



## CURRICULUM VITAE

### **Eric L. Sandquist**

Department of Astronomy  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1308  
(619) 594-2694  
[esandquist@sdsu.edu](mailto:esandquist@sdsu.edu)  
esandquist.sdsu.edu

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### EDUCATION

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| May 1991<br>B.A.  | University of Virginia<br>Physics                 |
| June 1993<br>M.S. | University of California, Santa Cruz<br>Astronomy |
| 1996<br>Ph.D.     | University of California, Santa Cruz<br>Astronomy |

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### TEACHING POSITIONS

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|---|-----------------------------------|
| Summer 1999<br>Northwestern University                | Lecturer<br>Physics and Astronomy |
| Fall 1999 – Summer 2004<br>San Diego State University | Assistant Professor<br>Astronomy  |
| Fall 2004 – Summer 2009<br>San Diego State University | Associate Professor<br>Astronomy  |
| Fall 2009 – present<br>San Diego State University     | Professor<br>Astronomy            |

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## PROFESSIONAL GROWTH

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**Refereed Journal Articles** (Student co-authors are underlined. Number of citations to the article and estimated percentage contribution are indicated in brackets. Impact factors for the journals are listed at the end of this document.)

1. **Sandquist, E. L.**, Buckner, A. J., Shetrone, M. D. Barden, S. C., Pilachowski, C. P., Harmer, D., Mathieu, R., Meibom, S., Frandsen, S., & Orosz, J. A. (2023). Evolved Eclipsing Binaries and the Age of the Open Cluster NGC 752, *The Astronomical Journal*, 165, 6 (32 pp). [1; 80%]
2. Morales, L. M., **Sandquist, E. L.**, Schaefer, G. H., Farrington, C. D., Klement, R., Bedin, L. R., Libralato, M., Malavolta, L., Nardiello, D., Orosz, J. A., Monnier, J. D., Kraus, S., Le Bouquin, J.-B., Anugu, N., ten Brummelaar, T., Davies, C. L., Ennis, J., Gardner, T., & Lanthermann, C. (2022). The Interferometric Binary Cnc in Praesepe: Precise Masses and Age, *The Astronomical Journal*, 164, 34 (22 pp). [1; 50%]
3. Brogaard, K., Grundahl, F., **Sandquist, E. L.**, Slumstrup, D., Jensen, M. L., Thomsen, J. B., Jørgensen, J. H., Larsen, J. R., Bjørn, S. T., Sørensen, C. T. G., Bruntt, H., Arentoft, T., Frandsen, S., Jessen-Hansen, J., Orosz, J. A., Mathieu, R., Geller, A., Ryde, N., Stello, D., Meibom, S., & Platais, I. (2021). Age and helium content of the open cluster NGC 6791 from multiple eclipsing binary members. III. Constraints from a subgiant. *Astronomy & Astrophysics*, 649, 178 (9 pp). [3; 3%]
4. **Sandquist, E. L.**, Latham, D. W., Mathieu, R. D., Leiner, E., Vanderburg, A., Stello, D., Orosz, J. A., Bedin, L. R., Libralato, M., Malavolta, L., & Nardiello, D. (2020). The K2 M67 Study: Precise Mass for a Turnoff Star in the Old Open Cluster M67, *The Astronomical Journal*, 161, 59 (31 pp). [5; 90%]
