

Curriculum Vitae: **Dr. Yanga R. “Yan” Fernández**

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Education

University of Maryland, College Park, Ph.D. Astronomy, 1999

Dissertation: *Physical Properties of Cometary Nuclei*

University of Maryland, College Park, M.S. Astronomy, 1995

California Institute of Technology, B.S. with Honors, Astronomy, 1993

Professional Experience

2011 - present Associate Professor, Department of Physics, University of Central Florida
2005 - 2011 Assistant Professor, Department of Physics, University of Central Florida
2002 - 2005 SIRTf/Spitzer Fellow, Institute for Astronomy, University of Hawai‘i
1999 - 2002 Scientific Researcher, Institute for Astronomy, University of Hawai‘i

Honors and Awards

- Asteroid (12225) Yanfernandez named in honor.
 - UCF Scroll & Quill Society membership, awarded 2017.
 - International Astronomical Union membership, awarded 2012.
 - SIRTf/Spitzer Fellowship, 2002-2005.
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All Refereed Publications (*93 total*)

Refereed Book Chapters (*3 total*)

1. Y. R. Fernández *et al.* 2015. Asteroids and Comets. In *Treatise on Geophysics*, 2nd Edition (G. Schubert, Ed.-in-Chief), Vol. 10 (T. Spohn, Ed.), Elsevier, pp. 487-528.
2. R. L. Jones *et al.*, including Y. R. Fernández 2009. The Solar System. In *LSST Science Book* (LSST Science Collaborations and LSST Project, Eds.), Version 2.0, arXiv: 0912.0201, <http://www.lsst.org/lsst/scibook>, pp. 97-136.
3. P. L. Lamy, I. Toth, Y. R. Fernández, H. A. Weaver 2004. The sizes, shapes, albedos, and colors of cometary nuclei. In *Comets II* (M. Festou *et al.*, Eds.), U. Az. Press, Tucson, pp. 223–264.

Refereed Journal Articles (82 total)

4. B. Bolin *et al.*, including Y. R. Fernández 2018. APO time resolved color photometry of highly-elongated interstellar object 1I/'Oumuamua. *Astrophysical J. Letters* **852**, L2. DOI 10.3847/2041-8213/aaa0c9.
5. E. Howell *et al.*, including Y. R. Fernández 2018. SHERMAN – A shape-based thermophysical model. II. Application to 8567 (1996 HW1). *Icarus*, in press. DOI 10.1016/j.icarus.2017.12.003.
6. C. Magri *et al.*, including Y. R. Fernández 2018. SHERMAN – A shape-based thermophysical model. I. Model description and validation. *Icarus*, in press. DOI 10.1016/j.icarus.2017.11.025.
7. C. M. Lisse *et al.*, including Y. R. Fernández 2017. Infrared Spectroscopy of HR 4796A's Bright Outer Cometary Ring + Tenuous Inner Hot Dust Cloud. *Astronomical J.* **154**, 182. DOI 10.3847/1538-3881/aa855e.
8. R. Kokotanekova *et al.*, including Y. R. Fernández 2017. Rotation of Cometary Nuclei: New Lightcurves and an Update of the Ensemble Properties of Jupiter-Family Comets. *Monthly Notices of Royal Astron. Soc.* **471**, 2974-3007. DOI 10.1093/mnras/stx1716.
9. S. P. D. Birch *et al.*, including Y. R. Fernández 2017. Geomorphology of Comet 67P/Churyumov-Gerasimenko. *Monthly Notices of Royal Astron. Soc.* **469**, S50-S67. DOI 10.1093/mnras/stx1096.
10. J. M. Bauer *et al.*, including Y. R. Fernández 2017. Debiasing the NEOWISE Cryogenic Mission Comet Populations. *Astronomical J.* **154**, 53. DOI 10.3847/1538-3881/aa72df.
11. S. E. Marshall *et al.*, including Y. R. Fernández 2017. Thermal properties and an improved shape model for near-Earth asteroid (162421) 2000 ET70. *Icarus* **292**, 22-35. DOI 10.1016/j.icarus.2017.03.028.
12. E. A. Kramer *et al.*, including Y. R. Fernández 2017. The perihelion emission of comet C/2010 L5 (WISE). *Astrophysical J.* **838**, 58. DOI 10.3847/1538-4357/aa5f59.
13. J. L. Crowell, E. S. Howell, Y. R. Fernández, et al. 2017. Radar and lightcurve shape model of near-Earth asteroid (1627) Ivar. *Icarus* **284**, 359-371. DOI 10.1016/j.icarus.2016.11.008.
14. C. A. Schambeau, Y. R. Fernández, et al. 2017. Analysis of R-band observations of an outburst of Comet 29P/Schwassmann-Wachmann 1 to place constraints on the nucleus? rotation state. *Icarus* **284**, 359-371. DOI 10.1016/j.icarus.2016.11.026.
15. N. A. Moskovitz *et al.*, including Y. R. Fernández 2017. Near-infrared thermal emission from near-Earth asteroids: Aspect-dependent variability. *Icarus* **284**, 97-

