

Emily Alicea-Muñoz

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Professional Interests

Professional development of physics graduate teaching assistants; Assessment of teaching effectiveness; Introductory-level physics problem solving; Scientific communication; Educational development; Informal education in physics and astronomy; Diversity, Equity, and Inclusion (DEI) in physics and astronomy; Black holes and neutron stars; Gravitational waves; Cosmology

Education

Georgia Institute of Technology (Atlanta, GA)	
Ph.D. Physics, Doctoral Minor in Higher Education	2020
Pennsylvania State University (University Park, PA)	
M.S. Astronomy and Astrophysics	2011
University of Puerto Rico, Mayagüez Campus (Mayagüez, PR)	
B.S. Physics, Magna Cum Laude	2003

Certifications and Professional Development

Georgia Institute of Technology (Atlanta, GA)	
Career Well-Being Certificate	2025
The Inclusive STEM Teaching Project	2021
Tech To Teaching, Advanced Certificate	2014
Tech To Teaching, Intermediate Certificate	2013

Employment History

Georgia Institute of Technology (Atlanta, GA)	
Academic Professional	2021 – present
Research Technician	2020
NASA Goddard Space Flight Center (Greenbelt, MD)	
Student Trainee, Astrophysics Science Division	2004 – 2011

Teaching

Georgia Institute of Technology (Atlanta, GA)	
Instructor of Record (* = remote/online; † = coordination/administration)	
• PHYS 2211 – Principles of Physics I (Sections A, B†, C†, D†, E†, HP)	Spring 2026
• PHYS 6803 (formerly CETL 8000 PH1) – Physics GTA Preparation	Fall 2025
• PHYS 2211 – Principles of Physics I (Sections A, B†, C†, D†, E†, HP)	Fall 2025
• PHYS 2212 – Principles of Physics II (Section K*)	Summer 2025
• PHYS 2211 – Principles of Physics I (Sections A, B†, C†, D†, E†, F†, HP, R*)	Spring 2025
• PHYS 2211 – Intro Physics I (Sections A, B†, C†, D†, E†, F†, HP)	Fall 2024

- PHYS 2211 – Intro Physics I Remote (Sections R*, RBS*) Fall 2024
- PHYS 2212 – Intro Physics II Remote (Sections R*, RBS*) Fall 2024
- CETL 8000 PH1/PHYS 8001 – Physics GTA Preparation Fall 2024
- PHYS 8002 – Seminar/Responsible Conduct of Research Fall 2024
- PHYS 2211 – Intro Physics I (Sections A†, B†, C, D†, E†, HP) Spring 2024
- PHYS 2211 – Intro Physics I Remote (Section R*) Spring 2024
- PHYS 2212 – Intro Physics II Remote (Section R*) Spring 2024
- PHYS 2211 – Intro Physics I (Sections A†, B†, HP, K†, M†, N) Fall 2023
- PHYS 2211 – Intro Physics I Remote (Sections R*, RBS*) Fall 2023
- PHYS 2212 – Intro Physics II Remote (Sections R*, RBS*) Fall 2023
- CETL 8000 PH1 – Physics GTA Preparation Fall 2023
- PHYS 8002 – Seminar/Responsible Conduct of Research Fall 2023
- PHYS 2212 – Intro Physics II (Sections P†, Q) Spring 2023
- PHYS 2211 – Intro Physics I Remote (Section R*) Spring 2023
- PHYS 2212 – Intro Physics II Remote (Section R*) Spring 2023
- PHYS 2211 – Intro Physics I (Sections M†, N, R*, RBS*) Fall 2022
- PHYS 8002 – Seminar/Responsible Conduct of Research Fall 2022
- CETL 8000 PH1 – Physics GTA Preparation Fall 2022
- PHYS 2211 – Intro Physics I (Section M*) Summer 2022
- PHYS 2212 – Intro Physics II (Section K*) Summer 2022
- PHYS 2211 – Intro Physics I (Sections K, M†, R*) Spring 2022
- PHYS 2211 – Intro Physics I (Sections M†*, R*) Fall 2021
- PHYS 8002 – Seminar/Responsible Conduct of Research Fall 2021
- CETL 8000 PH1 – Physics GTA Preparation Fall 2021
- PHYS 2211 – Intro Physics I (Section M*) Summer 2021
- PHYS 2212 – Intro Physics II (Section K*) Summer 2021
- PHYS 2211 – Intro Physics I (Sections M†*, R*, SZ*) Spring 2021
- PHYS 2211 – Intro Physics I (remote / Sections M*, R*, SZ*) Fall 2020
- PHYS 8002 – Seminar/Responsible Conduct of Research* Fall 2020
- CETL 8000 PH1 – Physics GTA Preparation* Fall 2020
- PHIL 6000 – Responsible Conduct of Research (Sections A*, D*, E*) Summer 2020
- CETL 8000 PH1 – Physics GTA Preparation Fall 2019
- CETL 8000 PH1 – Physics GTA Preparation Fall 2018
- CETL 8000 PH1 – Physics GTA Preparation Fall 2017
- CETL 8000 PH1 – Physics GTA Preparation Fall 2016
- CETL 8000 PH1 – Physics GTA Preparation Fall 2015
- CETL 8000 PH1 – Physics GTA Preparation Fall 2014

