Curriculum Vitae – Dr. Gustavo E. Medina Toledo

Last update: October 24, 2025

Personal Information

Full name : Gustavo Enrique Medina Toledo
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Research Interests

Galactic archaeology, variable stars, kinematics of stars and clusters, RR Lyrae stars in the distant halo, dwarf galaxies in the Local Group, photometric/spectroscopic surveys.

Education

Dr. rer. nat. (PhD) in Astronomy (2018 - 2022)
Heidelberg University, Heidelberg, Germany. *magna cum laude*
Thesis: Unveiling the Milky Way's history using young & old population variable stars (Link)
Supervisor: Prof. Dr. Eva K. Grebel

Master of Science in Astronomy (2015 - 2017)
Universidad de Chile, Santiago, Chile. *with highest distinction*
Thesis: Searching for distant RR Lyrae in the Galactic halo using the HITS survey (Link)
Supervisor: Prof. Dr. Ricardo Muñoz

Bachelor of Science in Astronomy (2010 - 2014)
Universidad de Chile, Santiago, Chile. *with distinction*

Professional Experience

Postdoctoral Fellow (2023 - 2026)
David A. Dunlap Department of Astronomy & Astrophysics, University of Toronto, Canada (Link)

Graduate Researcher (2015 - 2022)
Astronomisches Rechen-Institut, Heidelberg University, Germany (2018-2022; Link 1, Link 2)
Departamento de Astronomía, Universidad de Chile, Chile (2015-2017; Link)

Summer Term Researcher (Jan-Mar 2014)
Departamento de Astronomía, Universidad de Chile, Chile

Research Intern (Jan-Mar 2013)
Departamento de Astronomía, Universidad de Chile, Chile

Grants, Awards and Fellowships

Dunlap Postdoctoral Fellowship
University of Toronto, 2025 - 2026, Canada.

Arts & Science Postdoctoral Fellowship
University of Toronto, 2023 - 2025, Canada.

Gemini Science Fellowship
NOIRLab, Gemini Observatory, 2022 - 2025, Hawaii, USA.
Declined to take postdoctoral position at the University of Toronto.

Paris Sciences et Lettres (PSL) Fellowship
Observatoire de Paris, 2022 - 2024, France.
Declined to take postdoctoral position at the University of Toronto.

Hector Fellow Academy Doctoral Fellowship (acceptance ratio: 2%)
Hector Fellow Academy, 2018 - 2022, Germany.

Magíster Nacional Scholarship (acceptance ratio: 10%)
Comisión Nacional de Investigación Científica y Tecnológica, 2016, Chile.

Award for Academic Excellence (award winning ratio: 5%)
Facultad de Ciencias Físicas y Matemáticas, Universidad de Chile, 2013 and 2014, Chile.

As second author

FONDECYT National Fellowship 2022 (PI: Muñoz, R.; grant acceptance ratio: 15%)
Provides funding to support the HOWVAST survey development.
Comisión Nacional de Investigación Científica y Tecnológica, 2022 - 2025, Chile.

Successful observing proposals

As PI

"Improving the velocity estimation of the best distance tracers in the Milky Way outer halo observed by DESI", 2024B, Spare fiber program for the Dark Energy Spectroscopic Instrument survey, KPNO-Mayall, DESI ($\sim$ 4000 outer halo RR Lyrae stars with DESI).

"Constraining the 3-D morphology and extension of the Orphan-Chenab kink with RR Lyrae stars", 2024B, CTIO-Blanco, DECam (4 nights).

"Searching for evidence of the Orphan-Chenab stream progenitor with RR Lyrae stars", 2024A, CTIO-Blanco, DECam (4 nights).

"The mass of the Milky Way with RR Lyrae at the Galactic outskirts", 2024A, Gemini, GMOS-S (21 hr).

"Spectroscopy of RR Lyrae at the outer limits of the Milky Way", 2020A, LBTO-LBT, MODS (5 hr)

"Spectroscopy of RR Lyrae at the outer limits of the Milky Way", 2019B, LBTO-LBT, MODS (5 hr).