105. DOI 10.1016/j.icarus.2016.11.011.
16. J. Licandro *et al.*, including Y. R. Fernández 2016. Size and albedo distributions of asteroids in cometary orbits using WISE data. *Astron. & Astrophys.* **585**, A9.
 17. C. A. Schambeau, Y. R. Fernández, *et al.* 2015. A new analysis of Spitzer observations of comet 29P/Schwassmann-Wachmann 1. *Icarus* **260**, 60-72.
 18. J.M. Bauer *et al.*, including Y. R. Fernández 2015. The NEOWISE-discovered comet population and the CO+CO₂ production rates. *Astrophys. J.* **814**, 85.
 19. E. A. Kramer, Y. R. Fernández *et al.* 2014. A dynamical analysis of the dust tail of comet C/1995 O1 (Hale-Bopp) at high heliocentric distance. *Icarus* **236**, 136-145.
 20. J. P. Emery, Y. R. Fernández, *et al.* 2014. Thermal Infrared Observations and Thermophysical Characterization of OSIRIS-REx Target Asteroid (101955) Bennu. *Icarus* **234**, 17-35.
 21. Y. R. Fernández *et al.* 2013. Thermal properties, sizes, and size distribution of Jupiter-Family cometary nuclei. *Icarus* **226**, 1138-1170.
 22. M. S. Kelley, Y. R. Fernández, *et al.* 2013. The persistent activity of Jupiter-family comets at 3-7 AU. *Icarus* **225**, 475-494.
 23. J. M. Bauer *et al.*, including Y. R. Fernández 2013. Centaurs and scattered disk objects in the thermal infrared: Analysis of WISE/NEOWISE observations. *Astrophys. J.* **773**, 22.
 24. K. J. Meech *et al.*, including Y. R. Fernández 2013. The demise of comet 85P/Boethin, the first EPOXI mission target. *Icarus* **222**, 662-678.
 25. A. S. Rivkin *et al.*, including Y. R. Fernández 2013. The NEO (175706) 1996 FG3 in the 2-4 μm spectral region: Evidence for an aqueously altered surface. *Icarus* **223**, 493-498.
 26. L. O'Rourke *et al.*, including Y. R. Fernández 2013. Determination of an upper limit for the water outgassing rate of main-belt comet P/2012 T1 (PANSTARRS). *Astrophys. J.* **774**, L13.
 27. J. M. Bauer *et al.*, including Y. R. Fernández 2012. WISE/NEOWISE preliminary analysis and highlights of the 67P/Churyumov-Gerasimenko near nucleus environs. *Astrophys. J.* **758**, 18.
 28. J. M. Bauer *et al.*, including Y. R. Fernández 2012. WISE/NEOWISE observations of active bodies in the Main Belt. *Astrophys. J.* **747**, 49.
 29. H. H. Hsieh *et al.*, including Y. R. Fernández 2012. Discovery of main-belt comet P/2006 VW139 by Pan-STARRS1. *Astrophys. J.* **748**, L15.
 30. J. Licandro *et al.*, including Y. R. Fernández 2012. 5-14 μm Spitzer spectra of Themis family asteroids. *Astron. & Astrophys.* **537**, 73.
 31. H. Campins *et al.*, including Y. R. Fernández 2012. Spectra of asteroid families in support of Gaia. *Planetary & Space Sci.* **73**, 95-97.

