GILLIAN DORA BELTZ-MOHRMANN

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EDUCATION

Ph.D., Astrophysics, Vanderbilt University	in progress
Advisor: Andreas Berlind	
M.A., Astrophysics, Vanderbilt University	2018
B.A., Astrophysics, German, *cum laude*, Wellesley College	2016
Advisors: Kim McLeod, James Battat	

RESEARCH POSITIONS

Graduate Research Assistant, Vanderbilt University	2016–
LIGO Summer Undergraduate Research Fellow, Caltech	2015
Advisors: Alan Weinstein, Jonah Kanner	
NSF REU, University of Wyoming	2014
Advisor: Daniel Dale	
Keck Northeast Astronomy Consortium Summer Research Fellow, Williams College	2013
Advisor: Steven Souza	
Undergraduate Research Assistant, Wellesley College	2013–2016

HONORS & AWARDS

Vanderbilt Physics & Astronomy Dept. Most Outstanding Student Publication Award	2020
Vanderbilt Physics & Astronomy Dept. Spring McMinn Award	2020
Vanderbilt Data Science Symposium graduate student poster competition (1st place)	2019
Vanderbilt Physics & Astronomy Dept. Summer McMinn Award	2019
Vanderbilt Akunuri V. Ramayya Award for outstanding Teaching Assistant	2018
Vanderbilt College of Arts and Sciences Graduate Summer Research Award	2018
Vanderbilt Provost Graduate Fellowship	2016 - 2021
Undergraduate Chambliss Astronomy Achievement Award (Honorable Mention)	2016
Wellesley College Sarah Frances Whiting Medal for Achievement in Astronomy	2014

MEMBERSHIP

N-Body Shop Collaboration	2021 -
Sigma Xi: The Scientific Research Honor Society	2016 -
American Astronomical Society	2015 -

SKILLS & EXPERIENCE

Computational Skills

Languages: PYTHON, C, MATLAB, BASH, GIT, LaTeX

Parallel Computing: MPI, OPENMP

Supercomputing Time

Allocation Manager: Texas Advanced Computing Center Stampede2 - 118k node hours	2017–
GADGET-2 & GADGET-4 cosmological simulations, ROCKSTAR halo finder, 2LPTIC, CAMB	

Telescope Time

Wyoming Infrared Observatory 2.3 meter telescope: 80 hours	2014
Wellesley College 0.6 meter telescope: 200 hours	2013–2016
Williams College 0.6 meter telescope: 80 hours	2013

TEACHING & OUTREACH

Graduate Teaching Assistant, *Intro Astronomy Lab*, Vanderbilt University	2016–2019
Co-mentored high school student Caleigh Dennis	2017–2019
Two-time 1st place winner at Middle Tennessee Science & Engineering Fair	
Vanderbilt Student Volunteers for Science	2016
Physics Tutor, Wellesley College	2013–2016
Whitin Observatory Volunteer, Wellesley College	2012–2016

RECENT TALKS & POSTERS

Yale Galaxy Lunch	2021
The impact of baryonic physics on the abundance, clustering, and concentration of halos	
KITP Conference: The Galaxy-Halo Connection Across Cosmic Time	2020
HMF Discrepancies between Hydro and DMO Simulations	
Mock Innsbruck: the connection between galaxies and dark matter haloes	2020
Taking Halo Modeling to the Next Level	
The First Shanghai Assembly on Cosmology and Galaxy Formation	2019
Taking HOD Modeling to the Next Level:	
Results from SDSS and Tests with Hydrodynamic Simulations	
Santa Cruz Galaxy Workshop	2019
Can We Ignore Baryons in Halo Modeling?	
Astronomy Journal Club, Vanderbilt	2019
Testing the Accuracy of HOD Modeling using Hydro Simulations	
Meet the Astronomer Night, Dyer Observatory	2018
Large Scale Structure in the Universe	
Public Astronomy Night, Whitin Observatory	2016
LIGO and the Search for Gravitational Waves	
227th American Astronomical Society Meeting	2016
Tracking Spectral Noise Lines in Advanced LIGO Data	
KNAC Fall Research Symposium	2015
Tracking Spectral Noise Lines in Advanced LIGO Data	

PUBLICATIONS

6. **Beltz-Mohrmann, G. D.**, Szewciw, A. O., Berlind, A. A., Sinha, M., 2021, "Toward Accurate Modeling of Galaxy Clustering on Small Scales: Extensions to the Standard Halo Model", in prep.

5. Szewciw, A. O., **Beltz-Mohrmann, G. D.**, Berlind, A. A., Sinha, M., 2021, "Toward Accurate Modeling of Galaxy Clustering on Small Scales: Constraining the Galaxy-Halo Connection with Optimal Statistics", in prep.

4. **Beltz-Mohrmann, G. D.**, Berlind, A. A., 2021, "The impact of baryonic physics on the abundance, clustering, and concentration of halos", submitted to The Astrophysical Journal.

3. **Beltz-Mohrmann, G. D.**, Berlind, A. A., Szewciw, A. O., 2020, "Testing the Accuracy of Halo Occupation Distribution Modelling using Hydrodynamical Simulations", Monthly Notices of the Royal Astronomical Society, 491, 5771.

2. Dale, D. A., **Beltz-Mohrmann, G. D.**, Egan, A. A., Hatlestad, A. J., Herzog, L. J., Leung, A. S., McLane, J. N., Phenicie, C., Roberts, J. S., Barnes, K. L., Boquien, M., Calzetti, D., Cook, D. O., Kobulnicky, H. A., Staudaher, S. M., van Zee, L., 2016, "Radial Star Formation Histories in Fifteen Nearby Galaxies", The Astronomical Journal, 151, 4.

1. Souza, S. P., **Beltz-Mohrmann, G.**, Sami, M., 2014, "The Light Curve and Period of MT696", The Journal of the American Association of Variable Star Observers, 42, 154.