Co-Instructor

- PHYS 2211 – Introduction to Physics I (SOUP*) Summer 2020
- PHYS 2212 – Introduction to Physics II (SOUP*) Summer 2020
- PHYS 2211 – Intro Physics I Remote (Section R*) Spring 2020
- PHYS 2212 – Intro Physics II Remote (Section R*) Spring 2020
- CETL 8000 PH1/PH2 – Physics GTA Preparation Fall 2013

Head TA

- PHYS 2211 – Introduction to Physics I (SOUP*) Summer 2019
- PHYS 2212 – Introduction to Physics II (SOUP*) Summer 2019

• PHYS 2212 – Introduction to Physics II (SOUP*)	Summer 2018
• PHYS 2212 – Intro Physics II (Sections P, Q)	Spring 2017
• PHYS 2211 – Introduction to Physics I (SOUP*)	Summer 2016
• PHYS 2212 – Intro Physics II (Sections P, Q)	Spring 2016
• PHYS 2211 – Intro Physics I (Sections C, M, N)	Fall 2015
• PHYS 2211 – Introduction to Physics I (SOUP*)	Summer 2015
• PHYS 2211 – Intro Physics I (Sections K, M, N)	Spring 2015
• PHYS 2211 – Intro Physics I (Sections M, N)	Fall 2014
• PHYS 2211 – Intro Physics I (Section K)	Spring 2014
• PHYS 2211 – Intro Physics I (Section M)	Fall 2013
• PHYS 2211 – Intro Physics I (Sections K, M, N)	Spring 2013

Teaching Assistant

• PHYS 2211 – Intro Physics I (Section R*)	Spring 2019
• PHYS 2212 – Intro Physics II (Section R*)	Spring 2019
• PHYS 2211 – Intro Physics I (Section R*)	Fall 2018
• PHYS 2212 – Intro Physics II (Section R*)	Fall 2018
• PHYS 2211 – Introduction to Physics I (SOUP*)	Summer 2017
• PHYS 2212 – Intro Physics II (curriculum revision)	Summer 2014
• PHYS 2211 – Intro Physics I (Flipped Lab Section M01)	Spring 2014
• Introductory Physics I with Laboratory MOOC*	Summer 2013
• PHYS 2211 – Intro Physics I (Lab Section N03)	Fall 2012

University of Texas at Brownsville (South Padre Island, TX)

Teaching Assistant, Third Gravitational Wave Astronomy Summer School

5 – 9 June 2006

- Week 2: Gravitational Waves Sources (Dr. M. Coleman Miller)

Pennsylvania State University (University Park, PA)

Teaching Assistant, ASTRO 011 – Introductory Astronomy Lab

Spring 2006

- Lab Section 9, Lab Section 12
- Development of TA Choice Lab (“Black Holes”)

Research

Georgia Institute of Technology (Atlanta, GA)

Academic Professional, School of Physics

2020 – present

- Physics GTA professional development
- Scientific communication in the classroom
- Socioeconomic barriers encountered by STEM majors
- Problem solving in introductory physics