As second author

"The mass of the Milky Way with RR Lyrae at the Galactic outskirts", 2024A, LCO-Clay, MIKE. PI: Muñoz, R. (12 hr).

"Spectroscopy of RR Lyrae at the Outer Limits of the Milky Way", 2020B, LCO-Clay, MIKE. PI: Muñoz, R. (2 nights).

"Spectroscopy of RR Lyrae at the Outer Limits of the Milky Way", 2019B, LCO-Clay, MIKE. PI: Muñoz, R. (2 nights).

"Improving Phase Coverage of RR Lyrae at the Outer Limits of the Milky Way", 2019B, CTIO-SOAR, Goodman HTS. PI: Muñoz, R. (4 nights).

"Mapping the Outer Halo of the Milky Way with RR Lyrae", 2018B, CTIO-Blanco, DECam. PI: Muñoz, R. (2 nights).

"Mapping the Outer Halo of the Milky Way with RR Lyrae", 2018A, CTIO-Blanco, DECam. PI: Carlin, J. (2 nights).

"Mapping the Outer Halo of the Milky Way with RR Lyrae", 2017B, CTIO-Blanco, DECam. PI: Muñoz, R. (2 nights).

"Mapping the Outer Halo of the Milky Way with RR Lyrae", 2017B, CTIO-Blanco, DECam. PI: Carlin, J. (1 night).

Observing Experience

46 nights: DECam@Blanco 4 m telescope, CTIO (2015 - 2025)

8 nights: DESI@Mayall 4 m telescope, KPNO (2024-2025)

2 nights: IMACS@Baade 6.5 m (Magellan) telescope, LCO (2022)

5 nights: MIKE@Clay 6.5 m (Magellan) telescope, LCO (2019 - 2024)

5 nights: HTS@SOAR 4.1 m telescope, CTIO (2019)

3 nights: CCD Imager@Du Pont 2.5 m telescope, LCO (2017)

2 nights: CCD Imager@SMARTS 0.9 m telescope, CTIO (2013)

This list includes in-person and remote observations for the following surveys: DELVE, DESI, S^5, HOWVAST, SMASH, Merian, HiTS, MADCASH, DECAT.

Technical Skills

Programming Languages: PYTHON, Stan, R, C, BASH, JAVA

Others: High Performance Computing, SQL, LaTeX, Topcat (STILTS), SExtractor, MOOG, DS9, IRAF, iSpec, BASE-9, MESA

Astronomical Service

External panelist for the Hubble Space Telescope (HST) Time Allocation Committee (Cycles 32, 32-bridge, and 33; Stellar Populations section)

Peer-reviewing referee for high-impact journals: Astronomy & Astrophysics (A&A), the Monthly Notices of the Royal Astronomical Society (MNRAS), the Astrophysical Journal (ApJ), and The Open Journal of Astrophysics (OJAp) (1–2 papers per year)

Peer-reviewing referee for the allocation of observing time with the Gemini telescope, in conjunction with the Canadian Time Allocation Committee (CanTAC)

Collaborations, Memberships, and Leadership Roles

Principal investigator of the Halo Outskirts with Variable STars (HOWVAST) survey (2017-)

Active participation in the Ultraviolet Near Infrared Northern Survey (UNIONS) collaboration (2024-)

Active participation in the Dark Energy Spectroscopic Instrument (DESI) Milky Way Survey (MWS) collaboration (2023-). **DESI MWS builder (2024-) – DESI continuing participant status (2025-)**

Active participation in the DECam Local Volume Exploration Survey (DELVE) collaboration (2022-). **Survey builder (2024-)**

Active participation in the Southern Stellar Stream Spectroscopic Survey (S^5) collaboration (2022-)

Participation in the Merian Survey (2022-)

Active participation in the High cadence Transient Survey (HiTS) collaboration (2014-2018)

DELVE WIDE Collaboration Coordinator (2023-)

