

# GILLIAN DORA BELTZ-MOHRMANN

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## EDUCATION

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Ph.D., Astrophysics, Vanderbilt University	in progress
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	

## RESEARCH POSITIONS

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Graduate Student, 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 (KNAC) Summer Research Fellow, Williams College	2013
Advisor: Steven Souza	
Undergraduate Research Assistant, Wellesley College	2013–2016

## 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 –
Undergraduate Chambliss Astronomy Achievement Award (Honorable Mention)	2016
Wellesley College Sarah Frances Whiting Medal for Achievement in Astronomy	2014

## MEMBERSHIP

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

## SKILLS & EXPERIENCE

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### Computational Skills

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

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Graduate Teaching Assistant, <i>Intro Astronomy Lab</i> , Vanderbilt University	2016–2019
Co-mentored high school student <i>Caleigh Dennis</i>	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

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KITP Conference: The Galaxy-Halo Connection Across Cosmic Time <i>HMF Discrepancies between Hydro and DMO Simulations</i>	2020
Mock Innsbruck: the connection between galaxies and dark matter haloes <i>Taking Halo Modeling to the Next Level</i>	2020
The First Shanghai Assembly on Cosmology and Galaxy Formation <a href="https://gax.sjtu.edu.cn/shanghai2019/node/74">https://gax.sjtu.edu.cn/shanghai2019/node/74</a>	2019
Santa Cruz Galaxy Workshop <a href="http://hipacc.ucsc.edu/PDF/2019SCGW/Beltz-Mohrmann_SantaCruzPoster.pdf">http://hipacc.ucsc.edu/PDF/2019SCGW/Beltz-Mohrmann_SantaCruzPoster.pdf</a>	2019
Astronomy Journal Club, Vanderbilt <i>Testing the Accuracy of HOD Modeling using Hydro Simulations</i>	2019
Meet the Astronomer Night, Dyer Observatory <i>Large Scale Structure in the Universe</i> – ( <a href="https://dyer.vanderbilt.edu/lectures-dyer/">https://dyer.vanderbilt.edu/lectures-dyer/</a> )	2018
Public Astronomy Night, Whitin Observatory <i>LIGO and the Search for Gravitational Waves</i>	2016
227 <sup>th</sup> American Astronomical Society Meeting “Tracking Spectral Noise Lines in Advanced LIGO Data” <b>Beltz-Mohrmann, G.</b> , Weinstein, A., Kanner, J., 2016, AAS Meeting #227, #338.09	2016
KNAC Fall Research Symposium <i>Tracking Spectral Noise Lines in Advanced LIGO Data</i>	2015
225 <sup>th</sup> American Astronomical Society Meeting “EDGES: Deep Multi-wavelength and Radial SED Analysis for NGC4485, NGC4490, and NGC5273” <b>Beltz-Mohrmann, G.</b> , et al., 2015, AAS Meeting #225, #250.04	2015

## PUBLICATIONS

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5. **Beltz-Mohrmann, G. D.**, Berlind, A. A., 2021, “Effect of baryons on halo masses”, in prep.
  4. Szewciw, A. O., Berlind, A. A., **Beltz-Mohrmann, G. D.**, 2021, “Toward Accurate Modeling of Galaxy Clustering on Small Scales: Constraining the Galaxy-Halo Connection with Optimal Statistics”, in prep.
  3. **Beltz-Mohrmann, G. D.**, Berlind, A. A., Szewciw, A. O., 2019, “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.