Ph.D. Candidate (Physics Education Research), School of Physics

2012 – 2020

- Dissertation: Transforming the Preparation of Physics Graduate Teaching Assistants
- Supervisor: Dr. Michael F. Schatz

NASA Goddard Space Flight Center (Greenbelt, MD)

Student Trainee, Astrophysics Science Division

2004 – 2011

Code 663: Gravitational Astrophysics Laboratory

- Project: Black Hole Mergers as Probes of Structure Formation
- Supervisors: Dr. M. Coleman Miller, Dr. Joan M. Centrella

Intern, Summer Institute in Engineering and Computer Applications (SIECA) Summer 2003
 Code 662: X-Ray Astrophysics Laboratory
 • Project: PoST Pixel Differentiation at Low X-Ray Energies
 • Supervisor: Dr. Enectalí Figueroa-Feliciano

Harvard-Smithsonian Center for Astrophysics (Cambridge, MA) Summer 2002
 Intern, Smithsonian Astrophysical Observatory
 • Project: Search for Pulsations in Metal-Deficient Field Giants
 • Supervisor: Dr. Andrea K. Dupree

National Institute of Standards and Technology (Gaithersburg, MD) Summer 2001
 Summer Undergraduate Research Fellow
 • Project: Diffraction Effects in SURF Beamline 3
 • Supervisor: Dr. Eric L. Shirley

University of Puerto Rico, Mayagüez Campus (Mayagüez, PR) 2001 – 2002
 Undergraduate Research Assistant, Department of Physics
 • Project: Investigations of Single Pulses from Radio Pulsars
 • Supervisor: Dr. Leszek A. Nowakowski

Students Supervised

Georgia Institute of Technology (Atlanta, GA)
 Graduate Students
 • Steven W. Tarr Summer 2022 – present
 Dissertation: The Many Faces of Science Communication in the Classroom
 Undergraduate Students
 • Carson Hill Fall 2025 – Spring 2026
 Project: Characterizing student solutions to numeric problems
 • Abigail Creyts Fall 2024 – Fall 2025
 Project: Problem solving in introductory physics: numeric vs symbolic problems
 • Alex Ronemus Spring 2024 – Fall 2025
 Project: Exploring the self-reported workload of first-time physics GTAs
 • Dev Shah Spring 2024 – Summer 2024
 Project: Exploring student experiences with a science communication course by means of semi-structured interviews
 • Anika Jones Spring 2023 – Summer 2024
 Undergraduate Thesis: Barriers to STEM: Exploring physics students' path to the physics major
 • Gregory T. Carroll Spring 2022 – Fall 2023
 Project: A National Survey of Physics Graduate TA Preparation
 • Joan Esparragosa Masip (Universitat Politècnica de Catalunya) Fall 2016
 Undergraduate Thesis: Project: Effects of a Professional Development Program on GTA Teaching Effectiveness

Outreach

Georgia Institute of Technology (Atlanta, GA)
 Panelist, BORI Club Careers Panel 24 September 2025
 Panelist, SHPEtina Careers Panel 26 March 2025
 Volunteer, National Science Bowl 3 February 2024

Guest Lecturer, GT 1000 PHY – First-Year Seminar	2018 – 2023
• Presentation: “Black Holes”	
Public Talks for Breast Cancer Awareness	2021
• Presentation: “Breast cancer: detection, treatment, and survival // Things I wish I knew about breast cancer before my boob tried to kill me”	
Public Nights at the Georgia Tech Observatory	2012 – 2016
Summer Camp, “Thrill-A-Minute: Roller Coaster Physics”	2013 – 2015
Direct to Discovery (D2D) Participating Researcher	2013
The School Break, “Fun, Learn, Go! Summer Camp” (Austell, GA)	
Guest Speaker, “Space is the Place”	10 June 2013
NASA Goddard Space Flight Center (Greenbelt, MD)	
Volunteer, “Ask an Astrophysicist” Website	2006 – 2010
• http://imagine.gsfc.nasa.gov/docs/ask_astro/ask_an_astronomer.html	
University of Puerto Rico, Mayagüez Campus (Mayagüez, PR)	
Physics Week	2002, 2003
• Physics demos for high school students	
• “Physics Show” performance and organizing committee	
Caribbean Astronomical Society	2000 – 2002
• Helped with Open Houses at UPRM Planetarium and Observatory	
• Public talks in various astronomy topics (celestial mechanics, pulsars, stars)	

