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EDUCATION

- 2019 -** **Yale University** **Ph.D. Astronomy**
 Advisor: Prof. Pieter van Dokkum
- 2015 - 2019** **The University of Texas at Austin** **B.S.A. Astronomy and Physics**
 Cumulative unweighted GPA: 4.0/4.0
 Polymathic Scholars Honors Thesis: *Falsifiability of the Multiverse*

PEER-REVIEWED PUBLICATIONS

First-author:

- Shen, Z.**, van Dokkum, P., Danieli, S., 2023, *ApJL*, **957**: L6, [arXiv: 2309.08592](https://arxiv.org/abs/2309.08592):
Confirmation of an anomalously low dark matter content for the galaxy NGC1052-DF4 from deep, high resolution continuum spectroscopy
- Shen, Z.**, Danieli, S., van Dokkum, P., et al., 2021, *ApJ*, **914**: L12, [arXiv: 2104.03319](https://arxiv.org/abs/2104.03319):
A Tip of the Red Giant Branch Distance of 22.1 ± 1.2 Mpc to the Dark Matter Deficient Galaxy NGC1052-DF2 from 40 Orbits of Hubble Space Telescope Imaging
- Shen, Z.**, van Dokkum, P., & Danieli, S., 2021, *ApJ*, **909**: 179, [arXiv: 2010.07324](https://arxiv.org/abs/2010.07324):
A Complex Luminosity Function for the Anomalous Globular Clusters in NGC1052-DF2 and NGC1052-DF4
- Shen, Z.**, Diercke, A., Denker, C. 2018, *Astronomische Nachrichten*, **339**: 661, [arXiv: 1812.04404](https://arxiv.org/abs/1812.04404):
Calibration of Full-disk He I 10830 Å Filtergrams of the Chromospheric Telescope

Second-author:

- van Dokkum, P., **Shen, Z.**, et al., 2022, *ApJL*, **940**: L9, [arXiv: 2207.07129](https://arxiv.org/abs/2207.07129):
Monochromatic globular clusters as a critical test of formation models for the dark matter deficient galaxies NGC1052-DF2 and NGC1052-DF4
- van Dokkum, P., **Shen, Z.**, et al., 2022, *Nature*, **605**: 7910, [arXiv: 2205.08552](https://arxiv.org/abs/2205.08552):
A Trail of Dark-Matter-free Galaxies from a Bullet-Dwarf Collision
- Cannon, J., **Shen, Z.**, McQuinn, K. B. W. et al., 2018, *ApJ*, **864**: L14, [arXiv: 1808.07108](https://arxiv.org/abs/1808.07108):
Delayed Stellar Mass Assembly in the Low Surface Brightness Dwarf Galaxy KDG215

Other co-author:

- van Dokkum, P., et al. (*Incl Shen, Z.*), 2023, *ApJ*, **946**: L50, [arXiv: 2302.04888](https://arxiv.org/abs/2302.04888):
A candidate runaway supermassive black hole identified by shocks and star formation in its wake ... and six more, see [ADS list](#)

NON-PEER REVIEWED PUBLICATIONS

Asali, Y., Gerbig, K., Ghosh, A., et al. (*Incl. Shen, Z.*, equal contribution), 2022, *Bulletin of the American Astronomical Society*, **54**: 091, [arXiv: 2212.01456](https://arxiv.org/abs/2212.01456): *A Standardized Framework for Collecting Graduate Student Input in Faculty Searches*

INVITED TALKS

Apr 2023 Thunch, Princeton University, NJ
Mar 2023 Galaxy and AGN Journal Club, STScI/Johns Hopkins University, MD
Oct 2022 Astrophysics Seminar, University of Notre Dame, IN,
‘What Ultra-Diffuse Galaxies tell us about galaxy formation’
Aug 2022 Near Field Cosmology Journal Club, University of Chicago, IL

