

Jeffrey LaComb

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Education:

- Duke University, Fall 2014-Present
 - Earned Master of Arts in Mathematics, Jan. 2018
 - Ph.D in Mathematics, expected Summer 2019
 - Adviser: Dr. Jianfeng Lu
 - Tentative Thesis Title: “Asymptotic Analysis and Rare Event Simulation for Failure Probabilities in Materials Science”
 - Certificate in College Teaching, expected Summer 2019
 - Statistical and Applied Mathematical Sciences Institute (SAMSI) Graduate Fellow, 2016-2017
- Rensselaer Polytechnic Institute (RPI), Fall 2011-Spring 2014
 - Graduated with Bachelor of Science in Mathematics, Cumulative GPA 4.0/4.0, Dec. 2013

Teaching Experience:

- Multivariable Calculus for Economics (Math 202) TA, Duke, Spring 2019
- Lab Calculus I (Math 111L) Instructor, Duke, Fall 2018
- Multivariable Calculus (Math 212) Grader/TA, Duke, Summer 2018
- Lab Calculus and Functions I (Math 105L) Grader, Duke, Summer 2018
- Lab Calculus and Functions I (Math 105L) Instructor, Duke, Spring 2018
- Lab Calculus II (Math 112L) Instructor, Duke, Fall 2017
- Linear Algebra and Differential Equations (Math 216) TA, Duke, Fall 2015
- Lab Calculus I (Math 111L) Lab TA, Duke, Fall 2014
- Fundamentals of Geometry (Math 4120), Grader/TA, RPI, Spring 2014
- Foundations of Analysis (Math 4090), Grader/TA, RPI, Spring 2014
- Math Mentor, RPI, Fall 2012

Mentoring Roles:

- DOMath, Duke, Summer 2018
 - Along with Alex Watson (Assistant Research professor at Duke and the project leader) I advised two undergraduate math students on a 2 month summer research project, entitled “Topological Quantum Edge States”.
- Undergraduate Workshop on Optimization, SAMSI, Spring 2017
 - I served on a panel answering questions about graduate school from undergrad attendees.
- Undergraduate Workshop on Astronomy, SAMSI, Fall 2016
 - I served on a panel answering questions about graduate school from undergrad attendees.

- Math Biology Undergraduate Workshop, Duke, Summer 2015

-I helped advise two undergraduate students on week long research projects relating to math-bio.

Research Interests:

- Applied Math, specifically with applications in Material Science and Biology, Dynamical Systems, Numerical Analysis, Rare Event Simulation, Optimization

Awards:

- Summer Research Fellowship, Duke, Summer 2017
- Founders Award for Excellence, RPI, Fall 2013
- Rensselaer Medal, RPI, Fall 2011

Presentations:

- SAMSI Graduate Poster Session, Title: “Computation of Transition Pathways for Large Scale Dynamical Systems”, Spring 2017

Workshop/Conference Participation:

- Workshop on Stochastic Sampling and Accelerated Time Dynamics on Multidimensional Surfaces, Institute for Pure and Applied Mathematics (IPAM), Fall 2017
- Optimization Closing Workshop, SAMSI, Spring 2017
- Triangle Area Graduate Math Conference (TAGMaC), Duke, Spring 2017
- Optimization Opening Workshop, SAMSI, Fall 2016

Computer Skills:

- Proficient in programming in C++, Python, Julia, MATLAB, and Maple
- Proficient in the use of LaTeX

Professional Memberships:

- American Mathematical Society
- Society for Industrial and Applied Mathematics