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 and Appointments

2019 - present	Professor, Department of Physics, University of Central Florida
2016 - present	Associate Scientist, Florida Space Institute, University of Central Florida
2011 - 2019	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.
- International Astronomical Union membership, awarded 2012.
- UCF Scroll & Quill Society membership, awarded 2017.
- SIRTF/Spitzer Fellowship, 2002-2005.

Impact Indicators *(as of November 2025)*

- Google Scholar lists about **7600 citations all-time** of refereed and unrefereed work.
  - See https://scholar.google.com/citations?user=wPjufFkAAAAJ&hl=en.
- Astrophysics Data System has recorded about **5100 citations all-time** of refereed and unrefereed work.
  - See https://tinyurl.com/4d4xf97m.
- Web of Science (WoS) has recorded about **4800 citations all-time** of refereed work that is included in WoS.
  - See https://www.webofscience.com/wos/author/record/GAI-2073-2022
- Current h-index (from WoS) is 39.

Large Project Membership

- Co-Investigator and Science Team member on **NEO Surveyor**, a $1.2-billion NASA mission that will launch in 2027 or 2028. (PI Amy Mainzer, UCLA.)
- Member of Solar System Working Group for **SPHEREx**, a $400-million NASA mission that launched in 2025. (Working Group lead Carey Lisse, JHU/APL.)

Selected Recent Refereed Publications

(Out of 121 total, see also ORCID `https://orcid.org/0000-0003-1156-9721`*.)*

Recent Refereed Book Chapters *(of 5 total)*

- Y. R. Fernández, M. W. Buie, P. Lacerda, R. Marschall 2025. Centaur Nuclei: Sizes, Shapes, Spins, and Structure In *Centaurs* (K. Volk et al., Eds.), IOP Publishing, pp. 4-1 to 4-27. `https://doi.org/10.1088/2514-3433/ada267ch4`.
- J. M. Bauer, Y. R. Fernández, S. Protopapa, L. M. Woodney 2024. Comet science with ground based and space based surveys in the new millennium. In *Comets III* (K. Meech et al., Eds.), U. Ariz. Press, Tucson, pp. 193-212, `https://www.jstor.org/stable/jj.21819446.13`.

Recent Refereed Journal Articles *(of 108 total)*

- Y. Kwon *et al.*, including Y. R. Fernández 2025. COSINE (Cometary Object Study Investigating Their Nature and Evolution). I. Project Overview and General Characteristics of Detected Comets. *Astrophys. J. Supp.* **280**, 2. `https://doi.org/10.3847/1538-4365/adfe71`.
- T. Kareta *et al.*, including Y. R. Fernández 2025. Activity-induced Near-infrared Spectral Variability at 29P/SchwassmannWachmann 1, 20172022. *Plan. Sci. J.* **6**, 119. `https://doi.org/10.3847/PSJ/adce07`.
- S. A. Myers *et al.*, including Y. R. Fernández 2025. NEOWISE Data Processing and Color Corrections for Near-Earth Asteroid Observations. *Plan. Sci. J.* **6**, 80. `https://doi.org/10.3847/PSJ/adbc9f`.
- S. Faggi *et al.*, including Y. R. Fernández 2024. Heterogenous outgassing regions identified on active centaur 29P/Schwassmann-Wachmann 1. *Nature Astron.* **8**, 1237-1245. `https://doi.org/10.1038/s41550-024-02319-3`.
- E. Lilly *et al.*, including Y. R. Fernández 2024. Semi-major Axis Jumps as the Activity Trigger in Centaurs and High-Perihelion Jupiter Family Comets. *Ap. J. Lett.* **960**, L8. `https://doi.org/10.3847/2041-8213/ad1606`.
- J. N. Larson, Y. R. Fernández, G. Sarid 2024. Categorization of Spatial and Temporal Ejecta Outcomes in Binary Systems based on Variations of the Didymos System. *Plan. Sci. J.* **5**, 5. `https://doi.org/10.3847/PSJ/ad0cb9`.