Service

Conference Organization, Professional Societies, and Peer Review

Reviewer for: APS GPER Mini-Awards, <i>Frontiers in Education</i> , <i>PERC Proceedings</i> , <i>Physical Review Physics Education Research</i> , POD Network Conferences, <i>The Physics Teacher</i>	
Physics & Astronomy SEA Change Implementation Sub-Committee	2024
Co-developer of evaluation rubric for APS GPER Mini-Awards	2022
Program Committee, Dynamics Days Conference 2022	7 – 8 January 2022
Parallel session organizer, PERC 2020	July 2020
Coordinator and Facilitator, Cottrell Scholars National TA Workshop 2019	29 – 31 May 2019
Coordinator and Facilitator, Cottrell Scholars National TA Workshop 2017	31 May – 2 June 2017
Pre-conference workshop organization, AAPT 2017 Winter Meeting	18 February 2017
Coordinator, Cottrell Scholars National TA Workshop 2015	27 – 29 May 2015
Coordinator, Cottrell Scholars National TA Workshop 2014	28 – 30 May 2014
Co-facilitator, Atlanta Public Schools Teachers’ Workshop	13 October 2012

Georgia Institute of Technology (Atlanta, GA)

Member, Undergraduate Advising and Assessment Committee, School of Physics	2025 – present
Member, Academic Programs Committee, School of Physics	2023 – present
Member, Teaching Effectiveness, Advocacy, and Mentoring (TEAM) Committee	2023 – present
Faculty Advisor, Society of Women in Physics (SWiP)	2020 – present
Academic Advising of Physics Undergraduate Majors, School of Physics	2020 – present
Member, Internal Advisory Board, Center for Programs to Increase Engagement in the Sciences (C-PIES)	2023 – 2025
Member, Astrophysics Non-Tenure Track Faculty Search Committee, School of Physics	2024 – 2025
Member, Community Excellence Committee, School of Physics	2020 – 2025
• Co-Chair (2021 – 2023)	

Member, Non-Tenure Track Faculty Search Committees (x2), School of Physics	2023, 2024
Member, Undergraduate Program Committee, School of Physics	2021 – 2023
Volunteer, Chestatee Academy recruitment visit to Georgia Tech	30 January 2019
Volunteer, FOCUS 2019	19 January 2019
Volunteer, 5th Annual Latino College & STEM Fair	18 March 2017
Volunteer, SW Miami High School recruitment visit to Georgia Tech	17 November 2016
Volunteer, Chestatee Academy recruitment visit to Georgia Tech	14 November 2016
Volunteer, 4th Annual Latino College & STEM Fair	19 March 2016
Volunteer, FOCUS 2016	14, 16 January 2016
Volunteer, Chestatee Academy recruitment visit to Georgia Tech	4 December 2015

NASA Goddard Space Flight Center (Greenbelt, MD)

Organizer, Gravitational Astrophysics, Instrumentation, and Numerics Journal Club	Spring 2007
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Pennsylvania State University (University Park, PA)

Member, Website Committee, Department of Astronomy and Astrophysics	2005 – 2006
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Honors and Awards

(46) Thank-a-Teacher Awards (PHYS 2211, PHYS 2212, CTEL 8000)	2020 – present
Eric R. Immel Memorial Award for Excellence in Teaching (GT College of Sciences)	2025
GT School of Physics Seed Funds (\$12k)	2023
OMED Tower Award (Georgia Tech)	2020
Weatherly Travel Award (Georgia Tech)	2017
SGA Conference Fund Award (Georgia Tech)	2017
Graduate Student Instructor of the Year (Georgia Tech)	2017
School of Physics Graduate Student Instructor of the Year (Georgia Tech)	2017
POD Network GPSD Career Development Award	2016
SGA Conference Fund Award (Georgia Tech)	2016
Goizueta Foundation Fellowship (Georgia Tech)	2015 – 2019
AAPT Outstanding Physics Teaching Assistant Award (Georgia Tech)	2015
AAPT Outstanding Physics Teaching Assistant Award (Georgia Tech)	2013
Time Off Award for Excellent Research Progress (NASA GSFC)	2010
Nominated, Sloan Fellows Program (Penn State)	2006, 2010
Bunton-Waller Fellowship (Penn State)	2003 – 2005
Braddocks/Roberts Fellowship (Penn State)	2003
Rahsaan Jackson Presentation Award (NASA GSFC)	2003
Enrico Fermi Physics Award (UPR Mayagüez)	2003

