

# Erika Lynn Wagoner

*Curriculum Vitae*

## PERSONAL DETAILS

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Website: <https://wagoner47.github.io>

## EDUCATION

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### Ph.D. in Physics

**2014-2020**

*University of Arizona*

Advisor: Eduardo Rozo; Dissertation title: Enabling Galaxy Clustering and Dynamics as Tools of Precision Cosmology; Defense date: October 15, 2020

### B.S. in Physics and Astronomy

**2010-2014**

*The Ohio State University*

Advisor: Jennifer Johnson; Thesis title: Testing Stellar Models for M Dwarfs

## HONORS AND AWARDS

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- 2018 Large Synoptic Survey Telescope Dark Energy Science Collaboration Travel Grant
- 2018 Graduate and Professional Student Council Travel Grant, University of Arizona
- 2014 Smith Senior Award, Ohio State Department of Physics
- 2014 Denman Undergraduate Research Forum Runner-up
- 2013 Smith Junior Award, Ohio State Department of Physics

## RESEARCH EXPERIENCE

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### Research Assistant

**2015-2020**

*University of Arizona*

Advisor: Dr. Eduardo Rozo

Cosmology analysis, with both photometric and spectroscopic survey data. Projects I have worked on include developing a method for three-dimensional baryon acoustic oscillation analyses with photometric data and mitigation of observational systematics for large scale structure (LSS) analyses (working with the DES LSS working group). I have also worked on a project forecasting measurements of the Hubble constant using the cluster edge radius identifiable in the velocity dispersion profile around redMaPPer clusters.

## Undergraduate Researcher

2013-2014

*The Ohio State University*

Research position through the Summer Undergraduate Research Program in Astronomy.

Advisor: Dr. Jennifer Johnson

My work was focused on calibrating the relationship between color, temperature, and metallicity for M dwarfs observed with APOGEE, which would then be used to estimate the metallicity for M dwarfs found in SEGUE. This work led to my undergraduate thesis, which I defended in spring 2014.

## PRESENTATIONS

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### Dealing with Systematics at the Map Level

Jan 21, 2020

*University of Arizona*

Talk during the Large Scale Structure parallel session of the January 2020 DESC Collaboration meeting

### Linear Model Systematics Mitigation

Nov 5, 2019

*University of Sussex*

Talk during the Large Scale Structure parallel session of the November 2019 DES Collaboration meeting

### Systematics Mitigation with Gaussian Processes

June 20, 2019

*University of Pennsylvania*

Talk during the Large Scale Structure parallel session of the June 2019 DES Collaboration meeting

### DES Observing

September 2018

*CTIO, Chile*

## SKILLS

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*Languages*

English (native tongue), French (semi-fluent)

*Software*

L<sup>A</sup>T<sub>E</sub>X, PYTHON, C++, MATHEMATICA, SQL

## TEACHING EXPERIENCE

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### Teaching Assistant

2014

*University of Arizona*

*Courses:* Introductory physics (classical mechanics)

### Physics Tutor

2011-2014

*The Ohio State University*

*Courses:* Algebra and calculus based introductory physics sequences

## PUBLICATIONS

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1. *Measuring Cosmological Distances Using Cluster Edges as a Standard Ruler.* **Wagoner, E. L.**, Rozo, E., et al. arXiv e-prints, p. arXiv:2010.11324 (also submitted to MNRAS)

2. *Linear Systematics Mitigation in Galaxy Clustering in the Dark Energy Survey Year 1 Data.* **Wagoner, E. L.**, Rozo, E., Fang, X., et al. arXiv e-prints, p. arXiv:2009.10854 (also submitted to MNRAS)
3. *Tomographic galaxy clustering with the Subaru Hyper Suprime-Cam first year public data release.* Nicola, A. [and 14 others including **Wagoner, E. L.**]. JCAP03, (2020) 044
4. *Clusters Have Edges: The Projected Phase Space Structure of SDSS redMaPPer Clusters.* Tomooka, P., Rozo, E., **Wagoner, E. L.**, et al. 2020, arXiv eprints, arXiv:2003.11555 (Submitted to MNRAS)
5. *Core Cosmology Library: Precision Cosmological Predictions for LSST.* Chisari, N. E. [and 29 others including **Wagoner, E. L.**]. 2019, ApJS, 242, 2
6. *Examining the relationships between colour,  $T_{\text{eff}}$ , and  $[M/H]$  for APOGEE K and M dwarfs.* Schmidt, S. J., **Wagoner, E. L.**, Johnson, J. A., et al. 2016, MNRAS, 460, 2611