Chair of the Local Organizing Committee (LOC) and member of the Scientific Organizing Committee (SOC) of the DESI-Milky Way Survey workshop 2024, held in Toronto, Canada

Member of the organizing committee of the Summer Undergraduate Research Program (SURP), University of Toronto (2023, 2024)

Convener of the Near Field Cosmology (NFC) weekly group meeting, University of Toronto (2023-)

Regular contributions to Galaxy Evolution and Stellar Astrophysics group meetings

Established connections between members of several institutions, securing funding for research visits and fostering collaborations (University of Toronto, University of Heidelberg, MPIA, NOIRLab, Universidad de Chile, Goethe University of Frankfurt, Pontificia Universidad Católica de Chile)

Member of the Canadian Astronomical Society (CASCA) (2024-)

Member of the American Astronomical Society (AAS) and the Division on Dynamical Astronomy (DDA) (2024-)

Member of the German Astronomical Sociey (Astronomische Gesellschaft, AG) (2022-)

Additional Training

Management Skills – MBA Fundamentals Program for Doctoral Researchers
(Karlsruhe Institute of Technology, Germany)

- Information and Data Analytics (Jan/2021)
- Project Management (Oct/2020)
- Intercultural Training (Jul/2020)
- Human Resources Management (Jan/2019)

Selected Invited Talks, & Seminars

"The structure and accretion history of the Milky Way using halo RR Lyrae stars in large surveys", Herzberg Astronomy and Astrophysics Research Centre Colloquium, Victoria, BC, Canada (September/2025)

"Inferring the mass of the Milky Way mass with distant RR Lyrae and blue horizontal-branch stars", remote talk at DESI collaboration meeting, Berkeley, CA, USA (July/2025)

"Spectroscopic characterization and chemodynamical analysis of RR Lyrae stars in the DESI survey", Côte d'Azur Observatory, Nice, France (July/2025)

"Exploring the outer halo with DESI: characterization of spectroscopic variations of RR Lyrae stars and insights on the Galactic accretion history", Monday Seminar, Kapteyn Astronomical Institute, University of Groningen, Groningen, Netherlands (July/2025)

"Analysis of the spectroscopic variations of RR Lyrae stars in DESI: Tracing the structure, accretion history, and mass of the Milky Way", ESO Garching, Garching, Germany (July/2025)

"Summary of activities of the DELVE WIDE working group", DELVE Collaboration Meeting, Dartmouth, Hanover, USA (Online talk; June/2025)

"Data products of the DESI Milky Way Survey DR1: value added catalogs and scientific applications", CITA Seminar, Canadian Institute for Theoretical Astrophysics, Toronto, Canada (Mar/2025)

"RR Lyrae stars in the DESI Milky Way Survey: Insights on the structure, accretion history, and mass of the Milky Way", TASTY Seminar, University of Toronto, Toronto, Canada (Feb/2025)

"Tales from a dark matter halo: the outer Milky Way as a cosmic laboratory, Milky Way and Andromeda: the odd couple!" conference, **invited talk**, Sexten, Italy (Feb/2025)

"The DESI catalog of RR Lyrae stars: tracing the Milky Way potential out to 100 kpc", **invited plenary talk** at DESI collaboration meeting, Cancun, Mexico (Dec/2024)

"Dynamical modeling and orbit integration of distant Milky Way stars", **invited lecturer at workshop on stellar chemistry and kinematics**, Goethe Universität Frankfurt, Frankfurt, Germany (July/2024)

"The structure and accretion history of the Milky Way using halo RR Lyrae stars in photometric and spectroscopic surveys", AIP Colloquium, Leibniz-Instituts für Astrophysik Potsdam, Potsdam, Germany (July/2024)

"The structure and accretion history of the Milky Way from the combination of photometry and spectroscopy of halo RR Lyrae stars", NOIRLab Colloquium, NOIRLab, La Serena, Chile (Apr/2024)

"The Halo Outskirts With Variable Stars (HOWVAST) survey: exploring the outer Milky Way with RR Lyrae stars", TASTY Seminar, University of Toronto, Toronto, Canada (Dec/2023)

