy	California Institute of Technology
2013-2017	DuBridge Postdoctoral Fellow	California Institute of Technology
2013-2017	KITP Postdoctoral Scholar	Kavli Institute for Theoretical Physics
2011-2013	NASA Earth and Space Sciences Fellow	Cornell University
2011	Graduate Fellow	Kavli Institute for Theoretical Physics
2009-2011	Research Assistant	Cornell University
2008-2009	First Year Graduate Fellow	Cornell University
2007-2008	Undergraduate Researcher	High Altitude Observatory

TEACHING EXPERIENCE:

2017-, Assistant Professor, Astronomy Department, California Institute of Technology. Classes taught: Ay 101, Ay 123, Ay 125, Ay 141, Ay 215, Ph 106a, Ph 136b.
2014-16, Guest Lecturer, (various), California Institute of Technology
2012, Guest Lecturer, Introduction to Astrophysics and Space Sciences, Cornell University
2009-2011, Teaching Assistant, Astronomy 101/102, Cornell University
2009, Completed course “Teaching and Learning Physics”, Cornell University
2006-2008, Teaching Assistant, Astronomy 177/178/179, Whitman College

AWARDS AND HONORS:

2018, Alfred P. Sloan Research Fellow
2017, Rose Hills Foundation Innovator award, Caltech
2014, Division of Astrophysics Thesis Prize Finalist
2012, Astronomical Society of New York Graduate Student Prize
2012, Cranson W. and Edna B. Shelley Award for Outstanding Research, Cornell University
2007, Outstanding REU Research Award, Laboratory for Atmospheric and Space Physics, University of Colorado

GRANTS AND FELLOWSHIPS:

2023, Co-I on NASA SSW grant, “Tidal Evolution of the Galilean Satellites”
2023, Co-PI on Caltech-JPL PDRDF grant, “Planetary Seismology in the Outer Solar System” (IAMS 101231)
2023, Co-PI on NSF-BSF grant, “Magnetic Dynamos of Spider Companion Stars” (BSF-2022175)
2022, PI on NSF AAG grant, “Binary Compact Objects and their Progenitors” (AST-2205974)
2021, PI on 3CPE grant, “The seismic and magnetic signatures of Saturn’s core”
2021, PI on NASA XRP grant, “The turning tide of exoplanet evolution,” (20-XRP20_2-0147)
2020, PI on XSEDE allocation, “Magnetohydrodynamic simulations of the Tayler instability in rotating stellar interiors,” 220k node hours, (AST200022 New)
2018, Co-PI on Heising-Simons grant, “Quickening heartbeats: measuring tidal orbital decay in eccentric young binaries” (Grant #2018-1036)
2018, Sloan Fellowship, (FG-2018-10515)
2018, PI on NASA ATP Grant, “Pre-supernova Outbursts” (80NSSC18K1017)
2017, PI on Hubble Space Telescope Theory Grant, “Pre-supernova properties of progenitors detected by HST” (HST-AR-15021.001-A)
2017, Co-PI on Heising-Simons grant, “Down but not out: the white dwarf survivors of low-luminosity thermonuclear supernovae” (Grant #2017-274)
2013, DuBridge Postdoctoral Fellowship, California Institute of Technology

2012, Co-I on Kepler GO proposal, “Heartbeat Stars: A New Class of Binary System with Extreme Periastron Brightenings and Tidally Excited Modes” (11-KEPLER11-0056)
2011, Graduate Fellowship, Kavli Institute for Theoretical Physics
2011, NASA Earth and Space Science Fellowship
2008, First Year Graduate Fellowship, Department of Astronomy, Cornell University
2004, William O. Douglas Fellowship, Whitman College

DIVERSITY AND OUTREACH:

“Sounds of the Stars: Journey to the Center of a Star”, AAVSO meeting (online), April 2022
Mentoring three students from local community colleges on summer research projects, 2020
“Sounds of the Stars”, Griffith Observatory Lecture, August 2020
“Sounds of the Stars: journey to the center of a star”, San Diego Astronomy Association, June 2020
Faculty sponsor of Caltech chapter of Towards a More Inclusive Astronomy (TaMIA), 2019-
“Sounds of the Stars”, Caltech Public Lecture, November 2019
“The Art of Succeeding in Science”, Stem3 Academy, Valley Glen, May 2018
“The Stellar Ultrasound: Journey to the Center of a Star”, Astronomy on Tap, Pasadena, January 2018

RECENT TALKS AND PRESENTATIONS:

*Includes science talks given in the last three years

“Carnivorous and Cannibalistic Stars”, UNSW seminar, Sydney, Australia, March 2024
“Drama Preceding the Deaths of Massive Stars”, Monash University colloquium, Melbourne, Australia, February 2024
“How Fast do Black Holes Spin?”, Otago University seminar, Dunedin, New Zealand, February 2024
“The Prevalence of Resonance”, UCLA colloquium, Los Angeles, January 2024
“Drama Preceding the Deaths of Massive Stars”, Tel Aviv University colloquium, Tel Aviv, Israel, June 2023
“Extraordinary Binaries”, Weizman Institute colloquium, Tel Aviv, Israel, June 2023
“Extraordinary Binaries”, Hebrew University colloquium, Jerusalem, Israel, June 2023
“The Magnetic Hearts of Stars”, IAU online colloquium, April 2023
“Drama Preceding the Deaths of Massive Stars”, MIAPP workshop, Munich, Germany, February 2023
“Astrophysical Insights from Asteroseismology”, Caltech colloquium, January 2023
“Big Developments in Little Stars”, KITP Blackboard Talk for White Dwarf Program (invited), November 2022

“The Secret Lives of Pulsating Stars”, Peter Eggleton 80th Birthday Conference, Cambridge, UK, August 2022

“Pulsations in Binary Stars”, KASC Conference (invited), Leuven, Belgium, July 2022

“The Spins of Massive Stellar Cores”, AAS Conference, Pasadena, June 2022

“Tidal Interactions and Orbital Evolution”, ISSI Workshop on Saturn’s Moons (invited), Bern, Switzerland, May 2022

“Drama preceding the deaths of massive stars”, Astronomy Seminar, Hebrew University (online), January 2022

“Drama preceding the deaths of massive stars”, Astronomy Seminar, Weizmann Institute (online), December 2021

“Surprising impacts of gravity waves”, Astronomy Colloquium, Indiana University (online), December 2021

“Angular momentum transport in stars”, KITP conference (invited), KITP, November 2021

“Surprising impacts of gravity waves”, DAMTP seminar, Cambridge University (online), October 2021

“Transport problems in stars”, KITP program talk, KITP, October 2021

“Surprising impacts of gravity waves”, Astronomy Colloquium, University of Alberta (online), April 2021

SELECTED PUBLICATIONS*:

*Includes peer-reviewed papers in which J. Fuller is in the first five authors

1. Tsuna, D., Matsumoto, T., Wu, S., **Fuller, J.**, 2024, “Bright supernova precursors by outbursts from massive stars with compact object companions”, accepted to *ApJ*
2. Wu, S., Dewberry, J., **Fuller, J.**, 2024, “Tidal migration of exoplanets around M dwarfs: frequency-dependent tidal dissipation”, *ApJ*, 963, 34
3. **Fuller, J.**, Guillot, T., Mathis, S., Murray, C., 2024, “Tidal dissipation in giant planets”, *Space Science Reviews*, 220, 22
4. Yamaguchi, N., El-Badry, K., **Fuller, J.**, et al., 2024, “Wide post-common envelope binaries containing ultramassive white dwarfs: evidence for efficient envelope ejection in massive asymptotic giant branch stars”, *MNRAS*, 527, 11719
5. Scherbak, P., **Fuller, J.**, 2024 “Ultra–short-period WD binaries are not undergoing strong tidal heating”, *ApJ*, 962, 185
6. **Fuller, J.**, Felce, C., 2024, “Super slowly spinning stars in close binaries”, *MNRAS Letters*, 527, 103
7. Felce, C., **Fuller, J.**, 2023, “Slowly rotating close binary stars in Cassini states”, *MNRAS*, 526, 6168

