

DR. FERAH MUNSHI

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 University of Oklahoma
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 Norman, OK 73019

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Professional Preparation	UNIVERSITY OF WASHINGTON Ph.D. in Astronomy Thesis Title: “Star Formation in Cosmological N-body Simulations” Thesis Advisor: Thomas Quinn	Jan 2014
	UNIVERSITY OF WASHINGTON M.S. in Astronomy	Sept 2010
	UNIVERSITY OF CALIFORNIA, BERKELEY B.A. in Astrophysics	Dec 2007
Current Appointment	ASSISTANT PROFESSOR, U. OF OKLAHOMA	Aug 2018–
Postdoctoral Appointments	VIDA FELLOW, VANDERBILT UNIVERSITY	Dec 2016- August 2018
	POSTDOCTORAL RESEARCHER, RUTGERS UNIVERSITY	Jan 2016-July 2016
	POSTDOCTORAL RESEARCHER, U. OKLAHOMA	Jan 2014-Dec. 2016
Research Interests	Galaxy formation and evolution, dwarf galaxies, low surface brightness galaxies, ultra-diffuse galaxies, dark matter, cosmological simulations, data science	
Publications	<ul style="list-style-type: none"> • Applebaum, Elaad; Brooks, Alyson M.; Christensen, Charlotte R.; Munshi, Ferah; Quinn, Thomas R.; Shen, Sijing; Tremmel, Michael Ultra-faint dwarfs in a Milky Way context: Introducing the Mint Condition DC Justice League Simulations, submitted MNRAS arxiv:2008.11207 • Akins, Hollis B.; Christensen, Charlotte R.; Brooks, Alyson M.; Munshi, Ferah; Applebaum, Elaad and Angelhardt, Anna; Chamberland, Lucas Quenching timescales of dwarf satellites around Milky Way-mass hosts, under-review arxiv:2008.02805 • Carleton, T.; Guo, Y.; Munshi, F.; Tremmel, M.; Wright, A. An Excess of Globular Clusters in UDGs Formed Through Tidal Heating; MNRAS, under-review arxiv:2008.11205 • Wright, A.; Tremmel, M.; Brooks, A.; Munshi, F.; Nagai, D.; Sharma, R.; Quinn, T. The Formation of Isolated Ultra-Diffuse Galaxies in Romulus25; MNRAS, under-review arxiv:2005.07634 • Cruz, A.; Pontzen, A.; Volunteri, M.; Quinn, T.; Tremmel, M.; Brooks, A.; Sanchez, N.; Munshi, F.; Di Cintio, A. Self-Interacting Dark Matter and the Delay of Super-Massive Black Hole Growth; MNRAS, under-review arxiv:2004.08477 • Tremmel, M.; Wright, A.; Brooks, A.; Munshi, F.; Nagai, D.; Quinn, T. The Formation of Ultra-Diffuse Galaxies from Passive Evolution in the RomulusC Galaxy Cluster Simulation; ApJ 	