32. J. M. Bauer *et al.*, including Y. R. Fernández 2011. WISE/NEOWISE observations of comet 103P/Hartley 2. *Astrophys. J.* **738**, 171.
33. K. J. Meech *et al.*, including Y. R. Fernández 2011. EPOXI: 103P/Hartley 2 observations from a worldwide campaign. *Astrophys. J.* **734**, L1.
34. J. Ziffer *et al.*, including Y. R. Fernández 2011. Near-infrared spectroscopy of primitive asteroid families. *Icarus* **213**, 538.
35. C. Magri *et al.*, including Y. R. Fernández 2011. Radar and photometric observations and shape modeling of contact binary near-Earth asteroid (8567) 1996 HW1. *Icarus* **214**, 210-227.
36. K. J. Meech *et al.*, including Y. R. Fernández 2011. Deep Impact, Stardust-NExT and the Behavior of Comet 9P/Tempel 1 from 1997-2010. *Icarus* **213**, 323-344.
37. M. J. S. Belton *et al.*, including Y. R. Fernández 2011. Stardust-NExT, Deep Impact, and the accelerating spin of 9P/Tempel 1. *Icarus* **213**, 345-368.
38. H. Campins *et al.*, including Y. R. Fernández 2010. Water ice and organics on the surface of the asteroid 24 Themis. *Nature* **464**, 1320-1321.
39. Y. R. Fernández 2009. That's the way the comet crumbles: Splitting Jupiter-family comets. *Planetary & Space Science* **57**, 1218-1227.
40. Y. R. Fernández, D. Jewitt, J. E. Ziffer 2009. Albedos of small Jovian Trojans. *Astronomical J.* **138**, 240-250.
41. J. Licandro *et al.*, including Y. R. Fernández 2009. Spitzer observations of the asteroid-comet transition object and potential spacecraft target 107P/(4015) Wilson-Harrington. *Astronomy & Astrophys.* **507**, 1667-1670.
42. C. M. Lisse, Y. R. Fernández, *et al.* 2009. Spitzer Space Telescope observations of the nucleus of comet 103P/Hartley 2. *Publ. Astronomical Society of the Pacific* **121**, 968-975.
43. H. H. Hsieh, D. Jewitt, Y. R. Fernández 2009. Albedos of main-belt comets 133P/Elst-Pizarro and 176P/LINEAR. *Astrophysical J.* **694**, L111-L114.
44. H. Campins *et al.*, including Y. R. Fernández 2009. Spitzer observations of spacecraft target 162173 (1999 JU3). *Astronomy & Astrophys.* **503**, L17-L20.
45. H. Campins *et al.*, including Y. R. Fernández 2009. Low-perihelion near-Earth asteroids. *Earth Moon & Planets* **105**, 159-165.
46. O. Groussin *et al.*, including Y. R. Fernández 2009. The size and thermal properties of the nucleus of comet 22P/Kopff. *Icarus* **199**, 568-570.
47. N. Dello Russo *et al.*, including Y. R. Fernández 2008. The volatile composition of comet 17P/Holmes after its extraordinary outburst. *Astrophysical J.* **680**, 793-802.
48. J. M. Bauer *et al.*, including Y. R. Fernández 2008. The large-grained dust coma of 174P/Echeclus. *Publ. Astronomical Society of the Pacific* **120**, 393-404.
49. J. P. Emery *et al.*, including Y. R. Fernández 2007. Ices on (90377) Sedna: Confir-