8. Van Beeck, J., Van Hoolst, T., Aerts, C., **Fuller, J.**, 2023, “Non-linear three-mode coupling of gravity modes in rotating slowly pulsating B stars: stationary solutions and modeling potential”, submitted to *A&A*
9. Kremer, K., **Fuller, J.**, Piro, L., Ransom, S., 2023, “Connecting the young pulsars in Milky Way globular clusters with white dwarf mergers and the M81 fast radio burst”, *MNRAS*, 525, 22
10. El-Badry, K., Shen, K., Chandra, V., Bauer, E., **Fuller, J.**, et al., 2023, “The fastest stars in the galaxy”, *The Open Journal of Astrophysics*, 6, 28
11. Rui, N., **Fuller, J.**, 2023, “Gravity waves in strong magnetic fields”, *MNRAS*, 523, 582
12. Ma, L., **Fuller, J.**, 2023, “Tidal spin-up of black hole progenitor stars”, *ApJ*, 952, 53
13. Hon, M., Huber, D., Rui, N., **Fuller, J.**, et al., 2023, “A close-in giant planet escapes engulfment by its star”, *Nature*, 618, 917
14. Ji, S., **Fuller, J.**, Lecoanet, D., 2023, “Magnetohydrodynamic simulations of the Tayler instability in rotating stellar interiors”, *MNRAS*, 521, 5372
15. Caiazzo, I., Burdge, K., Tremblay, P., **Fuller, J.**, 2023, “A rotating white dwarf shows different compositions on its opposite faces”, *Nature*, 620, 61
16. Mankovich, C., Dewberry, J., **Fuller, J.**, “Saturn’s seismic rotation revisited”, *PSJ*, 4, 59
17. Gao, Y., van Roestel, J., Green, M., **Fuller, J.**, et al., 2023, “Observable tertiary tides in TIC242132789”, 2023, *MNRAS*, 521, 2114
18. **Fuller, J.**, Mathis, S., 2023, “Linking the interiors and surfaces of magnetic stars”, *MNRAS*, 520, 5573
19. Lu, W., **Fuller, J.**, Quataert, E., 2023, “On rapid binary mass transfer -- I. Physical model”, *MNRAS*, 519, 1409
20. Van Reeth, T., Johnston, C., Southworth, J., **Fuller, J.**, et al., 2023, “Tidally perturbed gravity-mode pulsations in a sample of close eclipsing binaries”, *A&A*, 671, 121
21. Scherbak, P., **Fuller, J.**, 2023, “White dwarf binaries suggest a common envelope efficiency $\alpha \sim 1/3$ ”, *MNRAS*, 518, 3966
22. Behmard, A., Sevilla, J., **Fuller, J.**, 2023, “Planet engulfment signatures in twin stars”, *MNRAS*, 518, 5465