5. Knudstrup, E., Grundahl, F., Brogaard, K., Slumstrup, D., Orosz, J. A., **Sandquist, E. L.**, Jessen-Hansen, J., Lund, M. N., Arentoft, T., Tronsgaard, R., Yong, D., Frandsen, S., & Bruntt, H. (2020). Extremely precise age and metallicity of the open cluster NGC 2506 using detached eclipsing binaries, *Monthly Notices of the Royal Astronomical Society*, 499, 1312. (27 pp) [4; 5%]
6. **Sandquist, E. L.**, Stello, D., Arentoft, T., Brogaard, K., Grundahl, F., Vanderburg, A., Hedlund, A., DeWitt, R., Ackerman, T. R., Aguiar, M., Buckner, A. J., Juarez, C., Ortiz, A. J., Richarte, D., Rivera, D. I. & Schlapfer, L. (2020). Variability in the Massive Open Cluster NGC 1817 from K2: A Rich Population of Asteroseismic Red Clump, Eclipsing Binary, and Main Sequence Pulsating Stars, *The Astronomical Journal*, 159, 96. (20 pp.) [4; 70%]
7. Brogaard, K., Christiansen, S. M., Grundahl, F., Miglio, A., Izzard, R. G., Tauris, T. M., **Sandquist, E. L.**, VandenBerg, D. A., Jessen-Hansen, J., Arentoft, T., Bruntt, H., Frandsen, S., Orosz, J. A., Feiden, G. A., Mathieu, R., Geller, A., Shetrone, M., Ryde, N., Stello, D., Platais, I., & Meibom, S. (2018). The blue straggler V106 in NGC 6791: a prototype progenitor of old single giants masquerading as young, *Monthly Notices of the Royal Astronomical Society*, 481, 5062 (10 pp). [17; 2%]
8. **Sandquist, E. L.**, Mathieu, R. D., Quinn, S. N., Pollack, M. L., Latham, D. W., Brown, T. M., Esselstein, R., Aigrain, S., Parviainen, H., Vanderburg, A., Stello, D., Somers, G., Pinsonneault, M. H., Tayar, J., Orosz, J. A., Bedin, L. R., Libralato, M., Malavolta, L., & Nardiello, D. (2018) The K2 M67 Study; A Curiously Young Star in an Eclipsing Binary in an Old Open Cluster, *The Astronomical Journal*, 155, 152 (18 pp). [9; 75%]
9. Arentoft, T., Brogaard, K., Jessen-Hansen, J., Silva Aguirre, V., Kjeldsen, H., Mosumgaard, J. R., & **Sandquist, E. L.** (2017). Convective-core Overshoot and Suppression of Oscillations: Constraints from Red Giants in NGC 6811, *The Astrophysical Journal*, 838, 115 (16 pp). [15, 5%]
10. Stello, D., Vanderburg, A., Casagrande, L., Gilliland, R., Silva Aguirre, V., **Sandquist, E.**, Leiner, E., Mathieu, R., & Soderblom, D. R. (2016). The K2 M67 Study: Revisiting Old Friends with K2 Reveals Oscillating Red Giants in the Old Open Cluster M67, *The Astrophysical Journal*, 832, 133 (8 pp). [60, 5%]
11. Leiner, E., Mathieu, R. D., Stello, D., Vanderburg, A., & **Sandquist, E.** (2016). The K2 M67 Study: An Evolved Blue Straggler in M67 from K2 Mission Asteroseismology, *The Astrophysical Journal Letters*, 832, L13 (7 pp). [23, 5%]
12. Bavarsad, E. A., **Sandquist, E. L.**, Shetrone, M. D., & Orosz, J. A. (2016). The Detached Eclipsing Binary KV 29 and the Age of the Open Cluster M11, *The Astrophysical Journal*, 831, 48 (14 pp). [7, 40%]
13. **Sandquist, E. L.**, Jessen-Hansen, J., Shetrone, M. D., Brogaard, K., Meibom, S., Leitner, M., Stello, D., Bruntt, H., Antoci, V., Orosz, J. A., Grundahl, F., & Frandsen, S. (2016). The Age and Distance of the Kepler Open Cluster NGC 6811 from an Eclipsing Binary, Turnoff Star Pulsation, and Giant Asteroseismology, *The Astrophysical Journal*, 831, 11 (36 pp). [35, 80%]

