Silvana C. Delgado Andrade

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Research Interests

Galaxy Evolution – Stellar Dynamical Modeling – Host Galaxy and Supermassive Black Hole Co-Evolution – Early-Type Galaxies – Optical and Infrared Integral-Field Spectroscopy – Dark Matter

Education

Ph.D. in Astronomy — May 2025
Advisor: Jonelle Walsh, Texas A&M University (TAMU)

M.S. in Astronomy — August 2022
Advisor: Jonelle Walsh, Texas A&M University

B.S. in Physics and Astronomy — May 2019
Advisor: Min Yun, University of Massachusetts at Amherst (UMass)

Appointments

Graduate Research Assistant (under Dr. J. Walsh)	TAMU, Fall 2019 – present
Graduate Teaching Assistant	TAMU, Fall 2019 – Spring 2022
Undergraduate Research Assistant (under Dr. M. Yun)	UMass, Fall 2017 – Spring 2019
Undergraduate Teaching Assistant	UMass, Fall 2017 – Spring 2019
NSF-Funded REU Research Assistant (under Dr. L. Strigari)	TAMU, Summer 2018
Five College Astronomy Deptartment Intern (under Dr. M. Yun)	UMass, Summer 2017

Funding, Honors, & Awards

NASA Texas Space Grant Consortium Graduate Fellow — 2022, 2024, 2025

American Astronomical Society FAMOUS Grant — 2024

College of Arts & Sciences Doctoral Student Travel Award — 2024
Texas A&M University

SACNAS Travel Award — 2022, 2024
Chapter Officer Leadership October Retreat ('24)
National Diversity in STEM Conference ('22)

Department of Physics & Astronomy Travel Award — 2024
Texas A&M University

Texas A&M Good Bull Fund — 2023
PI, grant to support the Diversity in Science Symposium

Dept. of Physics & Astronomy Climate & Diversity Grant — 2023
Co-I, grant to support the Society for the Underrepresented in P&A

GMT Community Science Meeting Travel Grant — 2022
Giant Magellan Telescope, Black Holes at All Scales

College of Natural Sciences Student Leadership Award — 2018 – 2019

University of Massachusetts, Amherst

National Science Foundation REU Research Grant 2018
Texas A&M University, Research Experience for Undergraduates

Nova Biomedical Scholarship 2015 – 2019

Publications

Lead Author

The MASSIVE Survey. XXI. Axisymmetric Jeans Models of Fast-Rotating Massive Early-Type Galaxies (*in preparation*)

S. C. Delgado Andrade, J. L. Walsh, J. D. Pilawa, C. Ma, E. M. Liepold, J. E. Greene, and J. P. Blakeslee

The MASSIVE Survey. XVII. A Triaxial Orbit-based Determination of the Black Hole Mass and Intrinsic Shape of Elliptical Galaxy NGC 2693 (2022, ApJ, 928, 178, DOI: 10.3847/1538-4357/ac58fd)

J. D. Pilawa, E. M. Liepold, **S. C. Delgado Andrade**, J. L. Walsh, C. Ma, M. E. Quenneville, J. E. Greene, and J. P. Blakeslee

Co-Author

Ground-based Reconnaissance Observations of 21 Exoplabet Atmospheres with the Exoplanet Transmission Spectroscopy Imager (*Submitted to AAS Journal*)

R. J. Oelkers, L. M. Schmidt, ... including **S. C. Delgado Andrade**

Gas-dynamical Mass Measurements of the Supermassive Black Holes in the Early-type Galaxies NGC4786 and NGC5193 from ALMA and HST Observations (2024, ApJ, 966, 132, DOI: 10.3847/1538-4357/ac7a38)

K. M. Kabasares, J. H. Cohn, A. J. Barth, ... including **S. C. Delgado Andrade**

Conferences & Presentations

PhD Defense (College Station, TX) February 2025
Talk: *Exploring the Giants: Stellar Dynamics of MASSIVE Galaxies*

245th AAS Meeting (National Harbor, MD) January 2025
Talk: *Linking SMBHs, Stars, and Dark Matter in MASSIVE Galaxies*

243th AAS Meeting (New Orleans, LA) January 2024
Talk: *Jeans Models of Fast-Rotating MASSIVE Early-Type Galaxies*

8th Annual GMT Community Science Meeting (Sedona, AZ) August 2022
Poster: *Comparing Stellar Dynamical Modeling Techniques for MASSIVE Galaxies*

Texas A&M Astronomy Symposium (College Station, TX)
Talk: *Jeans Models of Fast-Rotating ETGs in the MASSIVE Survey* August 2022
Talk: *Stellar Dynamical Models of MASSIVE Galaxies* August 2021
Talk: *The SMBH in the MASSIVE Galaxy NGC2693* August 2020
Talk: *SMGs: Multi-Component Systems & Counterparts* August 2019

Master's Defense & Prelim Talk (College Station, TX) April 2022
Talk: *Stellar Dynamical Models & SMBHs of MASSIVE Galaxies*

FCAD Senior Presentations (Amherst, MA) May 2019

Talk: *SMGs: Multi-Component Systems & Counterparts*

Massachusetts Undergraduate Research Symposium (Amherst, MA) April 2019
Poster: *SMGs: Multi-Component Systems & Counterparts*

Conference for Undergraduate Women in Physics (Amherst, MA) January 2019
Poster: *Selection of Milky Way Analogs in the Dark Energy Survey*

233rd AAS Meeting (Seattle, WA) January 2019
Poster: *Selection of Milky Way Analogs in the Dark Energy Survey*

Texas A&M REU Poster Presentation (College Station, TX) August 2018
Poster: *Selection of Milky Way Analogs in the Dark Energy Survey*

