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
227$^{\text{th}}$ 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

5. 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.

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., 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.