14. Miglio, A., Chaplin, W. J., Brogaard, K., Lund, M. N., Mosser, B., Davies, G. R., Handberg, R., Milone, A. P., Marino, A. F., Bossini, D., Elsworth, Y. P., Grundahl, F., Arentoft, T., Bedin, L. R., Campante, T. L., Jessen-Hansen, J., Jones, C. D., Kuszlewicz, J. S., Malavolta, L., Nascimbeni, V., & **Sandquist, E. L.** (2016). Detection of solar-like oscillations in relics of the Milky Way: asteroseismology of K giants in M4 using data from the NASA K2 mission, *Monthly Notices of the Royal Astronomical Society*, 461, 760-765. [53, 1%]
15. Brogaard, K., Jessen-Hansen, J., Handberg, R., Arentoft, T., Frandsen, S., Grundahl, F., Bruntt, H., **Sandquist, E. L.**, Miglio, A., Beck, P. G., Thygesen, A. O., Kjærgaard, K. L., & Haugaard, N. A. (2016). Testing asteroseismic scaling relations using eclipsing binaries in star clusters and the field, *Astronomische Nachrichten*, 337, 793-798. [37, 1%]
16. Brewer, L. N., **Sandquist, E. L.**, Mathieu, R. D., Milliman, K., Geller, A. M., Jeffries, M. W., Jr., Orosz, J. A., Brogaard, K., Platais, I., Bruntt, H., Grundahl, F., Stello, D., & Frandsen, S. (2016). Determining the Age of the Kepler Open Cluster NGC 6819 With a New Triple System and Other Eclipsing Binary Stars, *The Astronomical Journal*, 151, 66 (20 pp). [23, 30%]
17. Jeffries, M. W., Jr., **Sandquist, E. L.**, Mathieu, R. D., Geller, A. M., Orosz, J. A., Milliman, K. E., Brewer, L. N., Platais, I., Brogaard, K., Grundahl, F., Frandsen, S., Dotter, A., & Stello, D. (2013). WOCS 40007: A Detached Eclipsing Binary near the Turnoff of the Open Cluster NGC 6819, *The Astronomical Journal*, 146, 58 (20 pp). [36, 20%]
18. **Sandquist, E. L.**, Shetrone, M., Serio, A. W., & Orosz, J. (2013). Analysis of Detached Eclipsing Binaries near the Turnoff of the Open Cluster NGC 7142, *The Astronomical Journal*, 146, 40 (16 pp). [14, 70%]
19. Krogsrud, D., **Sandquist, E. L.**, & Kato, T. (2013). The Curious Radial Distribution of Horizontal Branch Stars in NGC 6441, *The Astrophysical Journal Letters*, 767, L27 (5 pp). [2, 40%]
20. **Sandquist, E. L.**, Mathieu, R. D., Brogaard, K., Meibom, S., Geller, A. M., Orosz, J. A., Milliman, K. E., Jeffries, Jr., M. W., Brewer, L. N., Platais, I., Grundahl, F., Bruntt, H., Frandsen, S., & Stello, D. (2013). A Long-Period Totally Eclipsing Binary Star at the Turnoff of the Open Cluster NGC 6819 Discovered with *Kepler*, *The Astrophysical Journal*, 762, 58 (14 pp). [42, 60%]
21. Brogaard, K., Vandenberg, D. A., Bruntt, H., Grundahl, F., Frandsen, S., Bedin, L. R., Milone, A. P., Dotter, A., Feiden, G. A., Stetson, P. B., **Sandquist, E. L.**, Miglio, A., Stello, D., & Jessen-Hansen, J. (2012). Age and helium content of the open cluster NGC 6791 from multiple eclipsing binary members. II. Age dependencies and new insights, *Astronomy & Astrophysics*, 543, A106 (17 pp). [143, 5%]
22. **Sandquist, E. L.**, Serio, A. W., & Shetrone, M. (2011). Variable Stars in the Open Cluster NGC 7142, *The Astronomical Journal*, 142, 194-210. [9, 50%]
23. Talamantes, A., **Sandquist, E. L.**, Clem, J. L., Robb, R. M., Balam, D. D., & Shetrone, M. (2010). Bright Variable Stars in NGC 6819: An Open Cluster in the Kepler Field, *The Astronomical Journal*, 140, 1268-1281. [20, 50%]
24. **Sandquist, E. L.**, Gordon, M., Levine, D., & Bolte, M. (2010). A Re-evaluation of the Evolved Stars in the Globular Cluster M13, *The Astronomical Journal*, 139, 2374-2409. [31, 70%]
25. Davenport, J. R. A. & **Sandquist, E. L.** (2010). Death of a Cluster: the Destruction of M67 as seen by SDSS, *The Astrophysical Journal*, 711, 559-572. [27, 20%]
26. **Sandquist, E. L.** & Hess, J. M. (2008). Evolved Stars in the Core of the Massive Globular Cluster NGC 2419, *The Astronomical Journal*, 2259-2285. [21, 70%]
27. Vargas Álvarez, C. A. & **Sandquist, E. L.** (2007). Evolved Stars in the Galactic Globular Cluster M55 (NGC 6809), *The Astronomical Journal*, 134, 825-834. [11, 10%]
28. Fekadu, N., **Sandquist, E. L.**, & Bolte, M. (2007). Photometry of the Globular Cluster NGC 5466: Red Giants and Blue Stragglers, *The Astrophysical Journal*, 663, 277-295. [14, 30%]
29. Willems, B., Taam, R. E., Kolb, U., Dubus, G. L., & **Sandquist, E. L.** (2007). Theoretical Orbital Period Distributions of Cataclysmic Variables above the Period Gap: Effects of Circumbinary Disks, *The Astrophysical Journal*, 657, 465-481. [18, 5%]
30. **Sandquist, E. L.** & Martel, A. R. (2006). A Robust Test of Evolution near the Tip of the Red Giant Branch and Missing Giants in NGC 2808, *The Astrophysical Journal Letters*, 654, L65-L68. [17, 95%]
31. Warren, S. R., **Sandquist, E. L.**, & Bolte, M. (2006). The Blue Straggler Population of the Globular Cluster M5: Comparison with M3, *The Astrophysical Journal*, 648, 1026-1036. [21, 20%]

