Prof. Ferah Munshi

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Professional Preparation

University of Washington — PhD defense: 12/6/2013
Ph.D. in Astronomy
Thesis Title: "Star Formation in Cosmological N-body Simulations"
Thesis Advisor: Thomas Quinn

University of Washington — Sept 2010
M.S. in Astronomy

University of California, Berkeley — Dec 2007
B.A. in Astrophysics

Current Appointment

Assistant Professor, George Mason University — Aug 2022–

Previous Appointments

Assistant Professor, U. of Oklahoma — Aug 2018–Aug 2022

VIDA Fellow, Vanderbilt University — Dec 2016- August 2018

Postdoctoral Researcher, Rutgers University — Jan 2016-July 2016

Postdoctoral Researcher, U. Oklahoma — Jan 2014-Dec. 2016

Career Interruptions due to childbirth
July 2016– Dec. 2016; Jan. 2020– June 2020

Research Interests

Galaxy formation and evolution, dwarf galaxies, low surface brightness galaxies, ultra-diffuse galaxies, dark matter, cosmological simulations, data science

Grants, Awards & Fellowships

- Co-PI: Leadership Resource Allocation (LRAC); XSEDE- Comprehensive Constraints on Self Interacting Dark Matter, 175 Million core-hours
- PI: NSF Phy-2013909- Testing SIDM with Realistic Galaxy Formation Simulations, 2020-2023 ($360,000)
- Collaborator: Leadership Resource Allocation (LRAC), XSEDE- Simulated Inside and Out: the Milky Way Galaxy at Unprecedented Resolution, 126 Million CPU hours
- VIDA Postdoctoral Fellowship, 2017-2018 ($80,000/year)
- Co-I HST Theory grant, 2016-2017 ($84,000)

- 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

Top Publications
*** indicates as faculty**

- **Munshi, F.; Brooks, A.; Applebaum, E.; Christensen, C; Sligh, S.; Quinn, T.**Quantifying the scatter in galaxy formation at the lowest masses** in-press, ApJ arXiv:2101.05822
- **Van Nest, J.; **Munshi, F.**; Wright, A.; Tremmel, M.; Brooks, A.M.; Nagai, D.; Quinn, T. **What's in a Name? Quantifying the interplay between definition, orientation and shape of UDGs using the ROMULUS Simulations**, submitted 9/2021
- **Bellovary, J.; Hayoune, S.; Chaffla, K.; Vincent, D.; Brooks, A.; Christensen, C.; **Munshi, F.**; Tremmel, M.; Van Nest, J.; Sligh, S.; Lazuriaga, M. **The Origins of Off -Center Massive Black Holes in Dwarf Galaxies**, MNRAS 2021
- **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**, ApJ 2021
- **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
- **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

Review Panels & TACs
Reviewer for NASA and NSF including ATP, ADAP, and AAG programs
HST cycle 24 & cycle 26 TAC

Professional Service

Reviewer for ApJ, MNRAS
OU Committee on Data Science
AAS Member
APS Member
LOC: CuWiP 2020 conference
LOC: PPC 2020 conference (postponed to 2021, virtual)
OU Inclusive graduate admissions committee
VOC: NBSE Jan 2021
Faculty Mentor: Women* in Physics
Bridge program subcommittee
White Paper Leader for Snowmass Cosmic Frontier: numerical simulations