- mation and compositional constraints. *Astronomy & Astrophys.* **466**, 395-398.
50. Y. R. Fernández *et al.* 2007. Near-infrared light curve of comet 9P/Tempel 1 during Deep Impact. *Icarus* **187**, 220-227. (Reprinted in *Icarus* **191S**, 424-431.)
 51. C. M. Lisse *et al.*, including Y. R. Fernández 2006. Spitzer spectral observations of the Deep Impact ejecta. *Science* **313**, 635-640.
 52. H. U. Käuffl *et al.*, including Y. R. Fernández 2006. Pre-impact mid-IR and optical observations of comet 9P/Tempel 1. *Earth Moon & Planets* **97**, 331-339.
 53. Y. R. Fernández *et al.* 2006. Comet 162P/Siding Spring: A surprisingly large nucleus. *Astronomical J.* **132**, 1354-1360.
 54. J. E. Ziffer *et al.*, including Y. R. Fernández 2006. Near-infrared spectra of two asteroids with low Tisserand invariant. *Earth Moon & Planets* **97**, 203-212.
 55. H. Campins *et al.*, including Y. R. Fernández 2006. Nuclear spectra of comet 162P/Siding Spring (2004 TU₁₂). *Astronomical J.* **132**, 1346-1353.
 56. P. A. Abell, Y. R. Fernández, *et al.* 2005. Physical characteristics of comet nucleus C/2001 OG₁₀₈ (LONEOS). *Icarus* **179**, 174-194.
 57. Y. R. Fernández, D. C. Jewitt, S. S. Sheppard 2005. Albedos of asteroids in comet-like orbits. *Astronomical J.* **130**, 308-318.
 58. Y. R. Fernández *et al.* 2005. New near-aphelion light curves of comet 2P/Encke. *Icarus* **175**, 194-214.
 59. K. J. Meech *et al.*, including Y. R. Fernández 2005. Deep Impact: Observations from a world-wide Earth-based campaign. *Science* **310**, 265-269.
 60. C. M. Lisse *et al.*, including Y. R. Fernández 2005. Rotationally resolved 8-35 μm Spitzer Space Telescope observations of the nucleus of comet 9P/Tempel 1. *Astrophysical J.* **625**, L139-L142.
 61. D. P. Cruikshank *et al.*, including Y. R. Fernández 2005. The high-albedo Kuiper Belt object (55565) 2002 AW₁₉₇. *Astrophysical J.* **624**, L53-L56.
 62. M. J. S. Belton *et al.*, including Y. R. Fernández 2005. The excited spin state of comet 2P/Encke. *Icarus*, **175**, 181-193.
 63. K. J. Meech *et al.*, including Y. R. Fernández 2005. The Deep Impact Earth-based campaign. *Space Science Reviews* **117**, 297-334.
 64. M. J. S. Belton *et al.*, including Y. R. Fernández 2005. Deep Impact: Working properties for the target nucleus – comet 9P/Tempel 1. *Space Science Reviews* **117**, 137-160.
 65. J. A. Stansberry *et al.*, including Y. R. Fernández 2004. Spitzer observations of the dust coma and nucleus of 29P/Schwassmann-Wachmann 1. *Astrophysical J. Supplement* **154**, 463-468.
 66. C. M. Lisse, Y. R. Fernández, *et al.* 2004. A tale of two very different comets: ISO and MSX measurements of dust emission from 126P/IRAS (1996) and 2P/Encke