32. **Sandquist, E. L.** (2006). New Eclipsing Variables in the Field of M67, *Information Bulletin on Variable Stars*, 5679, 1. [3, 100%]
33. **Sandquist, E. L.** (2005). Blue Stragglers in Low-Luminosity Star Clusters, *The Astrophysical Journal Letters*, 635, L73-L76. [21, 100%]
34. Willems, B., Kolb, U., **Sandquist, E. L.**, Taam, R. E., & Dubus, G. (2005). Angular Momentum Losses and the Orbital Period Distribution of Cataclysmic Variables below the Period Gap: Effects of Circumbinary Disks", *The Astrophysical Journal*, 635, 1263-1280. [49, 20%]
35. Hargis, J. R., **Sandquist, E. L.**, & Bradstreet, D. H. (2005). Time-Series Ensemble Photometry and the Search for Variable Stars in the Open Cluster M11, *The Astronomical Journal*, 130, 2824-2837. [14, 10%]
36. Pollard, D. L., **Sandquist, E. L.**, Hargis, J. R., & Bolte, M. (2004). The Unusual Luminosity Function of the Globular Cluster M10, *The Astrophysical Journal*, 628, 729-737. [16, 40%]
37. Clark, L. L., **Sandquist, E. L.**, & Bolte, M. (2004). The Blue Straggler and Main-Sequence Binary Population of the Low-Mass Globular Cluster Palomar 13, *The Astronomical Journal*, 128, 3019-3033. [40, 30%]
38. **Sandquist, E. L.** & Bolte, M. (2004). Exploring the Upper Red Giant and Asymptotic Giant Branches: The Globular Cluster M5, *The Astrophysical Journal*, 611, 323-337. [29, 95%]
39. Hargis, J. R., **Sandquist, E. L.**, & Bolte, M. (2004). The Luminosity Function and Color-Magnitude Diagram of the Globular Cluster M12, *The Astrophysical Journal*, 608, 243-260. [22, 20%]
40. **Sandquist, E. L.** (2004). A high relative-precision colour-magnitude diagram of M67, *Monthly Notices of the Royal Astronomical Society*, 347, 101-118. [86, 100%]
41. **Sandquist, E. L.** & Shetrone, M. D. (2003). S986 in M67: A Totally-Eclipsing Binary at the Cluster Turnoff, *The Astronomical Journal*, 126, 2954-2962. [14, 60%]
42. Taam, R. E., **Sandquist, E. L.** & Dubus, G. (2003). Cataclysmic Variable Evolution with Circumbinary Disks, *The Astrophysical Journal*, 592, 1124-1136. [34, 60%]
43. **Sandquist, E. L.** & Shetrone, M. D. (2003). Time-Series Photometry of M67: W UMa Systems, Blue Stragglers, and Related Systems, *The Astronomical Journal*, 125, 2173-2187. [52, 95%]
44. **Sandquist, E. L.**, Latham, D. W., Shetrone, M. D., & Milone, A. A. E. (2003). The Blue Straggler RS CVn Star S1082 in M67: A Detailed Light Curve and the Possibility of a Triple, *The Astronomical Journal*, 125, 810-824. [56, 60%]
45. **Sandquist, E. L.**, Dokter, J. J., Lin, D. N. C., & Mardling, R. A. (2002). A Critical Examination of Li Pollution and Giant Planet Consumption by a Host Star, *The Astrophysical Journal*, 572, 1012-1023. [65, 40%]
46. Shetrone, M. D. & **Sandquist, E. L.** (2000). Spectroscopy of Blue Stragglers and Turnoff Stars in M67 (NGC 2682), *The Astronomical Journal*, 120, 1913-1924. [59, 50%]
47. **Sandquist, E. L.** (2000). A Catalog of Helium Abundance Indicators from Globular Cluster Photometry, *Monthly Notices of the Royal Astronomical Society*, 313, 571-586. [36, 100%]
48. Langer, G. E., Bolte, M., & **Sandquist, E.** (2000). Globular Cluster Giant Branch Luminosity Functions: 'Extra Stars' and 'Deep Mixing', *The Astrophysical Journal*, 529, 936-945. [16, 20%]
49. **Sandquist, E. L.**, Taam, R. E., & Burkert, A. (2000). On the Formation of Helium Double Degenerate Stars and Pre-Cataclysmic Variables, *The Astrophysical Journal*, 533, 984-997. [79, 80%]
50. Shetrone, M. D., Smith, G. H., Briley, M. M., **Sandquist, E.**, & Kraft, R. P. (1999.) CN, CH, and NH Band Strengths of Metal-Poor Cluster and Field Red Giants, *Publications of the Astronomical Society of the Pacific*, 111, 1115-1123. [12, 2%]
51. **Sandquist, E. L.**, Bolte, M., Langer, G. E., Hesser, J. E., & Mendes de Oliveira, C. (1999). Wide-Field CCD Photometry of the Globular Cluster M30, *The Astrophysical Journal*, 518, 262-283. [30, 90%]
52. **Sandquist, E. L.**, Taam, R. E., Lin, D. N. C., & Burkert, A. (1998). Planet Consumption and Stellar Metallicity Enhancements, *The Astrophysical Journal Letters*, 506, L65-L68. [54, 80%]
53. **Sandquist, E. L.**, Taam, R. E., Chen, X., Bodenheimer, P., & Burkert, A. (1998). Double Core Evolution X. Through the Envelope Ejection Phase, *The Astrophysical Journal*, 500, 909-922. [165, 70%]
54. **Sandquist, E. L.**, Bolte, M., & Hernquist, L. (1998). Composition Mixing During Blue Straggler Formation and Evolution", *The Astrophysical Journal*, 477, 335-345. [38, 80%]
55. **Sandquist, E. L.**, Bolte, M., Stetson, P. B., & Hesser, J. E. (1996). CCD Photometry of the Globular Cluster M5. I. The Color-Magnitude Diagram and Luminosity Functions, *The Astrophysical Journal*, 470, 910-952. [137, 80%]

