



DANIELLE MALDONADO

Graduate Research Assistant

Department of Physics and Astronomy, West Virginia University • 213 White Hall •
dcm00016@mix.wvu.edu

EDUCATION

WEST VIRGINIA UNIVERSITY (2021-present)

Ph.D. in Physics

WEST VIRGINIA UNIVERSITY (2021-2024)

M.S. in Physics

UNIVERSITY OF TEXAS AT AUSTIN (2017-2021)

B.S. in Biophysics

RESEARCH AND TEACHING EXPERIENCE

PHYSICS EDUCATION RESEARCH (2021-present)

West Virginia University - John Stewart Group

- Performed instrument development and validation to measure self-regulated learning behaviors in calculus-based introductory physics courses
- Designed a self-regulated learning intervention for a calculus-based introductory physics course
- Analyzed differences in student Big Five personality traits compared to self-efficacy and science identity in calculus-based introductory physics courses

MATHEMATICS EDUCATION RESEARCH (2022-2024)

West Virginia University - Tim McEldowney Group

- Analyzed data from a nationwide survey of undergraduate mathematics majors to identify perceptions of the graduate school admissions process, knowledge or lack thereof of the GRE General Test and GRE Math Subject Test, and barriers to applying to and attending graduate school in mathematics
- Compared responses based on access to mentorship, institutional research status, gender, and other variables

GRADUATE TEACHING ASSISTANT (2021-2022)

West Virginia University

- Instructor for the algebra-based introductory mechanics course for life science and non-physics majors



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PUBLICATIONS

- Maldonado, D., & Stewart, J. (2024). Comparing the evolution of self-regulated learning behaviors to academic performance, personality, and self-efficacy in the introductory physics classroom. [Submitted].
- Maldonado, D., McEldowney, T., Townsend, E., Miller, D., Deshler, J., & Michaluk, L. (2024). Differences in Undergraduate Mathematics Majors' Perceived Barriers to Graduate School by Gender [In preparation].
- McEldowney, T., Townsend, E., Maldonado, D., Michaluk, L., & Deshler, J. (2024). The Price Does Not Appear the Same for Everyone: Racial Differences in Students' Perceptions of the Mathematics Graduate School Application Process. In Proceedings of the Annual Conference on Research in Undergraduate Mathematics Education. Special Interest Group of the Mathematics Association of America on Research in Undergraduate Mathematics Education.
- McEldowney, T., Townsend, E., Maldonado, D., Michaluk, L., & Deshler, J. (2024). Undergraduate Gender Differences in Knowledge of the GRE and Perception of the GRE as a Barrier to Applying to Graduate Mathematics Programs. In Proceedings of the Annual Conference on Research in Undergraduate Mathematics Education. Special Interest Group of the Mathematics Association of America on Research in Undergraduate Mathematics Education.
- Maldonado, D., & Stewart, J. (2023). Adding self-regulated learning instruction to an introductory physics class. In Proceedings of the Physics Education Research Conference (PERC) (pp. 199-204).

CONFERENCES AND PRESENTATIONS

- Contributed talk, *Measuring self-regulated learning behaviors in an introductory physics course*. American Association of Physics Teachers Summer Meeting (2024).
- Contributed poster, *Development of a scale to measure self-regulated learning behaviors in an introductory physics course: A confirmatory factor analysis*. AAPT Summer Meeting (2024).
- Contributed poster, *Comparing the evolution of self-regulated learning behaviors to academic performance, personality, and self-efficacy in an introductory physics class*. Physics Education Research Conference (2024).
- Contributed talk and poster, *Adding self-regulated learning instruction to a physics class*. AAPT Summer Meeting (2023), PERC (2023), AAPT Appalachian Section Meeting (2022).
- Contributed poster, *The impact of mentoring on the mathematics graduate admissions process*. AAPT Summer Meeting (2023).
- Contributed poster, *The relation of personality to science identity*. AAPT Summer Meeting (2022).



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PROFESSIONAL SERVICE

FORUM ON EDUCATION EXECUTIVE COMMITTEE (2023-2025)

American Physical Society

- APS March and April Meeting Program Committee, 2024, 2025
- FEd liaison to the Forum on Outreach and Engaging the Public Program Committee, 2024, 2025
- FEd flyer and logo redesign - Membership Committee, 2024
- Excellence in Physics Education Award - Selection Committee, 2023
- Jonathan F. Reichert and Barbara Wolff-Reichert Award for Excellence in Advanced Laboratory Instruction - Selection Committee, 2023
- APS Fellowship - Selection Committee, 2023

FORUM ON GRADUATE STUDENT AFFAIRS EXECUTIVE COMMITTEE (2024-2025)

American Physical Society

- APS March and April Meeting Program Committee, 2025

CONFERENCE FOR UNDERGRADUATE WOMEN IN PHYSICS (2023-2024)

American Physical Society, West Virginia University

- Graduate co-leader of Local Organizing Committee
- Assisted in planning, organization, consultation, and execution of three-day conference, including schedule design, speaker invitations, resource assembly, volunteer management, session moderation, and conference oversight

AMERICAN PHYSICAL SOCIETY STUDENT AMBASSADOR (2023-present)

GRADUATE SCHEDULING REPRESENTATIVE (2022-present)

West Virginia University

- Reviewed proposed graduate course schedules each semester and gathered feedback from graduate students to report to the faculty scheduling committee

PHYSICS AND ASTRONOMY GRADUATE STUDENT ORGANIZATION (2021-present)

West Virginia University

- President, 2023 - 2024
- Organizer of Pi Day: Pie a Professor fundraiser, 2024



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PROFESSIONAL SERVICE cont.

PHYSICS AND ASTRONOMY GRADUATE STUDENT ORGANIZATION (2021-present)

West Virginia University

- Co-organizer and volunteer for Remake Learning Days: Physics and Astronomy Demo Day, 2023, 2024
- Co-organizer of graduate-undergraduate mentorship program, 2024
- Chair of Social Committee, 2023 - 2024
- First-year graduate student mentor, 2022 - 2024
- Vice President, 2022 - 2023
- Chair of Recruitment Committee, 2022 - 2023
- Member of Ad-Hoc Department Chair Search Committee, 2022
- Author of organization's Statement of Solidarity in response to the Dobbs vs. Jackson decision, 2022

TECHNICAL SKILLS

- Advanced proficiency in R and RStudio
- Intermediate proficiency in SPSS
- Quantitative data analysis experience with structural equation modeling, mediation and moderation analysis, predictive and causal modeling, cross-lagged panel design, instrument development and validation, and interpretation of statistical significance and effect criteria
- Qualitative data analysis experience with inter-rater reliability and code development
- Social and Behavioral Human Subject Research certification