23. El Badry, K., Conroy, C., **Fuller, J.**, et al., 2022, “Magnetic braking saturates: evidence from the orbital period distribution of low-mass detached eclipsing binaries from ZTF”, *MNRAS*, 517, 4916
24. Wu, S., **Fuller, J.**, 2022, “Extreme mass loss in low-mass type Ib/c supernova progenitors”, *ApJ Letters*, 940, 27
25. Sevilla, J., Behmard, A., **Fuller, J.**, 2022, “Long-term lithium abundance signatures following planetary engulfment”, *MNRAS*, 516, 3354
26. Dewberry, J., Mankovich, C., **Fuller, J.**, 2022, “Impacts of zonal winds on planetary oscillations and Saturn ring seismology”, *MNRAS*, 516, 358
27. Wu, S., **Fuller, J.**, 2022, “Wave-driven outbursts and variability of low-mass supernova progenitors”, *ApJ*, 930, 119
28. Ginzburg, S., **Fuller, J.**, et al., 2022, “Slow convection and fast rotation in crystallization-driven white dwarf dynamos”, *MNRAS*, 514, 4111
29. Shi, Y., **Fuller, J.**, 2022, “Viscous and centrifugal instabilities of massive stars”, *MNRAS*, 513, 1115
30. Jayaraman, R., Handler, G., Rappaport, S., **Fuller, J.**, et al., 2022, “Tidally tilted pulsations in HD 265435, a subdwarf B star with a close white dwarf companion”, *ApJ Letters*, 928, 14
31. **Fuller, J.**, Lu, W., 2022, “The spins of compact objects born from helium stars in binary systems”, *MNRAS*, 511, 3951
32. Burdge, K., Marsh, T., **Fuller, J.**, et al., 2022, “A 62-minute orbital period black widow binary in a wide hierarchical triple”, *Nature*, 605, 41
33. Leung, S.C., Wu, S., **Fuller, J.**, 2021, “Wave-driven mass loss of stripped envelope massive stars: progenitor-dependence, mass ejection, and supernovae”, *ApJ*, 923, 41
34. Rui, N., **Fuller, J.**, 2021, “Astero seismic fingerprints of stellar mergers”, *MNRAS*, 229, 1618
35. Mankovich, C., **Fuller, J.**, 2021, “A diffuse core in Saturn revealed by ring seismology”, *Nature Astronomy*, 5, 1103
36. Caiazzo, I., Burdge, K., **Fuller, J.**, et al., 2021, “A highly magnetized and rapidly rotating white dwarf as small as the Moon”, *Nature*, 595, 39
37. van Roestel, J., Creter, L., Kupfer, T., Skody, P., **Fuller, J.**, et al., 2021, “A systematic search for outbursting AM CVn systems with the Zwicky Transient Facility”, *AJ*, 162, 113

38. Dewberry, J., Mankovich, C., **Fuller, J.**, Lai, D., Xu, W., 2021, “Constraining Saturn's interior with ring seismology: effects of differential rotation and stable stratification”, *PSJ*, 2, 198
39. Jiang, L., Tauris, T., Chen, W., **Fuller, J.**, 2021, “Novel model of an ultra-stripped supernova progenitor of a double neutron star”, *ApJ Letters*, 920, 36
40. Ma, L., **Fuller, J.**, 2021, “Orbital decay of short-period exoplanets via tidal resonance locking”, *ApJ*, 918, 16
41. Lu, W., **Fuller, J.**, et al., 2021, “The former companion of the hyper-velocity star S5-HVS1”, *MNRAS*, 503, 603
42. Leung, S., **Fuller, J.**, Nomoto, K., 2021, “Fast blue optical transients due to circumstellar interaction and the mysterious supernova SN 2018gep”, *ApJ*, 915, 80
43. Linial, I., **Fuller, J.**, Sari, R., 2021, “Partial stellar explosions—ejected mass and minimal energy”, *MNRAS*, 501, 4266
44. Wu, S., **Fuller, J.**, 2021, “A diversity of wave-driven pre-supernova outbursts”, *ApJ*, 906, 3
45. Yu, H., **Fuller, J.**, Burdge, K., 2021, “Tidally excited oscillations in hot white dwarfs”, *MNRAS*, 501, 1836
46. **Fuller, J.**, 2021, “Inverse tides in pulsating binary stars”, *MNRAS*, 501, 483
47. Burdge, K., Coughlin, M., **Fuller, J.**, et al., 2020, “An 8.8 minute orbital period eclipsing detached double white dwarf binary”, 2020, *ApJ Letters*, 905, 7
48. Burdge, K., Prince, T., **Fuller, J.**, et al., 2020, “A systematic search of Zwicky Transient Facility data for ultracompact binary LISA-detectable gravitational-wave sources”, *ApJ*, 905, 32
49. Cheng, S., **Fuller, J.**, Guo, Z., Lehman, H., Hambleton, K., 2020, “Detailed characterization of heartbeat stars and their tidally excited oscillations”, *ApJ*, 903, 122
50. O’Grady, A., Drout, M., Shappee, B., Bauer, E., **Fuller, J.**, 2020, “Cool, Luminous, and Highly Variable Stars in the Magellanic Clouds from ASAS-SN: Implications for Thorne-Żytkow Objects and Super-asymptotic Giant Branch Stars”, *ApJ*, 901, 135
51. Leung, S., **Fuller, J.**, 2020, “Hydrodynamic simulations of pre-supernova outbursts in red supergiants: asphericity and mass loss”, *ApJ*, 900, 99
52. **Fuller, J.**, Kurtz, D., Handler, G., Rappaport, S., 2020, “Tidally trapped pulsations in close binary systems”, *MNRAS*, 498, 5730