- **Munshi, F.**; Brooks, A.; Applebaum, E.; Weisz, D.; Quinn, T. **Going, Going, Gone Dark: Quantifying the scatter in the faintest Dwarf Galaxies** ApJ, under-rewrite/update
 - Bruton, S.; Dai, X.; Guerras, E.; **Munshi, F.**; **Deficit of Luminous and Normal Red Galaxies in Cosmic Voids**; MNRAS
 - **Munshi, F.**; Brooks, A.; Christensen, C.; Applebaum, E.; Holley-Bockelmann, K.; Quinn, T.; Wadsley, J. **Dancing in the Dark: Satellites of Dwarf Galaxies as probes of the first star formation**; 2019, ApJ
 - Bellovary, J.; Cleary, C.; **Munshi, F.**; Tremmel, M.; Christensen, C.; Brooks, A.; Christensen, C.; Quinn, T.; Wadsley, J. **Multimessenger signatures of massive black holes in dwarf galaxies** MNRAS, 2019
 - Christensen, Charlotte R.; Dave, R.; Governato, F.; Pontzen, A.; Brooks, A.; **Munshi, F.**; Quinn, T.; Wadsley, J. **In-N-Out: the gas cycle from dwarfs to spiral galaxies**; 2015, ApJ
 - Bellovary, J.; Holley-Bockelmann, K.; Galtekin, K.; Christensen, C.; Governato, F.; Brooks, A.; Loebman, S.; **Munshi, F.** **Effects of inclination on measuring velocity dispersion and implications for black holes**; 2014, MNRAS
 - **Munshi, F.**; Governato, F.; Christensen, C.; Loebman, S.; Quinn, T.; Shen, S.; Wadsley, J. **The Pressure of the Star Forming ISM in Cosmological Simulations**; 2014, ApJ
 - **Munshi, F.**; Brooks, A.; Governato, F.; Christensen, C.; Shen, S.; Loebman, S.; Moster, B.; Quinn, T.; Wadsley, J. **Reproducing the Stellar Mass/Halo Mass Relation in Simulated LCDM Galaxy Theory vs. Observational Estimates**; 2013, ApJ, 766, 56
 - Davenport, J.; Becker, A.; Bochanski, J.; Hawley, S.; Holtzmann, J.; Gunning, H.; **Munshi, F.**; Albright, M. **The Very Short Period M dwarf Binary SDSS J001641-000925**; 2013, ApJ, 764, 62
 - Suzuki, N.; Rubin, D.; Lidman, C.; Aldering, G.; Amanullah, R.; Barbary, K.; Barrientos, L. F.; [...] **Munshi, F.**, [...] Strovink, M.; Takanashi, N.; Tokita, K.; Wagner, M.; Wang, L.; Yasuda, N.; Yee, H. K. C.; Supernova Cosmology Project, **The Hubble Space Telescope Cluster Supernova Survey. V. Improving the Dark-energy Constraints above $z > 1$ and Building an Early-type-hosted Supernova Sample**; 2012, ApJ, 746, 85
- Unrefereed Publications
- Peebles, M; [...] **Munshi, F.**; [...] Zheng, Y., **“Understanding the circumgalactic medium is critical for understanding galaxy evolution”**, Astro2020 Decadal Survey Position Papers
 - Rosenfield, Philip; Loebman, S. R.; Hilton, E. J.; Garner, S.; Agol, E.; Bellovary, J. M.; Christensen, C. R.; Cowan, N. B.; Gogarten, S. M.; Haggard, D.; **Munshi, F. A.**; Schmidt, S. J.; [...] Covey, K. R.; West, A. A.; Carroll, P.; Murphy, J., **“Tools for Increasing Undergraduate Diversity in Your Department”**, Astro2010 Decadal Survey Position Papers (no. 38)
 - Norman, Dara; Ernst, David J.; Agueros, Marcel; Anderson, Scott F.; Baker, Andrew; Burgasser, Adam; [...] Gogarten, Stephanie; Stilp, Adrienne; Christensen, Charlotte; Hilton, Eric; Haggard, Daryl; Loebman, Sarah; Rosenfield, Phil; **Munshi, F.**, **“Increasing the Number of Underrepresented Minorities in Astronomy Through K-12 Education and Public Outreach (Paper I and II)”**, Astro2010 Decadal Survey Position Papers (no. 39, 40)

Selected
Talks
(invited)

INVITED SEMINAR: WHAT’S THE (DARK) MATTER WITH DWARF GALAXIES?
University of Massachusetts, Amherst; March 2020

COLLOQUIUM: WHAT'S THE (DARK) MATTER WITH DWARF GALAXIES?
Georgia State University; March 2020

COLLOQUIUM: WHAT'S THE (DARK) MATTER WITH DWARF GALAXIES?
Yale University; Sept. 2019

WORKSHOP: WHAT'S THE (DARK) MATTER WITH DWARF GALAXIES?
Aspen Center for Physics; June 2019

SEMINAR: THE STATISTICS OF THE LOW SURFACE BRIGHTNESS UNIVERSE
Ohio State University; March 2019

COLLOQUIUM: WHAT'S THE (DARK) MATTER WITH DWARF GALAXIES?
Iowa State University; Feb. 2019

