

Bryan C. Busby

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EDUCATION

B.Sc. in Pure Mathematics, University of Puerto Rico, UPR Mayagüez

Expected 2027

RESEARCH EXPERIENCE

Researcher, Villanova University (REU) – Advisor: Alexander Díaz-López	2025–present
Studied arithmetical structures on graphs with emphasis on cycles with multi-edges. Contributed to manuscript in preparation.	
Researcher, UPR Mayagüez – Advisor: Omar Colón-Reyes	2024–present
Research on transient length bounds for Boolean monomial systems using graph-theoretical tools (walks, Frobenius number). Co-author on manuscript in preparation.	
Researcher, UPR Mayagüez (CARSE) – Advisor: Rafael Rodríguez Solís	2023
Developed GNU Radio program for RF propagation. Analyzed instrument tolerance effects on 5G propagation measurements.	
High School Researcher, CROEM – Advisor: Edwin Benvenutti	2021
Independent research on adjacency matrices and walks. Extended a known result in graph theory with applications to dynamical systems.	

MANUSCRIPTS IN PREPARATION

Arithmetical Structures on Cycles with a multi-edge (with Alexander Díaz-López)

Transient Length Boundary for Finite Dynamical Systems (with Omar Colón-Reyes)

PRESENTATIONS

Arithmetical Structures on Cycles with a multi-edge – MAA MathFest, Sacramento, CA	Aug 2025
Finite Dynamical Systems: Transient Bounds for Boolean Monomial Systems – SIDIM (PR Interdisciplinary Mathematics Symposium), UPR Ponce	May 2024
<i>(PR Interdisciplinary Mathematics Symposium), UPR Ponce</i>	
Development of Radio Wave Propagation Setup and Propagation Measurements at 5G Bands – UPR Mayagüez	2023
On the Adjacency Matrix and Walks – Regional Math Fair (PR Dept. of Education)	2021

EMPLOYMENT

Food Server, Mayagüez Resort & Casino, Mayagüez, PR	2025–present
Food Server, Romano's Macaroni Grill, Mayagüez Mall, PR	2023–2024

TECHNICAL SKILLS

Python, TeX.

LANGUAGES

Spanish (native); English (fluent).