"A census of Cepheids in open clusters in the era of Gaia", MPIA, Heidelberg, Germany (Jun/2021)

"Exploring the outskirts of the Milky Way with RR Lyrae stars", ARI, Heidelberg University, Heidelberg, Germany (Jul/2019)

"Searching for distant RR Lyrae in the Galactic halo using the High cadence Transient Survey", AURA, La Serena, Chile (Aug/2018)

Participation in Scientific Events

Conferences ([T]: Contributed Talk, [P]: Poster Presentation)

- Stellar Variability: Taking the Pulse of the Universe, Pune, India (Nov/2025) **T**
- IAU 403: The hidden beauty of the Galactic outskirts, Cordoba, Spain (Oct/2025) **T**
- DESI annual collaboration meeting, Cancún, Mexico (Dec/2024; 2 talks, one contributed and one invited) **T**
- The RR Lyrae and Cepheid meeting 2024 Frontiers of Classical Pulsators, Marrakesh, Morocco (Nov/2024) **T**
- Resolved stellar populations from photographic plates to large surveys, Florence, Italy (Oct/2024) **T**
- DESI Milky Way International Workshop, Toronto, Canada (Aug/2024) **T**
- Canadian Astronomical Society (CASCA) Annual General Meeting 2024, Toronto, Canada (Jun/2024) **T**

- Globular Clusters and Their Tidal Tails: From the Milky Way to the Local Group, Toronto, Canada (May/2024)
- 55th Annual Meeting of the AAS Division of Dynamical Astronomy (DDA), Toronto, Canada (May/2024) **T**
- DESI collaboration meeting, Kona, USA (Dec/2023) **T**
- LSST@Europe5: Towards LSST science, together!, Poreč, Croatia (Sep/2023) **T**
- Great Lakes Clusters and Streams, Ann Arbor, USA (Aug/2023) **T**
- DESI General Meeting, Durham, UK (Jul/2023)
- DESI Milky Way Survey Meeting, Durham, UK (Jul/2023) **T**
- Meeting of the Young German Astronomical Society, Bamberg, Germany (Jul/2023)
- Hector Fellow Academy Symposium 2023, Berlin, Germany (Jul/2023)
- Canadian Astronomical Society (CASCA) Annual General Meeting 2023 - The Broad Spectrum of Canadian Astronomy, Penticton, Canada (Jun/2023) **T**
- IAU Symposium 376 - At the cross-roads of astrophysics and cosmology: Period–luminosity relations in the 2020s, Budapest, Hungary (Apr/2023) **P**
- Wide-Field Spectroscopy vs Galaxy Formation Theory, Tucson, USA (Mar/2023)
- RRL/Cep 2022 - Large-scale surveys as bridges between spectroscopy and photometry, La Palma, Spain (Sep/2022) **T**
- Annual Meeting of the German Astronomical Society, Bremen, Germany (Sep/2022) **T, P**
- Hector Fellow Academy Symposium 2022, Karlsruhe, Germany (Jul/2022) **T**
- European Astronomical Society Annual Meeting 2022, Valencia, Germany (Jun/2022)
- Star Clusters: the Gaia Revolution, Online (Oct/2021) **P**
- Hector Fellow Academy Symposium 2021, Online (Jul/2021)
- Streams 21: Constraints on Dark Matter, Online (Feb/2021)
- Linking the Galactic and Extragalactic conference series, Online (Dec/2020)
- Hector Fellow Academy Symposium 2020, Online (Jul/2020)
- AAVSO 108th Annual Meeting, Las Cruces, USA (Oct/2019) **P**
- RRL/Cep 2019 - Frontiers of Classical Pulsators, Cloudcroft, USA (Oct/2019) **T, P**
- Hector Fellow Academy Symposium 2019, Heidelberg, Germany (Jul/2019) **P**
- Astroinformatics 2019 International Conference, Pasadena, USA (Jun/2019)
- IV workshop Millennium Institute of Astrophysics MAS, Machalí, Chile (Jan/2017) **T**
- The RR Lyrae 2017 conference - Revival of the Classical Pulsators, Niepolomice, Poland (Sep/2017) **T**
- 5th CMM Pucón Symposium, Puerto Varas, Chile (Aug/2017)
- SOCHIAS 2017 - Annual Meeting, Maitencillo, Chile (Jan/2017) **T**
- III workshop Millennium Institute of Astrophysics MAS, Viña del Mar, Chile (Dec/2016) **T**
- Towards Science in Chile with LSST 2016 Workshop, Viña del Mar, Chile (Dec/2016) **P**
- 22nd Los Alamos Stellar Pulsation Conference Series Meeting, San Pedro, Chile (Nov/2016) **P**
- SOCHIAS XIII - Annual Meeting, Antofagasta, Chile (Mar/2016) **P**
- II workshop MAS, Olmué, Chile (Nov/2015)
- Anillo Workshop Closing Meeting 2015: Testing from Chile Fundamental Theories with new Observations, Santiago, Chile (Nov/2015) **T**
- High-precision Studies of RR Lyrae stars, Visegrad, Hungary (Oct/2015) **T**
- Pucón Symposium 2015: Advanced Tools Applied to Frontier Astronomy, BioMedicine and Massive Data-driven Sciences, Puerto Varas, Chile (Aug/2015)
- Astroinformatics 2014 International Conference, Viña del Mar, Chile (Nov/2014) **P**

