

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, <i>cum laude</i> , Wellesley College	2016
Advisors: Kim McLeod, James Battat	

RESEARCH POSITIONS

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

1st place in Vanderbilt Data Science Symposium graduate student poster competition	2019
McMinn Fellowship	2019
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
Sigma Xi: The Scientific Research Honor Society	2016
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/C++, Ruby, Julia, Rust, Racket, Prolog, MATLAB, bash, git, L^AT_EX
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, <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	

Dyer Observatory Volunteer	2017
Vanderbilt Programs for Talented Youth Volunteer	2017
Vanderbilt Student Volunteers for Science	2016
Physics Tutor, Wellesley College	2013–2016
Whitin Observatory Volunteer, Wellesley College	2012–2016

RECENT TALKS

<i>Machine Assisted Semi-Simulation Model</i> – AJC, Vanderbilt	2019
<i>Testing the Accuracy of HOD Modeling using Hydro Simulations</i> – AJC, Vanderbilt	2019
<i>Probing the Galaxy-Halo Connection with Satellite Kinematics</i> – AJC, Vanderbilt	2018
<i>Large Scale Structure in the Universe</i> – Meet the Astronomer Night, Dyer Observatory (https://dyer.vanderbilt.edu/lectures-dyer/)	2018
<i>Dark Matter Substructure in Numerical Simulations</i> – AJC, Vanderbilt	2018
<i>Accurate Modeling of Galaxy Clustering on Small Scales</i> – AJC, Vanderbilt	2017
<i>Galactic Conformity in Semi-Analytic Models</i> – AJC, Vanderbilt	2017
<i>LIGO and the Search for Gravitational Waves</i> – Public Astronomy Night, Whitin Observatory	2016
<i>Detector Characterization for Advanced LIGO</i> – Physics Research Panel, Wellesley College	2015
<i>Tracking Spectral Noise Lines in Advanced LIGO Data</i> – KNAC Fall Research Symposium	2015
<i>Searching for Exoplanets with KELT</i> – Public Astronomy Night, Whitin Observatory	2014
<i>Muon Detection as Evidence of Special Relativity</i> – Wellesley College Ruhlman Conference	2014
<i>Monitoring Variability in Massive Stars</i> – KNAC Fall Research Symposium	2013

CONFERENCES & WORKSHOPS

The First Shanghai Assembly on Cosmology and Galaxy Formation https://gax.sjtu.edu.cn/shanghai2019/node/74	2019
Santa Cruz Galaxy Workshop http://hipacc.ucsc.edu/PDF/2019SCGW/Beltz-Mohrmann_SantaCruzPoster.pdf	2019
Summer School on Large Scale Structure, MPA Garching	2018
SciCoder Workshop, Vanderbilt University	2017
227 th American Astronomical Society Meeting “Tracking Spectral Noise Lines in Advanced LIGO Data” Beltz-Mohrmann, G. , Weinstein, A., Kanner, J., 2016, AAS Meeting #227, #338.09	2016
225 th American Astronomical Society Meeting “EDGES: Deep Multi-wavelength and Radial SED Analysis for NGC4485, NGC4490, and NGC5273” Beltz-Mohrmann, G. , et al., 2015, AAS Meeting #225, #250.04	2015
224 th American Astronomical Society Meeting “Photometry and Spectroscopy of BD+35 1111 in M38” Souza, S. P., Kwitter, K. B., Sami, M., Beltz-Mohrmann, G. , 2014, AAS Meeting #224, #219.05	2014

PUBLICATIONS

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5. **Beltz-Mohrmann, G. D.**, Berlind, A. A., 2019, “Effect of baryons on halo masses”, in prep.
 4. Szewciw, A. O., Berlind, A. A., **Beltz-Mohrmann, G. D.**, 2019, “Toward Accurate Modeling of Galaxy Clustering on Small Scales II: Constraining the Halo Model”, 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”, arXiv:1908.11448, submitted to MNRAS.
 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”, arXiv:1511.03285, 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.