Professional Societies

American Association of Physics Teachers (AAPT)	2013 – present
• Physics Education Research Special Interest Group	
American Physical Society (APS)	2002 – present
• Topical Group on Physics Education Research (GPER); Forum on Early Career Scientists (FECS); Forum on Education (FEd)	
Professional and Organizational Development (POD) Network in Higher Education	2016 – 2022
American Astronomical Society (AAS)	2001 – 2022
Golden Key (GK) International Honour Society, UPRM Chapter	2001 – 2003
Caribbean Astronomical Society (CAS)	2000 – 2003
Society of Physics Students (SPS), UPRM Chapter	2000 – 2003
• Historian, Webmaster	

Book Chapters

1. V.K. Otero, E. Alicea-Muñoz. **Research on the Development of Faculty, Graduate Teaching Assistants, and Undergraduate Learning Assistants.** In *The International Handbook of Physics Education Research: Teaching Physics*, edited by M.F. Taşar and P. Heron. AIP Publishing, Melville, New York (2023)

Refereed Publications

1. S.W. Tarr, J.S. Brunner, E. Alicea-Muñoz, D.I. Goldman. **The value of hands-on experiments in an upper-division classical mechanics course.** *Emergent Scientist* 9, 1 (2025)
2. S.W. Tarr, E. Alicea-Muñoz. **Reflecting to Learn in a Physics Multimedia Communication Course.** *Physics Education Research Conference Proceedings* (2024)
3. S. Li, H.N. Gynai, S. Tarr, E. Alicea-Muñoz, P. Laguna, G. Li, D.I. Goldman. **A robophysical model of spacetime dynamics.** *Scientific Reports*, 13, 21589 (2023)
4. E. Alicea-Muñoz, C. Subiño Sullivan, M.F. Schatz. **Transforming the Preparation of Physics GTAs: Curriculum Development.** *Phys. Rev. Phys. Educ. Res.* 17, 020125 (2021)
5. E. Alicea-Muñoz, J. Espar Masip, C. Subiño Sullivan, M.F. Schatz. **Assessing a GTA professional development program.** *Physics Education Research Conference Proceedings* (2017)
6. S.S. Douglas, J.M. Aiken, S.Y. Lin, E.F. Greco, E. Alicea-Muñoz, M.F. Schatz. **Peer Assessment of Student-Produced Mechanics Lab Report Videos.** *Phys. Rev. Phys. Educ. Res.* 13, 020126 (2017)

Non-Refereed Publications

1. E. Alicea-Muñoz, M.C. Miller. **Black Hole Mergers as Probes of Structure Formation.** NASA Technical Reports Server (NTRS) Document ID 20080040733 (2008)

Works in Progress

1. E. Alicea-Muñoz, S.W. Tarr, G.T. Carroll, C. Subiño Sullivan, M.F. Schatz. **Transforming the Preparation of Physics GTAs II: Program Assessment.** [UNDER REVIEW, PHYS REV PER]

Seminars, Colloquia, and Invited Talks

1. **Physics GTA Preparation: Integrating physics, pedagogy, and professional development.** GT College of Sciences Teaching Celebration, Georgia Tech (Atlanta GA), 18 September 2025
2. **Training and professional development of physics GTAs.** Physics Colloquium, Department of Physics, Emory University (Atlanta GA), 28 January 2025
3. **Transforming the preparation of physics GTAs.** PER Seminar (remote), Department of Physics and Astronomy, University of Kansas, 9 March 2023
4. **Developing a comprehensive graduate TA preparation program.** Invited Talk, SESAPS: 89th Annual Meeting of the Southeastern Section of the American Physical Society (Oxford, MS), 4 November 2022
5. **Transforming the preparation of physics GTAs.** Invited Webinar (remote), American Association of Physics Teachers SEA Change webinar series, 18 October 2022
6. **Classroom observations as part of TA training.** Invited Talk, American Association of Physics Teachers 2022 Summer Meeting (Grand Rapids, MI), 11 July 2022
7. **Time Management for Physics TAs.** Invited Workshop (remote), Engaging Physics Tutoring Hub, Department of Physics, ETH Zürich, Switzerland, 28 April 2022
8. **Transforming the Preparation of Physics Graduate Teaching Assistants.** Physics Colloquium (remote), Department of Physics, Ohio State University, 26 January 2021