– I workshop Millennium Institute of Astrophysics MAS, Los Andes, Chile (Aug/2014) **P**

Workshops & Schools attended

– 47th Heidelberg Physics Graduate Days: "Bayesian inference on Milky Way datasets", and "Geometric Deep Learning", Heidelberg, Germany. (Oct/2021)

– 10th Modules for Experiments in Stellar Astrophysics (MESA) summer school 2021, Online. (Aug/2021)

– Bayesian Analysis for Stellar Evolution with nine variables (BASE-9) Workshop, Online. (Jun/2021)

– 45th Heidelberg Physics Graduate Days: "Modern Galactic dynamics in the era of plentiful data", and "An introduction to gravitational-wave astrophysics", Heidelberg, Germany. (Oct/2020)

– LSST/Rubin Observatory Project & Community Workshop 2020, Online. (Aug/2020)

– 13th IMPRS-HD Heidelberg Summer School: Gaia Data & Science, Heidelberg, Germany. (Sep/2018)

– Workshop on using TOPCAT, STILTS, and ADQL on Astronomical databases, Santiago, Chile. (Oct/2017)

– 11th IMPRS-HD Heidelberg Summer School: Astrostatistics & Data Mining, Heidelberg, Germany. (Sep/2016)

– Scientific Writing for Young Astronomers School (SWYA), Puerto Varas, Chile. (Apr/2016)

– "Astrophysics and R" (by Dr. Eric D. Feigelson), Santiago, Chile. (Apr/2016)

– 3rd La Serena School for Data Science: Applied tools for astronomy, La Serena, Chile. (Aug/2015)

Teaching Experience (as teaching assistant)

Winter 2020: Astronomical Techniques (Block), Heidelberg University
Winter 2020: Astronomy Laboratory, Heidelberg University
Summer 2019: Introduction to Astronomy and Astrophysics II, Heidelberg University
Winter 2019: Astronomical Techniques (Block), Heidelberg University
Spring 2016: Experimental Astronomy, Universidad de Chile
Autumn 2016: Experimental Astronomy, Universidad de Chile
Spring 2015: General Astronomy, Universidad de Chile
Autumn 2015: General Astronomy, Universidad de Chile

Students Supervised

Undergraduate students

Aishani Chaudhuri - University of Toronto (May/2025–)
"Radial velocity and orbit analysis of binary systems in the DESI survey"
Results: Catalog of binary stars in DESI (poster).