### Refereed Book Chapters

1. Taam, R. E. & Sandquist, E. L. (2000). Common Envelope Evolution of Massive Binary Stars, *Annual Review of Astronomy and Astrophysics*, 38, 111-140. [249, 20%; reviewed by book editor]

### Edited Non-refereed Journal Articles

1. Holt, W., Tucker, G., Buckner, A. J. & Sandquist, E. L. (2019). Discovery of Two Faint White Dwarf Candidates in Open Cluster NGC 2516, *Research Notes of the American Astronomical Society*, 3, 49 (2 pp.) [1; 10%]
2. Buckner, A. J. & Sandquist, E. L. (2018). Discovery of a White Dwarf Main-sequence Binary in Open Cluster NGC 752, *Research Notes of the American Astronomical Society*, 2, 151 (2 pp.) [30%]

### Non-refereed Proceedings

1. Brogaard, K., Sandquist, E., Jessen-Hansen, J., Grundahl, F., & Frandsen, S. (2015). Exploiting the Open Clusters in the Kepler and CoRoT Fields, in *Astrophysics and Space Science Proceedings*, 39, *Asteroseismology of Stellar Populations in the Milky Way*, eds. A. Miglio, L. Girardi, P. Eggenberger, and J. Montalbán (Switzerland, Springer), 51-58. [11 cites; 10%]
2. de Marco, O., Sandquist, E. L., Mac Low, M.-M., Herwig, F., & Taam, R. E. (2003). Wolf-Rayet Central Stars and the Binary Evolution Channel, in *Revista Mexicana de Astronomía y Astrofísica (Serie de Conferencias)*, 18, *The Eighth Texas-Mexico Conference on Astrophysics*, eds. M. Reyes-Ruiz and E. Vázquez-Semadeni (Mexico City, IAUNAM), 24-30. [25 cites; 5%]
3. de Marco, O., Sandquist, E. L., Mac Low, M.-M., Herwig, F., & Taam, R. E. (2003). Of Wolf-Rayet Central Stars and Common Envelopes, in *Revista Mexicana de Astronomía y Astrofísica (Serie de Conferencias)*, 15, *Winds, Bubbles, and Explosions: A Conference to Honor John Dyson*, eds. S. J. Arthur and W. J. Henney (Mexico City, IAUNAM), 34-37. [8 cites; 5%]
4. Sandquist, E. L., Dokter, J. J., Lin, D. N. C., & Mardling, R. A. (2003). An Examination of Li Pollution and Giant Planet Consumption by a Host Star, in *ASP Conference Series*, 294, *Scientific Frontiers in Research on Extrasolar Planets*, eds. D. Deming and S. Seager (San Francisco, ASP), 141-144.
5. Sandquist, E. & Dokter, J. (2000). Polluting Stars During Planet Formation, in *SDSU/Compaq Computational Science Meeting*, eds. M. Boninsegni, J. E. Castillo, W. A. Root, and D. R. Short, 19-22.
6. Taam, R. E. & Sandquist, E. (1998). Hydrodynamical Studies of Common Envelope Evolution, in *ASP Conference Series*, 138, *The 1997 Pacific Rim Conference on Stellar Astrophysics*, eds. K. L. Chan, K. S. Cheng, and H. P. Singh (San Francisco, ASP), 349-357.
7. Sandquist, E., Bolte, M., and Stetson, P. (1996). The Composition and Stellar Populations of the Globular Cluster M5, in *ASP Conference Series*, 92, *Formation of the Galactic Halo... Inside and Out*, ed. H. Morrison and A. Sarajedini (San Francisco, ASP), 293-296.

### Works-In-Progress

1. Lam, R., Sandquist, E. L., Schaefer, G. H., Farrington, C. D., Monnier, J. D., Anugu, N., Lanthermann, C., Klement, R., Ennis, J., Setterholm, B. R., Gardner, T., Kraus, S., Davies, C. L., & Orosz, J. A., (2022, submitted). Precise Age for the Binary Star System 12 Com in the Coma Berenices Cluster, *American Astronomical Society Journals*.

### Funded Research Grants

1. \$401,369 – “Mass and Age Standard Stars --- Studying Timing Reliability in Cluster Territory (MASS-STRICT)”, Principal Investigator, National Science Foundation, 07/15/2018 – 06/30/2023
2. \$49,999 – “The Open Cluster NGC 1817: A Meeting of Asteroseismology, Stellar Pulsation, and Eclipsing Binaries”, Principal Investigator (co-Investigators Torben Arentoft, Karsten Brogaard, Frank Grundahl, Dennis Stello), National Aeronautics and Space Administration, 02/01/2017 – 09/30/2019
3. \$77,609 - “Precision Star Ages using Detached Eclipsing Binaries in the Kepler Open Star Clusters”, Principal Investigator, National Aeronautics and Space Administration, 01/15/2013 – 12/15/2015
4. \$74,185 – “Improved Ages from Eclipsing Binaries in Open Star Clusters NGC 6791 and NGC 6819”, Principal Investigator, National Aeronautics and Space Administration, 01/15/2012 – 07/14/2014