- A. Mainzer *et al.*, including Y. R. Fernández 2023. The Near-Earth Object Surveyor Mission. *Plan. Sci. J.* **4**, 224. https://doi.org/10.3847/PSJ/ad0468.
- O. Harrington Pinto *et al.*, including Y. R. Fernández 2023. First detection of CO2 emission in a Centaur: JWST NIRSpec observations of 39P/Oterma. *Plan. Sci. J.* **4**, 208. https://doi.org/10.3847/PSJ/acf928.
- S. A. Myers *et al.*, including Y. R. Fernández 2023. Constraining the Limitations of NEATM-like Models: A Case Study with Near-Earth Asteroid (285263) 1998 QE2. *Plan. Sci. J.* **4**, 1. https://doi.org/10.3847/PSJ/aca89d.

Teaching History

All courses listed here are at UCF. Underline indicates course co-created by YRF. Double underline indicates course created solely by YRF.

Graduate courses:

- AST 5263 "Advanced Observational Astronomy"
- PHY 6246 "Classical Mechanics"
- AST 5765 "Advanced Astronomical Data Analysis"
- AST 6112 "Origin and Evolution of Planetary Systems"
- AST 6938 "Special Topics", course on New Horizons mission
- AST 6146 "Physics of Processes in Comets, Asteroids, and Dust"
- AST 6156 "Planetary Seminar"

Upper-level undergraduate courses:

- AST 4700 "Experimental Methods in Astronomy"
- AST 4762 "Astronomical Data Analysis"
- AST 3722 "Techniques of Observational Astronomy"
- AST 3043 "Practice of Historical Astronomy"

Lower-level undergraduate courses:

- AST 2002, AST 2002H "Astronomy"
- AST 2002L "Astronomy Lab"
- PHY 2053 "College Physics I"
- PHY 2054 "College Physics II"
- PHY 2048 "Physics for Engineers & Scientists I"

Undergraduate Mentoring: Research

- Research mentor to 23 UCF undergraduates and 1 high-school student over career
- Honors undergraduate thesis committee member for 7 UCF undergraduates over career

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Graduate Student Mentoring: Thesis and Dissertation Supervision

All students listed here were advised while at UCF.

As Committee Chair, Total 9 *(4 PhD completed, 2 PhD ongoing, 3 MS completed)*:

- Emily A. Kramer, Ph.D. in Physics, Planetary Sciences Track, 2014.
- Jenna L. Jones, Ph.D. in Physics, 2018.
- Charles A. Schambeau, Ph.D. in Physics, Planetary Sciences Track, 2018.
- Jennifer N. Larson, Ph.D. in Physics, Planetary Sciences Track, 2023.
- Rhiannon Hicks, expected Ph.D. in Physics, Planetary Sciences Track, in 2029.
- Daejhanae Smith, expected Ph.D. in Physics, Planetary Sciences Track, in 2029.
- Jean-Marc Denis, M.S. in Physics, 2012.
- Brynn Presler-Marshall, M. S. in Physics, Planetary Sciences Track, 2021.
- Mary L. Hinkle, M.S. in Physics, Planetary Sciences Track, in 2025.

Recent Selected Leadership and Service History

All entries listed here occurred while at UCF.

Recent Professional Leadership & Service

- Panel Reviewer and External Reviewer for NASA Science Mission Directorate Research and Analysis programs (numerous times, 2011-present).
- Member of Advisory Board to Planetary Data System's Small Bodies Node (2009-present).
- Referee/reviewer of manuscripts to top U.S. and **international** journals in astronomy (*Icarus*, *Astrophysical Journal Letters*, *Astronomical Journal*, *Astronomy & Astrophysics*, *Planetary Science Journal*) (2005-present).
- External reviewer for Hubble Space Telescope and James Webb Space Telescope.
- Reviewer of datasets submitted to the Planetary Data System for archiving.

Recent University Leadership & Service:

- Graduate Program Director for the Planetary Sciences Track within the Physics MS/PhD program (May 2024-present), and for Planetary and Space Sciences PhD program (May 2025-present).
- Director of UCF's Robinson Observatory (2009-2021), coordinating all research, education, and outreach projects at that facility, including organizing events that serve approximately 1,000 UCF students, K-12 students, Scouts, and members of the general public every year.