53. Li, G., Guo, Z., **Fuller, J.**, et al., 2020, “The effect of tides on near-core rotation: analysis of 35 Kepler γ Doradus stars in eclipsing and spectroscopic binaries”, *MNRAS*, 497, 4363
54. Yu, H., Weinberg, N., **Fuller, J.**, 2020, “Nonlinear tides in white dwarf binaries”, *MNRAS*, 496, 5482
55. Zhao, X., **Fuller, J.**, 2020, “Centrifugally Driven Mass Loss and Outbursts of Massive Stars”, *MNRAS*, 495, 249
56. Lainey, L., Gomez Casajus, L., **Fuller, J.**, et al., 2020, “Resonance locking in giant planets indicated by the rapid orbital expansion of Titan”, *Nature Astronomy*, 4, 1053
57. Kurtz, D., Handler, G., Rappaport, S., Saio, H., **Fuller, J.**, et al., 2020, “The single-sided pulsator CO Camelopardalis”, *MNRAS*, 494, 5118
58. Handler, G., Kurtz, D., Rappaport, S., Saio, H., **Fuller, J.**, et al., 2020, “Tidally Trapped Pulsations in HD 74423 discovered by TESS”, *Nature Astronomy*, 4, 684
59. Morozova, V., Piro, A., **Fuller, J.**, Van Dyk, S., 2020, “The influence of late-stage nuclear burning on red supergiant supernova light curves”, *ApJ Letters*, 891, 32
60. Veras, D., **Fuller, J.**, 2020, “The dynamical history of the evaporating or disrupted ice giant planet around white dwarf WD J0914+1914”, *MNRAS*, 492, 6059
61. Gossan, S., **Fuller, J.**, Roberts, L., 2020, “Wave heating from protoneutron star convection and the core-collapse supernova explosion mechanism”, *MNRAS*, 491, 5376
62. Jermyn, A., Tayar, J., **Fuller, J.**, 2020, “Differential rotation in convective envelopes: constraints from eclipsing binaries”, *MNRAS*, 491, 690
63. Veras, D., **Fuller, J.**, 2019, “Tidal circularization of gaseous planets orbiting white dwarfs”, *MNRAS*, 489, 2941
64. Burdge, K., **Fuller, J.**, et al., 2019, “Orbital decay in a 20 minute orbital period detached binary with a hydrogen poor low mass white dwarf”, *ApJ Letters*, 886, 12
65. Burdge, K., Coughlin, M., **Fuller, J.**, et al., 2019, “General relativistic orbital decay in the shortest period eclipsing binary system known”, *Nature*, 571, 528
66. **Fuller, J.**, Ma, L., 2019, “Most black holes are born very slowly rotating”, *ApJ Letters*, 881, 1
67. Guo, Z., **Fuller, J.**, et al., 2019, “KIC 4142768: an evolved Gamma Doradus/Delta Scuti hybrid pulsating eclipsing binary with tidally excited oscillations”, *ApJ*, 885, 46