5. \$74,457 – “Age-Sensitive Detached Eclipsing Binaries in Open Star Clusters NGC 6791 and NGC 6819”, Principal Investigator, National Aeronautics and Space Administration, 01/15/2011 - 01/14/2013
6. \$294,051 – “ARRA: Precise Ages for Open Star Clusters from Known Detached Eclipsing Binaries”, Principal Investigator, National Science Foundation, 09/01/2009 – 09/30/2013
7. \$225,213 – “Collaborative Research: Stellar Physics from Cluster-Wide Samples in Globular Star Clusters”, Principal Investigator (collaborator Michael Bolte), National Science Foundation, 07/15/2005 – 06/30/2010
8. \$379,640 – “Transforming Mount Laguna Observatory into a Regional Astronomical Research Facility”, co-Principal Investigator (Paul B. Etzel lead, with Allen W. Shafter, Jerome Orosz, William F. Welsh), National Science Foundation (Program for Research and Education with Small Telescopes; PREST), 2005
9. \$140,000 – “Acquisition of Computer Infrastructure for the SDSU Computational Science Research Center”, Contributor (PIs Andrew L. Cooksy, Jose E. Castillo, John J. Love), National Science Foundation (Major Research Instrumentation), 2002
10. \$170,588 – “Collaborative Research: Fundamental Stellar Physics from Large-Sample Globular Cluster Photometry”, Principal Investigator (collaborator Michael Bolte), National Science Foundation, 07/01/2001 - 12/05/2005
11. \$2,000 – “Polluting Stars during Planet Formation”, Principal Investigator, San Diego State University (Research, Scholarship, and Creative Activity Award), 2000

#### **Funded Training Grants**

1. \$23,446 – “Establishing a Diverse Community of Expert Rubin Observatory Users throughout the California State University System”, Co-Investigator, National Science Foundation (subcontract from Cal Poly SLO; PI Louise Edwards), 07/01/2024-6/30/2025
2. \$2,700 – “Research: Crashes of Stars”, Principal Investigator, San Diego State University (Summer Undergraduate Research Program – student Tiffany Shumack), 05/21/2018 - 09/17/2018
3. \$278,432 - “California State University Undergraduate Research Experiences (CSUURE) in Astronomy”, Principal Investigator, National Science Foundation, 07/01/2009 – 06/30/2013
4. \$278,385 - “California State University Undergraduate Research Experiences (CSUURE) in Astronomy”, Principal Investigator (co-PI Ron Angione), National Science Foundation, 04/01/2005 – 03/31/2010

#### **Grant Proposals in Review**

1. “Southern California Center for Education in Astronomical Data Science and Visualization”, Collaborator (PI: Bahram Mobasher, UCR), California Education Learning Lab

#### **Unfunded Grant Proposals**

1. \$345,929 - “Mass and Age Standard Stars --- Studying Timing Reliability in Cluster Territory (MASS-STRICT)”, Principal Investigator, National Science Foundation, 11/15/2016
2. \$355,908 - “Precision Star Clocks: Binary Systems in Star Clusters for Astronomical Age Calibration”, Principal Investigator, National Science Foundation, 11/16/2015
3. \$335,073 - “Improving Astronomical Age Precision using Known Eclipsing Binaries in Star Clusters”, Principal Investigator, National Science Foundation, 11/17/2014
4. \$16,000 – “Explorations in Precision Stellar Age Dating”, Principal Investigator, National Geographic Society, 07/13/2014
5. \$329,663 - “Improving Astronomical Age Precision using Known Eclipsing Binaries in Star Clusters”, Principal Investigator, National Science Foundation, 11/15/2013
6. \$78,577 - “Astrophysics and Age Measurement for *Kepler* Open Clusters from Eclipsing Binaries”, Principal Investigator, National Aeronautics and Space Administration, 01/24/2013
7. \$68,000 – “The Physics of the Helium Flash and Improving Local Group Distance Indicators”, Principal Investigator, Space Telescope Science Institute, 2007
8. \$45,054 – “Photometric Binary Fractions in the Cores of Galactic Globular Clusters”, Principal Investigator, Space Telescope Science Institute, 2005

9. \$39,109 – “The Unusual Luminosity Function of the Globular Cluster M10”, Principal Investigator, Space Telescope Science Institute, 2004
10. \$44,048 – “Dynamical Archaeology of Globular Clusters using Blue Stragglers”, Principal Investigator, Research Corporation (Cottrell College Science Award program), 1999

