

# GILLIAN DORA BELTZ-MOHRMANN

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## EDUCATION

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Ph.D., Astrophysics, Vanderbilt University	expected 2022
Advisor: Andreas Berlind	
M.A., Astrophysics, Vanderbilt University	2018
B.A., Astrophysics, German, <i>cum laude</i> , Wellesley College	2016
Advisors: Kim McLeod, James Battat	

## PUBLICATIONS

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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.

## RECENT TALKS & POSTERS

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### Invited Talks

Johns Hopkins Galaxies and AGN Journal Club	2021
<i>The impact of baryonic physics on the abundance, clustering, and concentration of halos</i>	
Yale Galaxy Lunch	2021
<i>The impact of baryonic physics on the abundance, clustering, and concentration of halos</i>	
Astronomy Journal Club, Vanderbilt	2019
<i>Testing the Accuracy of HOD Modeling using Hydro Simulations</i>	
Meet the Astronomer Night, Dyer Observatory	2018
<i>Large Scale Structure in the Universe</i>	
Public Astronomy Night, Whiting Observatory	2016
<i>LIGO and the Search for Gravitational Waves</i>	

### Contributed Talks

KITP Conference: The Galaxy-Halo Connection Across Cosmic Time	2020
<i>HMF Discrepancies between Hydro and DMO Simulations</i>	
Mock Innsbruck: the connection between galaxies and dark matter haloes	2020
<i>Taking Halo Modeling to the Next Level</i>	

### Contributed Posters

The First Shanghai Assembly on Cosmology and Galaxy Formation	2019
<i>Taking HOD Modeling to the Next Level: Results from SDSS &amp; Hydrodynamic Simulations</i>	
Santa Cruz Galaxy Workshop	2019
<i>Can We Ignore Baryons in Halo Modeling?</i>	

## HONORS & AWARDS

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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

## SKILLS & EXPERIENCE

### Computational Skills

Languages: PYTHON, C, MATLAB, BASH, GIT, L<sup>A</sup>T<sub>E</sub>X  
 Parallel Computing: MPI, OPENMP

### Supercomputing Time

Co-Investigator & Allocation Manager: Texas Advanced Computing Center 2017–  
 118k node hours on Stampede2 - 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

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

## RESEARCH POSITIONS

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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

## MEMBERSHIP

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