9. **Transforming the Preparation of Physics GTAs.** Juried Talk, Virtual Physics Education Research Conference, July 2020
10. **Roleplaying in GTA Preparation: Microteaching and Lab Simulation.** Invited Talk, American Association of Physics Teachers 2020 Virtual Summer Meeting, July 2020
11. **Transforming the Preparation of Physics Graduate Teaching Assistants.** PER Seminar, Department of Physics and Astronomy at Michigan State University (East Lansing, MI), 4 December 2019
12. **TA Professional Development: A Graduate Student's Perspective.** Invited Talk, APS March Meeting 2016 (Baltimore, MD), 17 March 2016
13. **Mentoring TAs: Lessons Learned from the Physics GTA Development Program.** Invited Talk, CETL Engaging Conversations Brown Bag Lunch Series, Georgia Tech (Atlanta, GA), 3 September 2014
14. **Black Hole Mergers as Probes of Structure Formation.** Colloquium, Astrophysics Science Division Seminar, NASA Goddard Space Flight Center (Greenbelt, MD), 4 June 2010
15. **Black Hole Mergers as Probes of Structure Formation.** Invited Talk, Department of Astrophysics, American Museum of Natural History (New York, NY), 8 February 2007

Contributed Research Talks

1. **Lessons learned from a decade of GTA preparation.** Contributed Talk, American Association of Physics Teachers 2024 Summer Meeting (Boston, MA), July 2024
2. **Remote GTA Preparation: The Good, the Bad, and the Ugly.** Contributed Talk, American Association of Physics Teachers 2021 Virtual Summer Meeting, July 2021
3. **Research Results and Best Practices for GTA Preparation.** Contributed Talk, American Association of Physics Teachers 2020 Virtual Summer Meeting, July 2020
4. **Looking back on six years of GTA preparation.** Contributed Talk, American Association of Physics Teachers 2019 Summer Meeting (Provo, UT), 22 July 2019
5. **What elements of GTA development do GTAs find most useful?** Contributed Talk, American Association of Physics Teachers 2017 Summer Meeting (Cincinnati, OH), 24 July 2017
6. **Effects of a professional development program on GTA teaching effectiveness.** Contributed Talk, American Association of Physics Teachers 2017 Winter Meeting (Atlanta, GA), 20 February 2017
7. **Disciplinary TA Development: Partnerships between Centers and Departments.** Interactive Session (co-presented with Dr. Carol Subiño Sullivan), 41st Annual POD Network Conference (Louisville, KY), 12 November 2016
8. **Design and Implementation of a Physics GTA Development Program.** Contributed Talk, American Association of Physics Teachers 2015 Summer Meeting (College Park, MD), 29 July 2015
9. **Training and Career Development of Physics Teaching Assistants.** Contributed Talk, American Association of Physics Teachers 2014 Summer Meeting (Minneapolis, MN), 28 July 2014
10. **Black Hole Mergers as Probes of Structure Formation.** Research Talk, 11th Eastern Gravity Meeting, Pennsylvania State University (University Park, PA), 13 May 2008
11. **Black Hole Mergers as Probes of Structure Formation.** Minute Talk, Extragalactic Astronomy Conference 2, NASA Goddard Space Flight Center (Greenbelt, MD), 14 September 2007
12. **Black Hole Mergers as Probes of Structure Formation.** Research Talk, Department of Astronomy and Astrophysics, Pennsylvania State University (University Park, PA), 6 March 2007
13. **Massive Black Hole Merger Rates.** Research Talk, 9th Eastern Gravity Meeting, Massachusetts Institute of Technology (Cambridge, MA), 24 March 2006