- (1997). *Icarus* **171**, 444-462.
67. H. H. Shieh, D. C. Jewitt, Y. R. Fernández 2004. The strange case of 133P/Elst-Pizarro: A comet amongst the asteroids. *Astronomical J.* **127**, 2997-3017.
 68. J. M. Bauer *et al.*, including Y. R. Fernández 2003. Physical survey of 24 Centaurs with visible photometry. *Icarus* **166**, 195-211.
 69. J. M. Bauer *et al.*, including Y. R. Fernández 2003. An optical survey of active Centaur C/NEAT (2001 T4). *Publ. Astronomical Society of the Pacific* **115**, 981-989.
 70. D. C. Jewitt, S. S. Sheppard, Y. R. Fernández 2003. 143P/Kowal-Mrkos and the shapes of cometary nuclei. *Astronomical J.* **125**, 3366-3377.
 71. Y. R. Fernández, S. S. Sheppard, D. C. Jewitt 2003. The albedo distribution of Jovian Trojan asteroids. *Astronomical J.* **126**, 1563-1574.
 72. Y. R. Fernández *et al.* 2003. The nucleus of *Deep Impact* target comet 9P/Tempel 1. *Icarus* **164**, 481-491. (Reprinted in *Icarus* **191S**, 11-21.)
 73. Y. R. Fernández 2002. The nucleus of comet Hale-Bopp: size and activity. *Earth Moon & Planets* **89**, 3-25.
 74. Y. R. Fernández, D. C. Jewitt, S. S. Sheppard 2002. Thermal properties of Centaurs Asbolus and Chiron. *Astronomical J.* **123**, 1050-1055.
 75. H. Campins and Y. R. Fernández 2002. Surface characteristics of cometary nuclei. *Earth Moon & Planets* **89**, 117-134.
 76. J. M. Bauer *et al.*, including Y. R. Fernández 2002. Observations of the centaur 1999 UG₅: Evidence of a unique outer Solar System surface. *Publ. Astronomical Society of the Pacific* **114**, 1309-1321.
 77. C. M. Lisse *et al.*, including Y. R. Fernández 2002. Discovery of an extremely red object in the field of HD 155826. *Astrophysical J.* **570**, 779-784.
 78. Y. R. Fernández, D. C. Jewitt, S. S. Sheppard 2001. Low albedos among extinct comet candidates. *Astrophysical J.* **553**, L197-L200.
 79. Y. R. Fernández *et al.* 2000. Physical properties of the nucleus of comet 2P/Encke. *Icarus* **147**, 145-160.
 80. Y. R. Fernández *et al.* 1999. The nucleus and inner coma of comet Hale-Bopp: Results from a stellar occultation. *Icarus* **140**, 205-220.
 81. C. M. Lisse, Y. R. Fernández, *et al.* 1999. Infrared observations of the dust emitted by comet Hale-Bopp. *Earth Moon & Planets* **78**, 251-257.
 82. C. M. Lisse, Y. R. Fernández, *et al.* 1999. The nucleus of comet Hyakutake (C/1996 B2). *Icarus* **140**, 189-204.
 83. I. de Pater *et al.*, including Y. R. Fernández 1997. BIMA observations of comet Hyakutake: upper limit to the 2.7 mm continuum emission. *Planetary & Space Science* **45**, 731-734.

84. Y. R. Fernández *et al.* 1997. Analysis of POSS images of comet-asteroid transition object 107P/1949 W1 (Wilson-Harrington). *Icarus* **128**, 114-126.
85. Y. R. Fernández *et al.* 1997. X-Band VLA observations of comet Hyakutake (C/1996 B2) and implications for nuclear properties. *Planetary & Space Science* **45**, 735-739.

Refereed Conference Proceedings (8 total)