68. Ma, L., **Fuller, J.**, 2019, “Angular momentum transport in massive stars and natal neutron star rotation rates”, *MNRAS*, 488, 4338
69. **Fuller, J.**, Piro, A., Jermyn, A., 2019, “Slowing the spins of stellar cores”, *MNRAS*, 485, 3661
70. Pablo, H., Shultz, M., **Fuller, J.**, et al., 2019, “ ϵ Lupi: measuring the heartbeat of a doubly-magnetic massive binary with BRITE-Constellation”, *MNRAS*, 488, 64
71. Zhang, M., **Fuller, J.**, Schwab, J., Foley, R., 2019, “The long-term evolution and appearance of type Iax supernova remnant stars”, *ApJ*, 872, 29
72. Kleiser, I., **Fuller, J.**, Kasen, D., 2018, “Helium giant stars as progenitors of rapidly fading Type Ibc supernovae”, *MNRAS Letters*, 481, 141
73. **Fuller, J.**, Ro, S., 2018, “Pre-supernova outbursts via wave heating in massive stars II: Hydrogen-poor stars”, *MNRAS*, 476, 1853
74. Luan, J., **Fuller, J.**, Quataert, E., 2018, “How Cassini can constrain tidal dissipation in Saturn”, *MNRAS*, 473, 5002
75. Van Reeth, T., Mombarg, J., Mathis, S., Tkachenko, A., **Fuller, J.**, et al., 2018, “Sensitivity of gravito-inertial modes to differential rotation in intermediate-mass main-sequence stars”, *A&A*, 618, A24
76. Hambleton, K., **Fuller, J.**, et al., 2018, “KIC 8164262: a heartbeat star showing tidally induced pulsations with resonant locking”, *MNRAS*, 473, 5165
77. **Fuller, J.**, Hambleton, K., Shporer, A., Isaacson, H., Thompson, S., 2017, “Accelerated tidal circularization via resonance locking in KIC 8164262”, *MNRAS Letters*, 472, 25
78. **Fuller, J.**, 2017, “Heartbeat stars, tidally excited oscillations, and resonance locking”, *MNRAS*, 472, 1538
79. **Fuller, J.**, 2017, “Pre-supernova outbursts via wave heating in massive stars - I. Red supergiants”, *MNRAS*, 470, 1642
80. Zimmerman, M., Thompson, S., Mullally, F., **Fuller, J.**, et al., 2017, “The Pseudosynchronization of Binary Stars Undergoing Strong Tidal Interactions”, *ApJ*, 846, 147
81. Vick, M., Lai, D., **Fuller, J.**, 2017, “Tidal dissipation and evolution of white dwarfs around massive black holes: an eccentric path to tidal disruption,” *MNRAS*, 468, 2296
82. Guo, Z., Gies, D., **Fuller, J.**, 2017, “Tidally induced pulsations in Kepler eclipsing binary KIC 3230227”, *ApJ*, 834, 59

