

CHRISTINA DURÓN

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EDUCATION

Claremont Graduate University

Ph.D. in Mathematics | GPA: 3.81

Claremont, CA

May 2019

- **Dissertation:** "The Distribution of Betweenness Centrality in Exponential Random Graph Models"

University of Washington

Master's in Applied Mathematics | GPA: 3.74

Seattle, WA

June 2013

Swarthmore College

Bachelor of Arts in Mathematics, Computer Science Minor | GPA: 3.2

Swarthmore, PA

May 2012

PUBLICATIONS AND TECHNICAL REPORTS

Durón, C., Pan, Y., D. Gutmann, Hardin, J., and Radunskaya, A. **Variability of Betweenness Centrality and Its Effect on Identifying Essential Genes**, *Bulletin of Mathematical Biology*, doi:10.1007/s11538-018-0526-z, 2018.

Pan, Y., Durón, C., Bush, E., Sims, P., Hardin, J., Radunskaya, A., and Gutmann, D. **Graph Complexity Analysis Identifies an ETV5 Tumor-Specific Network in Human and Murine Low-Grade Glioma**, *PLOS ONE*, 13(5): e0190001, 2018.

D. Burkow, C. Durón, K. Heal, A. Vargas, L.A. Melara, **A Mathematical Model of the Emission and Optimal Control of Photochemical Smog**. Technical Report, MTBI-08- 07M, Mathematical and Theoretical Biology Institute, Arizona State University, 2011.

AWARDS AND GRANTS

The Jean E. Miller Excellence in Teaching Award

The Webb Schools of California

Claremont, CA

June 2018

- Presented annually to a full-time teacher, who has taught over three years at the Webb Schools, to recognize excellence in teaching and an outstanding impact on the schools

Daniel Pick Fellowship

Claremont Graduate University

Claremont, CA

Oct 2017

- Awarded \$10,000 to an IMS doctoral student who is conducting promising research in the area of molecular biology

TDA-BIO NSF Grant

ACM-BCB

Seattle, WA

Oct 2016

- Supported the participation and travel of graduate students in the ACM conference on Bioinformatics, Computational Biology, and Health Informatics

Joseph and Elizabeth Peeler Fellowship

Claremont Graduate University

Claremont, CA

Aug 2015 – June 2017

- Presented annually to a graduate student based on merit who is studying in the fields of mathematics and science

The Thompson and Vivian Webb Excellence in Teaching Award

The Webb Schools of California

Claremont, CA

June 2015

- Presented annually to a full-time teacher during their first three years at the Webb Schools to recognize excellence in teaching and an outstanding impact on the schools

The Heinrich W. Brinkmann Mathematics Prize

Swarthmore College

Swarthmore, PA

June 2012

- Presented annually by the Mathematics and Statistics Department to the student or students who submit the best paper on a mathematical subject

TEACHING EXPERIENCE

Postdoctoral Research Associate

University of Arizona

- Will teach nine units per year while maintaining an active research program

Tucson, AZ

August 2019 – present

High School Mathematics Teacher

The Webb Schools of California

- Faculty in both the Mathematics and Computer Science departments
- Taught 5 courses, each meeting a minimum of twice per week for 80-minutes
- Engaged in all elements of instructional planning, implementation, and assessment
- Developed a complete solution manual, lecture series, applications, and projects to supplement the mathematics curriculum
- Developed a lecture series, labs, and assignments to supplement the computer programming curriculum
- Developed curricula include Integrated Mathematics 2, Precalculus, Honors Precalculus, Introduction to Computer Programming with Python, and Advanced Placement Computer Science Principles
- Served yearly as an advisor for a group of 6-9 students, providing guidance in academic, extracurricular, social, and personal areas

Claremont, CA

Aug 2013 – June 2019

Laboratory Assistant

University of Washington

- Led two 2.5-hour study sessions per week to facilitate students in their development and application of numerical methods and MATLAB programming

Seattle, WA

Oct 2013 – June 2013

Linear Algebra Teaching Assistant

Swarthmore College

- Attended lectures and led weekly 2-hour study sessions to assist students in their understanding of the material and to provide help with homework

Swarthmore, PA

Jan 2012, Jan 2011

Computer Science Teaching Assistant

Swarthmore College

- Attended weekly lectures and led weekly 1.5-hour group sessions to aid students in their development of logic, documentation, debugging, and coding skills for assignments and in their preparation for exams

Swarthmore, PA

Jan 2010

RELATED PROFESSIONAL EXPERIENCE

Research Assistant

Pomona College

- Funded by a NIH grant, analyzed RNASeq data on a mouse model and identified important genes to target in Optic Glioma

Claremont, CA

Jan 2017 – June 2018

Math Summer Workshop Coordinator

Claremont Graduate University

- Recruited and enrolled high school students for a 2-week summer workshop that focused on developing programming skills by modeling real-world applications

Claremont, CA

June 2016 – June 2018

Math Summer Workshop Instructor

Claremont Graduate University

- Recruited, enrolled, organized, and co-instructed a 2-week summer workshop for high school students to learn Python programming and model the behavior of photogenic bacteria

Claremont, CA

June 2017

Math Summer Workshop Instructor

Claremont Graduate University

- Recruited, enrolled, organized, and co-instructed a 2-week summer workshop developed for high school students to learn MATLAB and write programs for SVD, noise reduction, GUIs, and k -means clustering

Claremont, CA

June 2016

Jet Propulsion Laboratory Intern

California Institute of Technology

- Participated in a 10-week, full-time summer internship that focused on the incorporation of inter-robot measurements, such as accelerometer, wheel odometry, visual odometry, and GPS, into the Extended Kalman Filter (EKF) to produce a more accurate state estimate for autonomous vehicles

Pasadena, CA

June 2015

- Participated in an 8-week program that focused on mathematical modeling and analysis techniques for tracking air pollution in Los Angeles

ACTIVITIES

Math Club Faculty Advisor

The Webb Schools of California

Claremont, CA

Aug 2017 – June 2019

- Scheduled speakers to deliver talks to high school students throughout the year that emphasized real-world mathematical applications
Assisted with fundraising and enrollment in competitions such as AMC, California Math League, Math Day at the Beach, and Interstellar

Women's Basketball Team Member

Swarthmore College

Swarthmore, PA

Aug 2008 – June 2012

- Participated at the Division III level and selected as a co-captain during senior year

Mathematics and Statistics Student Advisory Committee Member

Swarthmore College

Swarthmore, PA

Jan 2012, Jan 2011

- Offered input on hiring decisions, suggestions on the mathematics curriculum, served as a conduit for student concerns, and assisted with the recruitment of majors and minors

Community Based Learning Math Tutor

Swarthmore College

Swarthmore, PA

Jan 2011

- Tutored children in kindergarten through 12th grade who participated in an after-school program

AFFILIATIONS

- American Mathematical Society
- SIAM
- Association for Women in Mathematics

SKILLS

Programming Languages

- C
- C++
- MATLAB
- Python
- R
- Maple

Scientific Applications

- GitHub
- LaTeX
- RSweave

Languages

- English
- Spanish