86. I. M. Coulson *et al.*, including Y. R. Fernández 2009. JCMT observations of the Deep Impact event. In *Deep Impact as a World Observatory Event: Synergies in Space, Time, and Wavelength* (H. U. Käufl and C. Sterken, Eds.), Springer, Berlin, pp. 69-72.
87. J. Pittichova, Y. R. Fernández, *et al.* 2009. Dust evolution of comet 9P/Tempel 1. In *Deep Impact as a World Observatory Event: Synergies in Space, Time, and Wavelength* (H. U. Käufl and C. Sterken, Eds.), Springer, Berlin, pp. 317-322.
88. C. M. Lisse *et al.*, including Y. R. Fernández 2007. Planetary science goals for the Spitzer warm era. In *The Science Opportunities of the Warm Spitzer Mission Workshop* (L. J. Storrie-Lombardi and N. A. Silberman, Eds.), American Institute of Physics, Melville, NY, pp. 184-212.
89. D. P. Cruikshank *et al.*, including Y. R. Fernández 2007. Physical properties of trans-neptunian objects. In *Protostars and Planets V* (B. Reipurth *et al.*, Eds.), U. Ariz. Press, Tucson, pp. 879-893.
90. D. P. Cruikshank *et al.*, including Y. R. Fernández 2006. Solar System observations with Spitzer Space Telescope. In *The Spitzer Space Telescope: New Views of the Cosmos* (L. Armus and W. T. Reach, Eds.), Astronomical Soc. Pacific, San Francisco, pp. 23-30.
91. Y. R. Fernández *et al.* 2006. Review of Spitzer Space Telescope observations of small bodies. In *Asteroids, Comets, and Meteors: Proceedings of the International Astronomical Union Symposium 229* (D. Lazzaro *et al.*, Eds.), Cambridge Univ. Press, Cambridge, pp. 121-131.
92. C. M. Lisse, M. F. A'Hearn, Y. R. Fernández, S. B. Peschke 2002. A search for trends in cometary dust emission. In *Dust in the Solar System and Other Planetary Systems* (S. F. Green, I. P. Williams, J. A. M. McDonnell, N. McBride, Eds.), Pergamon, pp.259-268.
93. D. C. Jewitt and Y. R. Fernández 2001. Physical properties of planet-crossing objects. In *Collisional Processes in the Solar System* (H. Rickman and M. Marov, Eds.), Kluwer, Dordrecht, pp. 143-161.

Invited Presentations (17 total)

1. “Ensemble Physical Properties of Comets,” seminar at Florida Space Institute, Orlando, FL, September 2017.
2. “Science From Eclipses,” public talk at UCF Science Café, Orlando, FL, September 2017.
3. “A New Perspective on Comets,” presented at 2017 National Astronomy Teaching Summit, Fort Myers, FL, August 2017.
4. “Ensemble Physical Properties of Comets,” seminar at Planetary Science Institute, Tucson, AZ, April 2016.
5. “Ensemble Physical Properties of Comets,” seminar at UCLA, Los Angeles, CA, March 2016.
6. “Ensemble Physical Properties of Comets,” seminar at Jet Propulsion Laboratory, Pasadena, CA, March 2016.
7. “Review of Observed Thermal Properties of Active Cometary Nuclei,” presented at TherMoPS II: Thermal Models for Planetary Science, Puerto de la Cruz, Tenerife, Spain, June 2015.
8. “Science from Enigmatic Comets,” seminar at Jet Propulsion Laboratory, Pasadena, CA, February 2013.
9. “Ensemble Properties of Icy Small Bodies,” colloquium at University of Maryland, College Park, MD, December 2010.
10. “Thermal and Reflective Properties of Cometary Nuclei and Related Bodies,” seminar at Johns Hopkins University Applied Physics Laboratory, Laurel, MD, May 2010.
11. “Size, Shapes and Size Distributions of Asteroids and Comets,” presented with T. Mueller at Future Ground-based Solar System Research: Synergies with Space Probes and Space Telescopes, Portoferraio, LI, Italy, September 2008.
12. “Thermophysical Properties of Small Bodies as Revealed by the Spitzer Space Telescope,” colloquium at Planetary Science Institute, Tucson, AZ, September 2008.
13. “The Enigmatic Behavior of Comet Encke,” presented at Belton Symposium: Journey Through the Solar System, Tucson, AZ, November 2006.
14. “Deep Impact Makes a Deep Impact on Planetary Science,” seminar at Michigan State University, Lansing, MI, February 2006.
15. “Review of Spitzer Space Telescope Observations of Small Bodies,” presented at IAU Symposium 229, Comets Asteroids Meteors, Búzios, RJ, Brazil, August 2005.
16. “Size and Activity of Comet Hale-Bopp,” presented at IAU Colloquium 186, Cometary Science After Hale-Bopp, Puerto de la Cruz, Tenerife, Spain, January 2002.