Winnie (Mingzhi) Jiang - University of Toronto (May/2025–)
"A photometric analysis of RR Lyrae stars in the Orphan-Chenab stream"
Results: Calibration of time series for the analysis of RR Lyrae stars (link).

Wesley Luo - University of Toronto (May/2024–)
a) "Comparing the dynamical properties of DESI stellar streams with cold and warm dark matter simulations"
Results: Quantification of the dependence of the velocity dispersion of streams on dark matter models (link).

b) "The density profile of halo blue horizontal-branch stars in DELVE DR3"
Results: Catalog of 40,000 BHB stars in DELVE DR3. Measurement of the halo shape and insights on its formation. **Publication in preparation** (link).

Harlin Toor - University of Toronto (May/2024–Sep/2024)
"Tracing the stellar halo of the Milky Way with blue horizontal-branch stars in the deep wide-field DELVE survey"
Results: Catalog of BHB stars in the DELVE survey using Bayesian mixture models. Measurement of the halo shape out to $\sim 80\,\mathrm{kpc}$ with BHB stars (poster).

Maia Wertheim - University of Toronto (May/2023–)
"Hunting for faint stellar streams in the distant Milky Way halo using DECaLS, DELVE, and UNIONS"
Results: Identification of several new stream candidates using the matched filter technique. **Publication in preparation** (link).

Phebe T-Giorgis - Simon Fraser University (May/2023–Sep/2023)
"Searching for RR Lyrae stars in the Aquarius II ultra-faint dwarf galaxy using multi-epoch photometry"
Results: Several new RR Lyrae candidates detected in Aquarius II (poster).

Andrew Li - University of Toronto (Jan/2023–)
"Characterization of stellar streams using S^5 using Gaussian Mixture Modelling"
Results: Membership lists of streams in S^5 and characterization of two streams with multiple components: Jhelum and Indus. **Publication in preparation** (link).

Grace Yu - University of Toronto (Jan/2023–Jan/2024)
"Tracing the Milky Way Density Profile with Blue Horizontal Branch stars in the Dark Energy Survey"
Results: Classification of BHB stars in the DES survey using a Bayesian mixture model and mapping the stellar density profile < 70 kpc. Published in the A&A journal (link).

Jiaxun Yang - University of Toronto (Jan/2023–May/2023)
"Constraining the morphology and orbital history of Bootes III with S^5"
Results: Improved systemic velocity and metallicity estimations of the ultra-faint dwarf galaxy Bootes III. **Publication in preparation**.

High school students (as part of the Visions of Science program)

Adheena Fatimah and Heruye Gared - University of Toronto (Jul/2024–Aug/2024)
"Hunting for Milky Way hypervelocity stars with spectroscopy" (posters here and here)

Public outreach

Talks

"The Milky Way and the exploration of the distant Universe", Marshall McLuhan Catholic Secondary School, Toronto, Canada (Dec/2024)

"Explorando los confines de la Vía Láctea y el universo a gran escala", Teatro municipal de Longaví, Longaví, Chile (Apr/2024)

"The Milky Way: Our Home in the Universe", Astronomy in Action Space Rangers Summer Camp, Toronto, Canada (Aug/2023)

"Astronomy in the 21st century", Bartow County School, Cartersville, US (May/2023)

"La Vía Láctea y las distancias a escala Galáctica", Liceo Rural Municipal Atenea Cunco, Cunco, Chile (Jul/2021)

Service

Volunteer at the "Astronomy on TAP" outreach events at the University of Toronto (2023-)

Volunteer at the "Universe" outreach program of the University of Toronto (2023-)

Panelist at the 2023 Visions of Science Empower Leadership Program at the University of Toronto (Jul/2023)

Guide on high-school visits to the Department of Astronomy and Astrophysics, University of Toronto, Canada (2023-)

Guide on the national heritage day at the National Astronomical Observatory, Chile (May/2017)

Languages

Spanish (Native speaker)
English (Fluent)
German (Intermediate - Goethe-Zertifikat B1 - B2)

List of Publications

(As of October 24, 2025)

Number of citations: 5,875 / 109 (total, as first author)
h-index: 21 / 6 (total, as first author)

As first author (8 papers)

Medina, G. E., Li, T. S., Eadie, G., and the DESI collaboration, "The mass of the Milky Way from outer halo stars measured by DESI DR1", 2025, submitted to ApJ, arXiv:2508.19351.