INVITED WORKSHOP: THE STATISTICS OF THE LOW SURFACE BRIGHTNESS UNIVERSE
FROM ROMULUS
Lorentz Center, Leiden; August 2018

COLLOQUIUM: THE MARVELOUS DWARFS MEET THE JUSTICE LEAGUE: SIMULATIONS
OF DWARF GALAXIES
Wichita State University; April 2018

TAPIR SEMINAR: FEEDBACK AND ITS ROLE IN SHAPING (DWARF) GALAXIES
Caltech, April 2017

SEMINAR: ALI BABA & THE 40 THIEVES: SIMULATIONS OF DWARF GALAXIES
Rutgers, March 2016

SEMINAR: THE 40 THIEVES: A HIGH RESOLUTION SIMULATION OF DWARF GALAXIES
Harvard/CfA, Feb 2015

SEMINAR: STAR FORMATION IN DWARF GALAXIES
UC-Irvine, Nov 2014

COLLOQUIUM: STAR FORMATION IN DWARF GALAXIES
Marquette University, Oct 2012

**Review Panels
& TACs** Reviewer for NASA and NSF
HST cycle 24 & cycle 26 TAC

Grants, Awards & Fellowships

- NSF Phy-2013909 Testing SIDM with Realistic Galaxy Formation Simulations, 2020-2023 (\$360,000)
- VIDA Postdoctoral Fellowship, 2017-2018 (\$80,000/year)
- Co-I HST Theory grant, 2016-2017 (\$84,000)
- co-PI NSF OU Physics REU Grant, 2014-2015 (\$267,000)
- International Travel Grant, 2015 (\$1,200)
- AAS Doxsey Thesis Prize, 2014 (\$1,000)
- PI Washington Space Grant Dissertation Fellowship, 2013 (\$5,000)
- NSF Graduate Research Fellowship, honorable mention 2008
- ARCS Fellowship, 2008-2010, (\$15,000)
- AAS Chambliss Medal, 2007

Professional Service

Reviewer for ApJ, MNRAS
 OU Committee on Data Science
 AAS Member
 LOC: CuWiP 2020 conference
 LOC: PPC 2020 conference (cancelled)

Teaching Highlights

Current: Instructor for Astronomy 1504/1514: Introduction to Astronomy for non-majors (with and without laboratory); OU
 Instructor for Pre-MAP; UW (2011)
 TA for Astro 150(2 semesters, Planets), Astro 101 (2 semesters, Intro to Astronomy); UW (2008-2010)

References

A. Brooks (Associate Professor, Rutgers, abrooks@physics.rutgers.edu, 848-445-8877),
 T. Quinn (Professor, UW, trq@astro.washington.edu, 206-685-9009),
 K. Holley-Bockelmann (Professor, Vanderbilt, k.holley@vanderbilt.edu, 615-343-2153),
 P. Natarajan (Professor, Yale University, priyamvada.natarajan@yale.edu, 203-436-4833)

Grad Students Advised

Devin, Bush (PhD, OU, in progress)
 Jordan Van Nest (PhD, OU, in progress)
 Jordan Sligh (PhD, OU, in progress)
 Renae Wall (PhD, OU, committee member)
 Hora Mishra (PhD, OU, committee member)
 Hyeunsop (Joseph) Choi (PhD, OU, committee member)
 Amber Roepe (PhD, HEP, OU, committee member)
 Anna Wright (PhD, Rutgers)
 Elaad Applebaum (PhD, Rutgers, in progress)
 Antonio Porrás (MS, Fisk University 2018;
 Thorold Thonrud (MSc, U Victoria, 1/2019)
 Francis Macinnis (MS, OU, 2018)

Undergrad Students Advised

Raelin Lane (OU),
Alexi Musick (OU),
Christopher Foley (OU),
Claire Riggs (OU, now Rutgers PhD program)
Amy Griffin (OU, capstone research)
Kobi Ederi (OU, CS department)
Ryan Westerdahl (UW)
Danny Weller (OU REU)
Sydney Duncan (OU REU)
Anahi Favela (OU REU)