83. Pablo, H., Richardson, N., **Fuller, J.**, et al., 2017, “The most massive heartbeat: an in-depth analysis of ι Orionis”, *MNRAS*, 467, 2494
84. Lecoanet, D., Vasil, G., **Fuller, J.**, Cantiello, M., Burns, K., 2017, “Conversion of internal gravity waves into magnetic waves”, *MNRAS*, 466, 2181
85. de Wit, J., Lewis, N., Knutson, H., **Fuller, J.**, 2017, “Planet-induced Stellar Pulsations in HAT-P-2's Eccentric System”, *ApJ Letters*, 836, 17
86. Hambleton, K., Kurtz, D., Prsa, A., Quinn, S., **Fuller, J.**, et al., 2016, “KIC 3749404: a heartbeat star with rapid apsidal advance indicative of a tertiary component”, *MNRAS*, 463, 1199
87. **Fuller, J.**, Luan, J., Quataert, E., 2016, “Resonance locking as the source of rapid tidal migration in the Jupiter and Saturn moon systems”, *MNRAS*, 458, 3867
88. Shporer, A., **Fuller, J.**, et al., 2016, “Radial velocity monitoring of Kepler heartbeat stars”, *ApJ*, 829, 34
89. Cantiello, M., **Fuller, J.**, Bildsten, L., 2016, “Astero seismic signatures of evolving internal stellar magnetic fields”, *ApJ*, 824, 14
90. Stello, D., Cantiello, M., **Fuller, J.**, García, R., Huber, D., 2016, “Suppression of quadrupole and octupole modes in red giants observed by Kepler”, *PASA*, 33, 11
91. Stello, D., Cantiello, M., **Fuller, J.**, García, R., Bildsten, L., Huber, D., Bedding, T., and Silva Aguirre, V., 2016, “A prevalence of dynamo-generated magnetic fields in the cores of intermediate-mass stars”, *Nature*, 529, 364
92. **Fuller, J.**, Cantiello, M., Stello, D., García, R., and Bildsten, L., 2015, “Astero seismology can reveal strong internal magnetic fields in red giant stars”, *Science*, 350, 423
93. **Fuller, J.**, Cantiello, M., Lecoanet, D., and Quataert, E., 2015, “The spin rate of pre-collapse stellar cores: wave-driven angular momentum transport in massive stars”, *ApJ*, 810, 101
94. Belyaev, M., Quataert, E., **Fuller, J.**, 2015, “The properties of g-modes in layered semiconvection”, *MNRAS*, 452, 2700
95. **Fuller, J.**, Ott, C., 2015, “Dark matter-induced collapse of neutron stars: a possible link between fast radio bursts and the missing pulsar problem”, *MNRAS Letters*, 450, 71
96. **Fuller, J.**, Klion, H., Abdikamalov, E., Ott, C., 2015, “Supernova seismology: gravitational wave signatures of rapidly rotating core collapse”, *MNRAS*, 450, 414
97. **Fuller, J.**, Lecoanet, D., Cantiello, M., and Brown, B., 2014, “Angular momentum transport via internal gravity waves in evolving stars”, *ApJ*, 796, 17

98. **Fuller, J.**, 2014, “Saturn ring seismology: Evidence for stable stratification in the deep interior of Saturn”, *Icarus*, 242, 283
99. Borkovits, T., Derekas, A., **Fuller, J.**, et al., 2014, “HD 183648: a Kepler eclipsing binary with anomalous ellipsoidal variations and a pulsating component”, *MNRAS*, 443, 3068
100. **Fuller, J.**, and Lai, D., 2014, “Dynamical tides in compact white dwarf binaries: influence of rotation”, *MNRAS*, 444, 3488
101. **Fuller, J.**, Lai, D., and Storch, N., 2014, “Non-radial oscillations in rotating giant planets with solid cores: application to Saturn and its rings”, *Icarus*, 231, 34
102. **Fuller, J.**, and Lai, D., 2013, “Dynamical tides in compact white dwarf binaries: helium core white dwarfs, tidal heating, and observational signatures”, *MNRAS*, 430, 274
103. **Fuller, J.**, Derekas, A., Borkovits, T., Huber, D., Bedding, T., and Kiss, L., 2013, “Tidally induced oscillations and orbital decay in compact triple star systems”, *MNRAS*, 429, 2425
104. **Fuller, J.**, and Lai, D., 2012, “Tidal novae in compact binary white dwarfs”, *ApJL*, **756**, 17
105. **Fuller, J.**, and Lai, D., 2012, “Dynamical tides in compact white dwarf binaries: tidal synchronization and dissipation”, *MNRAS*, **421**, 426
106. **Fuller, J.**, and Lai, D., 2012, “Dynamical tides in eccentric binaries and tidally-excited stellar pulsations in *Kepler* KOI-54”, *MNRAS*, **420**, 3126
107. **Fuller, J.**, and Lai, D., 2011, “Tidal excitation of oscillation modes in compact white dwarf binaries: I. Linear theory”, *MNRAS*, **412**, 1331
108. **Fuller, J.**, and Gibson, S., 2009, “A survey of coronal cavity density profiles”, *ApJ*, **700**, 1205
109. **Fuller, J.**, Gibson, S., de Toma, G., and Fan, Y., 2008, “Observing the unobservable? Modeling coronal cavity densities”, *ApJ*, **678**, 515