Medina, G. E., Li, T. S., Allende Prieto, C., et al., "The DESI Y1 RR Lyrae catalog II: The metallicity dependency of pulsational properties, the shape of the RR Lyrae instability strip, and metal rich RR Lyrae", 2025, submitted to ApJ, arXiv:2505.10614.

Medina, G. E., Li, T. S., Koposov, S., et al., "The DESI Y1 RR Lyrae catalog I: Empirical modeling of the cyclic variation of spectroscopic properties and a chemodynamical analysis of the outer halo", 2025, submitted to ApJ, arXiv:2404.02924.

Medina, G. E., Muñoz R. R., Carlin, J. L., Vivas, A. K., Grebel, E. K., Martínez-Vázquez, C. E., Hansen, C. J., "Taking the pulse of the outer Milky Way with HOWVAST: an RR Lyrae density profile out to >200 kpc", 2024, MNRAS, 531, 4762.

Medina, G. E., Hansen, C. J., Muñoz, R. R., Grebel E. K., Vivas, A. K., Carlin, J. L., Martínez-Vazquez C., "RR Lyrae stars as probes of the outer Galactic halo: Chemical and kinematic analysis of a pilot sample", 2023, MNRAS 519, 5689.

Medina, G. E., Lemasle, B., Grebel, E. K., "A revisited study of Cepheids in open clusters in the Gaia era", 2021, MNRAS 505, 1342.

Medina, G. E., Muñoz, R. R., Vivas, A. K., et al., "Discovery of distant RR Lyrae stars in the Milky Way using DECam", 2018, ApJ, 855, 43.

Medina, G. E., Muñoz, R. R., Vivas, A. K., et al., "Serendipitous Discovery of RR Lyrae Stars in the Leo V Ultra-faint Galaxy", 2017, ApJ, 845, L10.

As co-author (50 papers)
(Contribution - [Obs]: Observations, [DA]: Data analysis)

Tan, C. Y., Cerny, W., Pace, A. B, et al., "Ultra-Faint Milky Way Satellites Discovered in Carina, Phoenix, and Telescopium with DELVE Data Release 3", 2025, submitted to ApJ, arXiv:2510.11684 - [Obs], [DA]

Ding, J., Rockosi, C., Li, T. S., et al., "The Draco Dwarf Spheroidal Galaxy in the First Year of DESI Data", 2025, submitted to ApJ, arXiv:2509.21822 - [Obs], [DA]

To, C.-H., Chang, C., Anbajagane, D., et al., "A DECADE of dwarfs: first detection of weak lensing around spectroscopically confirmed low-mass galaxies", 2025, submitted to ApJ, arXiv:2509.20458 - [Obs]

Tan, C. Y., Drlica-Wagner, A., Pace, A. B., et al., "DELVE Milky Way Satellite Census I: Satellite Population and Survey Selection Function", 2025, submitted to ApJ, arXiv:2509.12313 - [Obs], [DA]

Gatti, M., Anbajagane, D., Chang, C., et al., "DECADE+DES Y3 Weak Lensing Mass Map: A 13,000 deg2 View of Cosmic Structure from 270 Million Galaxies", 2025, submitted to ApJ, arXiv:2508.03798 - [Obs]

Anbajagane, D., Chang, C., Drlica-Wagner, A., et al., "The Dark Energy Camera All Data Everywhere cosmic shear project V: Constraints on cosmology and astrophysics from 270 million galaxies across 13,000 deg2 of the sky", 2025, submitted to ApJ, arXiv:2508.03582 - [Obs]

Sandford, N. R., Li, T. S., Koposov, S. E., et al., "Chemodynamics of BoötesI with S5: Revised Velocity Gradient, Dark Matter Density, and Galactic Chemical Evolution Constraints", 2025, submitted to ApJ, arXiv:2509.02546 - [DA]

Byström, A., Koposov, S., Lilleengen, S., et al., "Exploring the interaction between the MW and LMC with a large sample of blue horizontal branch stars from the DESI survey", 2025, MNRAS, 542, 560 - [Obs], [DA].