17. “Physical Properties of Comet Hale-Bopp,” presented at Washington Area Astronomers meeting, Fairfax, VA, October 1997.
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External Funding

- 24 awards as either PI, Co-I, Co-PI
 - Total to YRF is \$1.550M, lifetime.
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Citations (*as of January 10, 2018*)

- Google Scholar has recorded over 3500 citations all-time of refereed and unrefereed work, including about 1700 since promotion to Associate Professor.
 - Web of Science has recorded over 2200 citations all-time of refereed work, including over 1150 since promotion to Associate Professor.
 - Astrophysics Data System (ADS) has recorded over 2600 citations all-time of refereed and unrefereed work, including over 1300 since promotion to Associate Professor.
 - ADS Citations per year for recent years: ◦2018 (so far): 27; ◦2017: 223; ◦2016: 195; ◦2015: 235; ◦2014: 186; ◦2013: 211; ◦2012: 200; ◦2011: 237; ◦2010: 154.
 - Current *h*-index is 25.
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Contributed Conference Presentations

- Over 200 lifetime.
 - Year-by-year in recent academic years:
 - 2017-2018 (so far): 11
 - 2016-2017: 18
 - 2015-2016: 17
 - 2014-2015: 23
 - 2013-2014: 14
 - 2012-2013: 22
 - 2011-2012: 13
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Professional Societies

- International Astronomical Union
- American Astronomical Society, Division for Planetary Sciences
- American Geophysical Union

Teaching History

All courses listed here are at UCF.

- Graduate:
 - AST 5263 “Advanced Observational Astronomy”
 - PHY 6246 “Classical Mechanics”
 - AST 6938 “Special Topics”
 - AST 6156 “Planetary Seminar”
- Upper-level undergraduate:
 - AST 4700 “Experimental Methods in Astronomy”
 - AST 3722C “Techniques of Observational Astronomy”
- Lower-level undergraduate:
 - AST 2002, AST 2002H “Astronomy”
 - AST 2002L “Astronomy Lab”
 - PHY 2053 “College Physics I”
 - PHY 2054 “College Physics II” Recitation
 - PHY 2048 “Physics for Engineers & Scientists I” Recitation
- Research mentor to 16 UCF undergraduates over career.
- Research mentor to 1 high-school student over career.
- Honors in the Major committee member for 3 UCF undergraduates over career.

Thesis and Dissertation Supervision

All students listed here were advised while at UCF.

- **As Committee Chair, Total 5** (*2 PhD completed, 2 PhD ongoing, 1 MS completed*):
 - Emily A. Kramer, Ph.D. in Physics, Planetary Sciences Track, 2014.
 - Jenna L. Crowell, Ph.D. in Physics, 2018.
 - Charles A. Schambeau, Physics, Planetary Sciences Track, PhD anticipated 2018.
 - Mary L. Hinkle, Physics, Planetary Sciences Track, PhD anticipated 2021.
 - Jean-Marc Denis, M.S. in Physics, 2012.
- **As Committee Member, Total 16:**
 - Ph.D. in Physics: 15
 - M.S. in Physics: 1

Recent, Selected Service Activities

- **Professional Service**
 - Member of Small Bodies Assessment Group, reporting to NASA Advisory Council Planetary Science Subcommittee.

- Member of NASA “Comet ISON Observing Campaign” team and “Coordinated Investigations of Comets” team.
 - Panel Reviewer and External Reviewer for numerous NASA Science Mission Directorate Research and Analysis programs.
 - Member of numerous telescope facility allocation committees: Atacama Large Millimeter Array, Hubble Space Telescope, Spitzer Space Telescope. External reviewer for HST, Spitzer, James Clerk Maxwell Telescope.
 - Referee/reviewer of manuscripts to top U.S. and international journals in astronomy.
 - Member of Advisory Board to Planetary Data System’s Small Bodies Node, and Reviewer of datasets submitted to the Planetary Data System for archiving.
- **University Service:**
 - Director of UCF’s Robinson Observatory, coordinating all research, education, and outreach projects at that facility, including organizing events that serve approximately 800-1,000 UCF students, K-12 students, Scouts, and members of the general public every year. Also building liaison for observatory building.
 - Faculty advisor for Astronomy Society at UCF, a Registered Student Organization.
 - Original organizer of department’s Planetary Science Journal Club/Seminar series.