FCAD Senior Presentations (Amherst, MA) April 2018
Poster: *Variability in Young Stellar Objects through H-α Emission*

Observing Experience

McDonald Observatory (13 nights)
2.7 m Telescope, *George Cynthia Mitchell Spectrograph* (Mitchell/VIRUS-P) February 2023
2.1 m Telescope, *Exoplanet Spectroscopic Imager* (ETSI) June 2022

W. M. Keck Observatory (2 nights)
Keck II 10 m Telescope, *Keck Cosmic Web Imager* (KCWI) November 2019

Kitt Peak National Observatory (4 nights)
0.9 m Telescope, *Half-Degree Imager* January 2018

Teaching Experience

Research Project Leader
Warrior Scholar Project, STEM Academic Boot Camp
Texas A&M University Summer 2020, 2021, 2022
Columbia University (*remote*) Summer 2020

Teaching Assistant and Laboratory Instructor Fall 2019, 2021; Spring 2022
ASTR 111: Overview of Modern Astronomy
Department of Physics & Astronomy, Texas A&M University

Teaching Assistant Spring, Fall 2020
ASTR 320: Astrophysical Research Methods
Department of Physics & Astronomy, Texas A&M University

Laboratory Assistant Fall 2017 – Spring 2019
ASTR 101: Introduction to Astronomy
Department of Astronomy, University of Massachusetts, Amherst

Astronomy Tutor Fall 2017 – Spring 2019
Department of Astronomy, University of Massachusetts, Amherst

Skills

Data Analysis & Modeling: Stellar dynamical modeling (JAM), forward modeling, nested sampling (`dynesty`), Multi-Gaussian Expansion modeling (`mgefit`, `GALFIT`), stellar kinematics fitting (`pPXF`), high-

performance computing (HPC) pipelines, batch processing, reproducible workflow design

Programming & Tools: Python (modular scripting, data pipelines, visualization), LaTeX, Linux (Ubuntu/CentOS), Bash, version control (Git), vim

Additional Software Experience: MATLAB, CASA, IRAF/PyRAF, R, virtual machines (VMs)

Outreach & Service

Appointments

Public Relations Chair 2024 – present
Advancing Chicanos/Hispanics & Native Americans in STEM (SACNAS)
Texas A&M University

Chair April 2024
SACNAS Diversity in Science Symposium
Texas A&M University

President 2023 – 2024
Advancing Chicanos/Hispanics & Native Americans in STEM
Texas A&M University

Public Relations Chair 2022 – 2023
LatinX Graduate Student Association
Texas A&M University

Chair 2021 – 2023
Astronomy on Tap (AoT) Bryan/College Station

Co-Coordinator 2020 – 2023
Society for the Underrepresented in Physics & Astronomy
Texas A&M University

Co-Coordinator Fall 2022
Gateway to Graduate School
Texas A&M University

Mentoring

Mentor (2-4 undergraduate students) 2023, 2025
Vanguard STEM *Unbound Mentoring program*

Research Mentor (1 graduate student) Summer 2022
Astronomy project with Dr. Jenny Greene
Princeton University

Primary Mentor (3 first-year graduate students) 2020 – 2022
Mentoring and Advising Graduates in an Inclusive Community
Texas A&M University

Research Mentor (2 undergraduate students) Summer 2020
AggieStar Program: Fiber Optic Characterization for Unprecedented Sky Subtraction
Texas A&M University

Science Communication

Astronomy on Tap BCS (Bryan, TX)
- Talk: *Cosmic Feasts: A Tale of Galactic Cannibals* — September 2024
- Talk: *The Gravity of Our Universe* — August 2022
- Talk: *An Astrology Talk* — November 2021
- Talk: *Gravity (Remote)* — May 2020

SACNAS Meeting (Texas A&M) — October 2023
- Talk: *Graduate School 101*

Gateway to Graduate School (Texas A&M) — October 2022
- Talk: *Graduate School 101*

Skype a Scientist (Virtual, Minshew Elementary School) — January 2022
- Talk: *Skype a Scientist: Astronomy* (3 classrooms)

Warrior Scholar Project (Texas A&M) — 2020, 2021, 2022
- Talk: *Numerical Simulations in Astrophysics*

SUPA (Texas A&M) — July 2022
- Talk: *Femininity in Academia (Part 2)*
- Talk: *Femininity in Academia* — November 2021
- Talk: *Mental Health During the Pandemic (*Virtual*)* — January 2021

Astronomy on Tap BCS (Virtual) — January 2021
- Talk: *Fantastic Galaxies & Where to Find Them*

Texas A&M Society for Physics Students (Virtual) — November 2020
- Talk: *Implicit Bias in Science*

Warrior Scholar Project (Virtual, Columbia University) — July 2020
- Talk: *Numerical Simulations in Astrophysics*

Volunteering

Coordinator: SACNAS Coffee with Professors — October 2024
with Dr. Steven Villanueva
NASA Goddard Postdoctoral Fellow

Coordinator: SACNAS & LGSA Observing Night — September 2024

Volunteer: Texas A&M Physics Festival — April 2021, 2022, 2024

Coordinator: SACNAS Coffee with Professors — September 2024
with Dr. Jolene Ramsey
Assistant Professor Biology Department, Texas A&M

Coordinator: SACNAS Coffee with Professors — October 2024
with Dr. Joaquin Rodriguez-Nieva
Department of Physics & Astronomy, Texas A&M

MC/Speaker: Astronomy on Tap BCS — 2020 – 2023

Volunteer: Texas Science Olympiad — April 2022

Speaker: Skype A Scientist — January 2022

Volunteer: Conference for Undergraduate Women in Science — January 2020

Panelist: Conference for Undergraduate Women in Science — January 2020

Volunteer: Texas A&M Star Parties — Summer 2018