Heiger, M. E., Ji, A. P., Li, T. S., et al., "Not-so-heavy metal(s): Chemical Abundances in the Ultra-faint Dwarf Galaxies Eridanus IV and Centaurus I", 2025, submitted to ApJ, arXiv:2508.11012 - [DA]

Chiti, A., Placco, V., Pace, A., et al., "A second-generation star in a relic dwarf galaxy", 2025, submitted to ApJ, arXiv:2508.04053 - [Obs], [DA]

Yang, H., Wang, W., Zhu, L., et al., "The dark matter content of Milky Way dwarf spheroidal galaxies: Draco, Sextans and Ursa Minor", 2025, submitted to ApJ, arXiv:2507.02284 - [Obs], [DA]

Chiti, A., Tavangar, K., Ferguson, P. S., et al., "DELVE-ing into the Milky Way's Globular Clusters: Assessing extra-tidal features in NGC 5897, NGC 7492, and testing detectability with deeper photometry", 2025, submitted to ApJ, arXiv:2507.11629 - [Obs], [DA]

Pace, A., Li, T. S., Ji, A. P., et al., "Spectroscopic Analysis of Pictor II: a very low metallicity ultra-faint dwarf galaxy bound to the Large Magellanic Cloud", 2025, OJAp, 8, 112 - [Obs], [DA]

Placco, V. M, Limberg, G., Chiti, A., et al., "The DECam MAGIC Survey: Spectroscopic Follow-up of the Most Metal-Poor Stars in the Distant Milky Way Halo", 2025, ApJ, 991, 101 - [Obs], [DA]

Koposov, S., Li, T. S., Allende Prieto, C., et al., "DESI Data Release 1: Stellar Catalogue", 2025, submitted to OJAp, arXiv:2505.14787 - [Obs], [DA]

Kim, B., Koposov, S. E., Li, T. S, et al., "Nearby stellar substructures in the Galactic halo from DESI Milky Way Survey Year 1 Data Release", 2025, MNRAS, 540, 264 - [Obs], [DA]

Casey, Q. O., Mutlu-Pakdil, B., Sand, D. J., et al., "Deep Photometric Observations of Ultra-Faint Milky Way Satellites Centaurus I and Eridanus IV", 2025, ApJ, 984, 148 - [Obs], [DA]

Doliva-Dolinsky, A., Mutlu-Pakdil, B., Crnojević, D., et al., "The NGC3109 Satellite System: The First Systematic Resolved Search for Dwarf Galaxies Around a SMC-mass Host", 2025, ApJ, 989, 21 - [Obs], [DA]

Medoff, J., Mutlu-Pakdil, B., Carlin, J. L., et al., "DELVE-DEEP Survey: The Faint Satellite System of NGC 55", 2025, ApJ, 990, 108 - [Obs], [DA]

Aganze, C., Chandra, V., Wechsler, R. H., et al., "The Cocytos Stream: A Disrupted Globular Cluster from our Last Major Merger?", 2025, submitted to ApJ, arXiv:2504.11687 - [Obs], [DA]

Barbosa, F. O., Chiti, A., Limberg, G., et al., "The DECam MAGIC Survey: A Wide-field Photometric Metallicity Study of the Sculptor Dwarf Spheroidal Galaxy", 2025, submitted to ApJ, arXiv:2504.03593 - [Obs], [DA]

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Gwyn, S., McConnachie, A. W., Cuillandre, J-C., et al., "UNIONS: The Ultraviolet Near-Infrared Optical Northern Survey", 2025, submitted to ApJ, arXiv:2503.13783 - [DA]

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