### Participation in Professional Associations

1. American Astronomical Society (member, 1994-present)

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### TEACHING EFFECTIVENESS

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#### Chaired M.S. Theses

- |             |   |
|-------------|---|
| In progress | Victoria Moore, “Age of the AB Dor Moving Group”  |
| In progress | Christopher Danner (Physics), “The Interferometric Binary HD 21278 and the Age of the alpha Persei Star Cluster”        |
| Summer 2021 | Rex Lam, “Precise Age for the Binary Star System 12 Com in the Coma Berenices Cluster”                                  |
| Summer 2020 | José Torres Hernandez, “Age of the Cluster NGC 2516 from the Eclipsing Binary V392 Car”                                 |
| Spring 2019 | Peter Wysocki, “High-Precision Measurement of the Atlas Binary System Masses”   |
| Spring 2019 | Justen Pautzke, “An Improved Analysis of the Resolved Binary 51 Tau and the Age of the Hyades”                          |
| Spring 2018 | Anne Hedlund, “Toward an Age and Distance to NGC 1817 from the Eclipsing Binary V1178 Tau”                              |
| Fall 2014   | Christopher Gabler, “The Initial-Final Mass Relation for White Dwarfs using Old Open Clusters”                          |
| Summer 2014 | Ernest Bavarsad, “Characterization of the Detached Eclipsing Binary KV29 and the Age of the Open Cluster M11”           |
| Summer 2013 | Lauren Brewer, “A Triple System near the Turnoff of the Open Cluster NGC 6819 and Determining Age Using <i>Kepler</i> ” |
| Fall 2011   | Mark Jeffries, “Two Age Sensitive Detached Eclipsing Binaries in the Open Cluster NGC 6819”                             |
| Spring 2011 | David Krogsrud, “The Radial Distribution of Second Generation Stars in NGC 6441”  |
| Summer 2009 | James Davenport, “A Matched Filter Analysis of the Old Open Cluster M67”  |
| Summer 2008 | Tiffany Borders, “The Search for Transiting Extrasolar Planets in the Open Cluster M52”                                 |
| Summer 2007 | Andrew Serio, “A Planetary Transit Search in the Open Cluster NGC 7142”   |
| Spring 2007 | Carlos Vargas Álvarez, “A Photometric Study of the Evolved Stars in the Globular Cluster M55 (NGC 6809)”                |
| Summer 2006 | Jessica Castora, “A Photometric Study of the Evolved Stars in the Globular Cluster M15 (NGC 7078)”                      |
| Spring 2005 | Nassissie Fekadu, “The Luminosity Function and Color Magnitude Diagram of the Globular Cluster NGC 5466”                |
| Summer 2004 | Jonathan Hargis, “The Search for Variable Stars in the Open Cluster M11”  |
| Fall 2003   | John Harbold, “A New Indicator of Stellar Physics of Globular Clusters”   |
| Fall 2002   | Lee Clark, “Photometry of the Globular Cluster Palomar 13”  |
| Summer 2001 | John Dokter, “Planetesimal Pollution and the Metallicities of Stars with Planets”                                       |

#### M.S. and Ph.D. Thesis Committees

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|-------------|--|
| In progress | Matthew Portman (Ph.D. Computational Sciences)   |
| Spring 2022 | Robert Baldocchi (M.S. Astronomy), “Determining the Photometric Temperature of Betelgeuse from Spectra”  |
| Summer 2021 | Andrew Buckner (M.S. Physics), “Hong-Ou-Mandel Interference for Multilayered Al:ZnO/ZnO Metamaterial”  |
| Spring 2021 | Alexander Dimoff (M.S. Astronomy), “A New Method to Determine the Structure Constants of Eclipsing Binaries using ELC”                                       |
| Summer 2014 | Nicholas Earl (M.S. Astronomy), “Photodynamical Modeling of Hierarchical Stellar System KOI-126”   |
| Spring 2014 | Haley Sharp (M.S. Astronomy), “Accurate Parameters of the Double-lined Eclipsing Binary KIC 9474969 and Comparison with Asteroseismology”                    |
| Fall 2009   | Karsten Brogaard (Ph.D. Astronomy, Aarhus University), “Stellar Cluster Ages and Tests of Stellar Evolution --- Cluster Member Eclipsing Binaries as a Tool” |

Spring 2004 Steven Williams, (M.S. Astronomy), "On the Nova Rate in the Galaxy M33"  
 Fall 2003 Aaron Linsdau (M.S. Computational Sciences), "Visualization of the General Curvilinear Ocean Model  
 Applied to the Gulf of California"  
 Summer 2002 Erin de Pietro (M.S. Astronomy), "On the Nature of V4142 Sagittarii"  
 Summer 2000 J. A. Hansen (M.S. Mathematics), "The Mathieu Groups"