14. **Massive Black Hole Binary Merger Rates in a Hierarchical Model of Structure Formation.** Research Talk, SIECA Intern Presentations, NASA Goddard Space Flight Center (Greenbelt, MD), 3 August 2004
15. **PoST Pixel Differentiation at Low X-Ray Energies.** Research Talk, SIECA Intern Presentations, NASA Goddard Space Flight Center (Greenbelt, MD), 29 July 2003
16. **Pulsations in Metal-Deficient Field Giants.** Research Talk, Smithsonian Astrophysical Observatory Intern Symposium, Harvard-Smithsonian Center for Astrophysics, (Cambridge, MA), 14 August 2002
17. **Investigations of Single Pulses from Radio Pulsars.** Research Talk, 22nd Puerto Rico Interdisciplinary Scientific Meeting (Arecibo, PR), 16 March 2002
18. **Diffraction Effects in SURF Beamline 3.** Research Talk, Summer Undergraduate Research Fellows Colloquium, National Institute of Standards and Technology, (Gaithersburg, MD), 10 August 2001
19. **Investigations of Single Pulses from Radio Pulsar PSR 0540+23.** Research Talk, 21st Puerto Rico Interdisciplinary Scientific Meeting (Ponce, PR), 10 March 2001

Research Posters

1. A. Creyts, S.W. Tarr, E. Alicea-Muñoz. **Can Students Solve for x: Introductory Physics Students' Approaches to Problem Solving.** Physics Education Research Conference (Washington, DC), July 2025
2. S.W. Tarr, E. Alicea-Muñoz. **Defining success in science multimedia communication courses.** Physics Education Research Conference (Washington, DC), July 2025
3. A.K. Jones, E. Alicea-Muñoz. **Identifying Barriers to STEM in underrepresented groups.** Physics Education Research Conference (Boston, MA), July 2024
4. S.W. Tarr, E. Alicea-Muñoz. **Reflecting to Learn in a Physics Multimedia Communication Course.** Physics Education Research Conference (Boston, MA), July 2024
5. G.T. Carroll, E. Alicea-Muñoz. **A National Survey of Physics Graduate TA Preparation.** Physics Education Research Conference (Grand Rapids, MI), July 2022
6. E. Alicea-Muñoz, J. Espar Masip, C. Subiño Sullivan, M.F. Schatz. **Assessing a GTA Professional Development Program.** Physics Education Research Conference (Cincinnati, OH), July 2017
7. E. Alicea-Muñoz, C. Subiño Sullivan, M.F. Schatz. **GTA Preparation in the School of Physics.** Georgia Tech STEM Education Research Expo (Atlanta, GA), February 2015
8. E. Alicea-Muñoz, C. Subiño Sullivan, D. Koh, M.F. Schatz. **Training and Career Development of Physics Teaching Assistants.** Physics Education Research Conference (Minneapolis, MN), July 2014
9. E. Alicea-Muñoz, M.C. Miller. **Using Black Hole Mergers to Explore Structure Formation.** 213th Meeting of the American Astronomical Society (Long Beach, CA), January 2009
10. E. Alicea-Muñoz, M.C. Miller. **Using Black Hole Mergers to Explore Structure Formation.** 24th Texas Symposium on Relativistic Astrophysics (Vancouver, BC, Canada), December 2008
11. E. Alicea-Muñoz, J. Baker, J. Centrella, P. Laguna, M.C. Miller, M. Ricotti. **Massive Black Hole Merger Rates.** 207th Meeting of the American Astronomical Society (Washington, DC), January 2006
12. E. Alicea-Muñoz, J. Baker, J. Centrella, P. Laguna, R. Matzner. **Massive Black Hole Binary Merger Rates in a Hierarchical Model of Structure Formation.** APS April Meeting 2005 (Tampa, FL), April 2005
13. E. Alicea-Muñoz, A.K. Dupree. **Pulsations in Metal-Deficient Field Giants.** 201st Meeting of the American Astronomical Society (Seattle, WA), January 2003
14. E. Alicea-Muñoz, E.L. Shirley. **Diffraction Effects in SURF Beamline 3.** 22nd Puerto Rico Interdisciplinary Scientific Meeting (Arecibo, PR), March 2002

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