Lucas Bouck

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Personal Website: http://lbouck.github.io

Education University of Maryland, College Park

Applied Math, Statistics, and Scientific Computing Program, (Currently Attending)

George Mason University B.S., Mathematics, May 2018

with Honors in the Major and Summa Cum Laude

Research Interests

Partial Differential Equations, Numerical Analysis, PDE-Constrained Optimization

Publications

Ian H. Bell, Bradley K. Alpert, and Lucas Bouck. "ChebTools: A C++11 (and Python) Library for Working with Chebyshev Expansions." Journal of Open

Source Software. 2018.

Invited Talks Student Research Talks (StReeTs)

George Mason University, Fairfax, VA, February 2018

Title: "Chebyshev Polynomials: Background and Root Finding in 2-D"

SIAM Central States Section Meeting Mini Symposium

Colorado State University, Ft. Collins, CO, September 2017 Title: "Fractional Dynamics for Quantum Random Walks"

Applied and Computational Math Seminar Talk

George Mason University, Fairfax, VA, September 2017

Title: "Root Finding with Chebyshev Polynomials in Two Dimensions"

Summer Undergraduate Research Fellowship Colloquim Talk

National Institute of Standards and Technology, Boulder, CO, August 2017 Title: "Root Finding with Chebyshev Polynomials in Two Dimensions"

Invited Seminar Talk

Naval Research Lab, Washington, D.C., May 2017

Title: "Fractional Dynamics for Quantum Random Walks"

Extreems-Qed Undergraduate Research Conference

University of William and Mary, Williamsburg, VA, March 2017

Title: "Fractional Dynamics for Quantum Random Walks"

Shenadoah Undergraduate Math and Statistics Conference

James Madison University, Harrisonburg, VA, September 2016

Title: "Introducing Fractional Dynamics to Quantum Random Walks"

Posters SciPy Conference 2018 Poster Session

Austin, TX, July 2018

Title: "Chebyshev Expansions: Background and Computing in the

C++/Python Library ChebTools"

Joint Math Meetings 2018 Student Poster Session

San Diego, CA, January 2018

Title: "Root Finding with Chebyshev Polynomials in Two Dimensions"

Joint Math Meetings 2017 Student Poster Session

Atlanta, GA, January 2017

Title: "Introducing Fractional Dynamics to Quantum Random Walks"

Events Attended

Nonlocal School on Fractional Equations

Iowa State University, Ames, IA, August 2017

Attended a three day summer school on fractional order partial differential equa-

Education Experience

Learning Assistant, George Mason University

January 2017-May 2017

Hold office hours and teach students supplementary material for a Calculus

III class

Math Tutor, George Mason University

August 2016-Present

Tutor students in math and physics courses ranging from lower to upper-

level.

Grader, George Mason University

September 2015-December 2015

Graded guizzes for a Discrete Mathematics Class

Awards and Funding

NSF Graduate Research Fellowship

May 2018

Brin Fellowship

May 2018

Klaus Fischer Academic Achievement Award in Mathematics

May 2018

Awarded for performance in math classes at GMU.

Goldwater Scholarship Honorable Mention

March 2017

Received an honorable mention for the most prestigious undergraduate scholarship in the natural sciences, mathematics, and engineering in America.

Outstanding Poster Award

January 2017

Awarded to the top 15% of posters based on judges' scores in each topic area at the student poster session at the 2017 Joint Math Meetings.

Amer Bešlagić Award

April 2016

Awarded for performance in math classes during first two years at GMU.

University Scholarship

August 2014

George Mason University's highest value and most prestigious undergraduate scholarship.

Dean's List

Fall 2014-Spring 2018

Technical Skills Python, C++, Java, LATEX, MATLAB