### Undergraduate Senior Theses

In progress Alejandro Rivera (Physics), "Photometric Radius Measurements of Ultramassive White Dwarfs"  
 2020/2021 Leslie Morales, "The Age of Praesepe from  $\epsilon$  Cancri"  
 2020/2021 Fabio Perez, "The Age of the Pleiades from Atlas"  
 2019/2020 Jordan Ealy, "An X-ray Study of Star Formation in IC 348" (campus facilitator)  
 2018/2019 Taylor Ackerman, "Characteristics of a Variable Binary Star in an Open Cluster"  
 2018 Ryan DeWitt, "The Kepler K2 Study of NGC 1817's Variable Stars"  
 2017 Daniel Rivera, "Analysis of an Eclipsing Binary in the Open Cluster NGC 6939"  
 2016/2017 Andrew Buckner, "Photometry of the Eclipsing Binary DS And in NGC 752"  
 2015/2016 Joey McKenzie, "Photometry of Eclipsing Binary V11 in NGC 7789"  
 2014/2015 Arturo Martinez, "Finding Variable Stars in the Open Cluster M37 to Derive a Precise Age"  
 2014/2015 Kristen Endean, "Kepler K2 Data Analysis"  
 2012/2013 Maria Lapid, "Age Estimation for NGC 6866 Using an Eclipsing Binary"  
 2011/2012 David Jaimes, "Eclipsing Binaries in Open Clusters in the *Kepler* Field"  
 2011/2012 Emily Martin, "Searching for Binary Stars in the Open Star Cluster Berkeley 39"  
 2011/2012 Chantal Gonzales, "Determining the Age of the Open Cluster NGC 6939"  
 2006/2007 Jordan Hess, "Evolved Stars in the Massive Globular Cluster NGC 2419"  
 2006/2007 Tadafumi Kato, "Evolved Stars in the Massive Globular Cluster NGC 6441"  
 2005/2006 Mark Gordon, "Evolved Stars in the Globular Cluster M13"  
 2003 Nathan Siu, "A Search for Planet Transits in the Open Cluster M52"  
 2002/2003 Denise Pollard, "Photometry of the Globular Cluster M10"  
 2002 Daniel Levine, "Photometry of the Globular Cluster M13"  
 2001 William Johnson, "4-Body Simulations of Binary-Binary Collisions"  
 2000 Robb Davis, "The Evolution of Blue Straggler Stars in Open Clusters"  
 2000 Marcus Carroll, "The Distribution of Blue Straggler Stars in Globular Clusters"

### Teaching Awards

2006,2007,2008,2013 Department of Astronomy "Most Influential Faculty"  
 2007,2014 Department of Astronomy Outstanding Faculty Member

### Curriculum Development

2006 ASTR 440: Astrophysics of Stars  
 2004 ASTR 201: Astronomy for Science Majors (new course)  
 2000 ASTR 600: Seminar – Astrophysical Hydrodynamics (new course)  
 1999 ASTR 101: Principles of Astronomy  
 1999 ASTR 630: Stellar Atmospheres and Interiors

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## SERVICE

### Service for the Department

1. 08/2017-present Department Chair
2. 08/2017-present Chair, Department Scholarship Committee
3. 07/2015-05/2016 Chair, Search Committee for Tenure Track Position in Astronomy
4. 2014 Department Chair Review Committee
5. 07/2013-04/2014 Chair, Search Committee for Mount Laguna Observatory Director
6. 2011-2013 Chair, Department Reappointment, Promotion, and Tenure Committee



7. 2007 Chair, Search Committee for Tenure Track Position in Astronomy (cancelled)
8. 2006-2017 Department Assessment Coordinator
9. 2005 Search Committee for Tenure Track Position in Astronomy
10. 2003 Chair, Department Curriculum Review Committee
11. 2002-2006 Undergraduate Advisor
12. 2002 Search Committee for Tenure Track Position in Astronomy
13. 2002 Search Committee for Staff Position in Astronomy
14. 2001-2003 Department Observatory Infrastructure Committee
15. 2000 Search Committee for Tenure Track Position in Astronomy

### Service for the College

1. 2009-2011 College of Sciences Reappointment, Promotion, and Tenure Committee
2. 2001 College of Sciences Scholarship and Lectureship Committee

### Service for the University

1. 09/2015 – 05/2017 General Education Committee (College of Sciences representative)

### Service for the Profession

1. 2022-present Local Organizing Committee, Cool Stars 22 Conference
2. 1998-present Ad-hoc Referee (*The Astronomical Journal*, *The Astrophysical Journal*, *The Astrophysical Journal Letters*, *Monthly Notices of the Royal Astronomical Society*, *Astronomy & Astrophysics*, *Revista Mexicana de Astronomía y Astrofísica*, *Journal of Applied Mathematics and Physics*, *Nature Communications*)
3. 2019 Proposal Reviewer, Indian Space Research Organization
4. 2017 Proposal Reviewer, National Science Centre (Poland)
5. 2014 Proposal Reviewer, Hungarian Scientific Research Fund (OTKA)
6. 2012 Proposal Review Panel, National Science Foundation
7. 2003 Proposal Review Panel, National Science Foundation

### Service for the Community

1. 06/2016-05/2020 Steering Committee, Cal-Bridge Scholarship program
2. 2015-2017 Steering Committee, Fellowships and Internships in Extremely Large Data Sets (FIELDS)
3. 2005-2012 Head, California State University Undergraduate Research Experiences (CSUURE) in Astronomy (summer program)

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## ASTRONOMY JOURNAL IMPACT FACTORS

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The table below quotes 2018 impact factors for common astronomy journals.

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|--|--------|
| <i>Annual Review of Astronomy and Astrophysics</i>             | 33.069 |
| <i>The Astrophysical Journal Letters</i>                       | 8.374  |
| <i>Astronomy &amp; Astrophysics</i>                            | 6.209  |
| <i>The Astrophysical Journal</i>                               | 5.580  |
| <i>The Astronomical Journal</i>                                | 5.497  |
| <i>Monthly Notices of the Royal Astronomical Society</i>       | 5.231  |
| <i>Publications of the Astronomical Society of the Pacific</i> | 3.470  |
| <i>Astronomische Nachrichten</i>                               | 0.916  |