

# Lucas Bouck

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## Education

**George Mason University**  
B.S., Mathematics, May 2018 (Expected)  
Minor: Computer Science  
Overall GPA: 3.98  
Math GPA: 4.00

## Math Coursework

**George Mason University**  
Calculus I and II (AP Credit), Calculus III (A+), Discrete Mathematics (A+), Linear Algebra (A+), Differential Equations (A+), Intro to Advanced Math (A+), Numerical Analysis I (A+), Numerical Analysis II (A), Advanced Calculus I (A+), Advanced Linear Algebra (A+), Abstract Algebra (A+), Modern Applied Math I (A+), Intro to Partial Differential Equations with Numerical Methods (A+)

## Other Relevant Coursework

**George Mason University**  
Probability and Statistics for Engineers and Scientists I and II (A), Intro to Computer Programming (A+), University Physics I (A+), General Chemistry I and II (AP Credit)

## Current Coursework

**George Mason University**  
Advanced Calculus II, Functions of a Complex Variable,  
Graduate Course in Calculus of Variations, Object Oriented Programming

## Research Experience

**Department of Mathematical Sciences, George Mason University**  
January 2016-Present  
Currently conducting NSF funded research in applied mathematics on modeling quantum random walks with partial differential equations, under the mentorship of Dr. Harbir Antil.

## Conferences & Publications

**Shenadoah Undergraduate Math and Statistics Conference**  
September 2016  
Title: "Introducing Fractional Dynamics to Quantum Random Walks"  
Gave a talk on my research at James Madison University.

**Joint Math Meetings Student Poster Session**  
January 2017  
Title: "Introducing Fractional Dynamics to Quantum Random Walks"  
Presenting a poster to judges at the Joint Math Meetings in Atlanta, GA.

**Roosevelt Institute's Ten Ideas: Economic Development**  
Spring 2016  
Title: "Supporting Scholars: Rent Relief for Students in Fairfax City"  
Wrote a policy proposal with two co-authors on implementing a student rent relief program in Fairfax City that mirrors their current program for seniors.

## Work Experience

### **Math Tutor, George Mason University**

August 2016-Present

Tutor students in math, physics, and computer science courses ranging from lower to upper-level.

### **Math Quiz Grader, George Mason University**

September 2015-December 2015

Graded quizzes for Dr. Geir Agnarsson's Discrete Math Class

### **Caddy, Columbine Country Club**

April 2014-August 2015

I worked as an A-caddy. I performed various services for the golfer. I also gave course knowledge and advice when appropriate.

### **Taekwondo Instructor, JW Kim Taekwondo**

February 2012-July 2014

I taught Taekwondo to many students ranging from age 4 to adult. I ran drills, gave advice and feedback to students, and helped with planning classes.

### **Challenge Course Facilitator, Cherry Creek High School**

January 2013-June 2014

I facilitated challenge course programs ranging in length, group age, and group ability level. I also led three semesters of Adventure Education classes, two semesters to train future leaders in the program.

## Awards

### **University Scholarship**

August 2014

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

### **Amer Bešliagić Award**

April 2016

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

### **Dean's List**

Fall 2014-Fall 2016

### **Phi Kappa Phi Member**

April 2016

### **Golden Key Society Member**

October 2015

### **Eagle Scout**

December 2012

## Research Interests

Differential Equations, Numerical Analysis

## Technical Skills

Python, Matlab, L<sup>A</sup>T<sub>E</sub>X, Mathematica, HTML, Bash, Minitab, Microsoft Suite