RESEARCH FELLOWSHIPS, AWARDS, & GRANTS

2023 Yale Center for Research Computing, [AWS Cloud Credit for Research program](#) PI, \$9000 awarded
2023 Third Place, [Yale 3-Minute Thesis Competition](#)
2019-2021 [Gruber Science Fellowship](#), Yale University
2020 Yale University Nathan Hale Associates Scholar
2019 UT Austin [Deans Honored Graduate](#) with Research Distinction
2019 University Co-op George H. Mitchell Award Semifinalist
2019 UT Austin Department of Astronomy Outstanding Senior Award
2018 [Research Internship in Science and Engineering \(RISE\)](#),
[German Academic Exchange Service \(DAAD\)](#)
2018, 2017 UT Austin College of Natural Sciences Distinguished College Scholar
2018 Kevin E. Underhill Memorial Endowed Presidential Scholarship
2018 First place, Physics Department Open House Poster Competition
Title: *‘Can Starbursts Flatten Mass Distribution in the Centers of Dwarf Galaxies?’*

COMMUNITY SERVICE

2022- ApJ, MNRAS Reviewer
2021- Yale Graduate Writing Lab Graduate Writing Fellow
Scientific writing consultant for Yale graduate students and postdocs. Led writing workshops and conducted one-on-one consulting sessions for abstracts, fellowship proposals, and other academic writing.
2021-2023 Astronomy Students Council Member
Liaison between the graduate student body and department faculty.
2021-2022 Yale University Graduate Student Assembly Astronomy Representative
Graduate student advocate and member of the Public Relations Committee.
2020 - 2021 [Yale Astronomy Climate and Diversity Committee](#) Subcommittee Chair
2019 - 2021 Yale Astro Sibs Program Undergraduate Mentor
2017 - 2018 UT Austin [Astronomy Students Association](#) Secretary

OBSERVING EXPERIENCE

Keck I/LRIS (10m): 12 nights.

Keck II/KCWI (10m): 6 nights.

Palomar/TripleSpec (5m): 2 nights.

McDonald Observatory Harlan J. Smith Telescope / Tull Coudé Spectrograph (2.7m): 5 nights.

TEACHING EXPERIENCE

Conducted weekly review sessions, graded homework and held office hours in the following classes:

Yale University

ASTR 180: Introduction to Relativity and Black Holes Fall 2020

ASTR 120: Galaxies and the Universe Spring 2020

ASTR 110: Planets and Stars Fall 2021, Fall 2019

Supervised lab safety and facilitated group projects and weekly discussion sessions in:

University of Texas at Austin

UGS 303: Originality in Arts and Sciences Fall 2016, 2017

M 427J: Differential Equations with Linear Algebra Honors Spring 2015

CONFERENCE & POSTERS

- Jun 2023** Hiking through the unexplored universe: the sunrise of ultra-diffuse galaxies, Sexten, Italy
- Mar 2022** [Aspen Winter Conference: Globular Clusters](#), Aspen, CO, *'Globular Clusters in Dark Matter Deficient Galaxies'*
- Jan 2019** 233rd AAS Meeting, Seattle, WA, Jan 10th 10 AM, Abstract ID 401.01, *'Calibration of full-disk He I 10830 Å filtergrams of the Chromospheric Telescope'*
- Oct 2018** Texas Astronomy Undergraduate Research Symposium, UT Austin, *'Delayed Stellar Mass Assembly in the Dwarf Galaxy KDG 215'*
- Oct 2018** [Gulf Coast Undergraduate Research Symposium](#), Rice University, Houston, *'Delayed Stellar Mass Assembly in the Dwarf Galaxy KDG 215'*
- Jul 2018** DAAD RISE Meeting, Heidelberg, Germany, *'Stargazing at Noon: Observations of Solar Filaments'*
- Mar 2017** Undergraduate Research Forum, UT Austin, *'Observing Eclipsing Binaries'*

OUTREACH AND MEDIA

[Astrobites](#) Author

Jan 2021 - Jan 2023

[Astronomy on Tap Austin](#) Speaker

May 2019