# D. Zack Garza

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**EDUCATION**

**University of Georgia**, Athens,GA, USA — Aug 2019 – Present
- Ph.D. in Mathematics (Expected)

**University of California, San Diego**, La Jolla, CA, USA — Aug 2015 – Jun 2018
- B.S. Mathematics
- Minor in Computer Science
- Major GPA: 3.723

**University of California, Berkeley**, Berkeley, CA, USA — Sep 2014 – Jun 2015
- Concurrent Enrollment
  - CS 70: Discrete Mathematics and Probability Theory
  - EE 20: Structure and Interpretation of Systems and Signals
- Cumulative GPA: 3.33

**Sierra College**, Rocklin, California, USA — Sep 2011 – Jun 2014
- A.A. Mathematics
- A.S. Physics
- A.A. Fine Arts

**PRESENTATIONS**
- Poster: *Spectral Sequences and Higher Homotopy Groups of Spheres*
  UC San Diego Undergraduate Research Symposium — May 2018

**WORKSHOPS AND TALKS**
- Mathematics Subject GRE Workshop — Mar 2019
- Homotopy and the Hopf Fibration — Jun 2018
- Topological Fixed Point Theorems — Mar 2018

- Homology and The Snake Lemma — Nov 2017
- Algebraic Geometry: A Historical Primer — Oct 2017
- Introduction to Functional Programming — Oct 2017
- Intermediate LaTeX — May 2017
- Introduction to LaTeX — Apr 2017
- Intermediate LaTeX — Feb 2017
- Organizing Research Projects with LaTeX — Jan 2017
- Category Theory as an Organizational Tool — Jan 2017

- Introduction to LaTeX — Nov 2016
- Introduction to Category Theory, Part 2 — Nov 2016
- Introduction to Category Theory, Part 1 — Oct 2016
- Haskell for Mathematicians — Oct 2016
- Discrete Mathematics: Graphs and Trees — May 2014

**AWARDS**
- UC San Diego Academic Enrichment Program
  Summer Undergraduate Research Scholarship (Declined) — 2018
- Diana C. Miles Scholarship — 2017 – 2018
- Errett Bishop Scholarship — 2016 – 2017
- Richard L. and Fern W. Erion and Laidlaw-Erion Scholarship — 2016 – 2017
- Provost Honors (Muir College, UC San Diego) — 2015 – 2016

**SERVICE**

**President, Society of Undergraduate Mathematics Students**, UC San Diego — 2016 – 2018

**Officer, Mathematics Club**, Sierra College — 2013 – 2014

**TEACHING**

University of Georgia
- Graduate School Teaching Seminar (GRSC 7770) — Fall 2019

Private Tutoring                                                              2014 – Present
- Calculus, Linear Algebra, Differential Equations,
  Real Analysis, Abstract Algebra, Complex Analysis,
  Point-Set Topology, Number Theory, Probability

**WORK EXPERIENCE**

**Retail Scientifics**, San Diego, CA                                        Jan 2016 – Aug 2019
- Data Scientist & Full Stack Engineer
  - API development for real-time predictive modeling, time-series forecasting, and machine learning.

**Google Summer of Code**, Berkeley, CA                                      Apr 2015 – Aug 2015
- Student Developer
  - Contributed Haskell code to the open source project Hackage.

**Shutterfly**, Santa Clara, CA                                             Jun 2014 – Jan 2015
- Software Engineer, Intern/Contractor
  - Developed server-side OpenGL 3D graphics engine and associated mathematical libraries.

**CONFERENCES ATTENDED**
- University of Maryland Geometry Festival                                   May 2019
- Arizona Winter School: Topology and Arithmetic                            Apr 2019
- UC San Diego Complex Algebraic Geometry                                    Jan 2019

**COURSEWORK**

**Graduate Coursework**
- Algebraic Topology                                                  Fall 2017 – Spring 2018
- Quantum Mechanics for Mathematicians                                       Spring 2017
- Functional Analysis                                                 Fall 2016 – Winter 2017
- Algebra                                                                     Fall 2017

**Undergraduate Coursework**
- Cryptography                                                               Winter 2018
- Numerical Methods and Physical Modeling                                    Fall 2017
- Image Processing                                                           Fall 2017

- Applied Linear Algebra                                                     Summer 2017
- Partial Differential Equations                                            Summer 2017
- Computer Vision                                                            Spring 2017
- Complex Analysis                                                           Spring 2017
- History of Mathematics (Hyperbolic Geometry)                              Spring 2017
- Theory of Computation                                                      Winter 2017
- Introductory Machine Learning                                             Winter 2017
- Discrete Math and Graph Theory                                            Winter 2017
- Design and Analysis of Algorithms                                          Fall 2016

- Number Theory                                                             Summer 2016
- Advanced Data Structures                                                   Spring 2016
- Knot Theory                                                                Spring 2016
- Point-Set Topology                                                        Winter 2015
- Mathematical Algorithms and Systems Analysis in Computer Science          Winter 2015
- Probability                                                               Winter 2015
- Software Tools and Techniques                                             Winter 2015
- Combinatorics                                                              Fall 2015
- Abstract Algebra                                                    Fall 2015 – Spring 2016
- Real Analysis                                                       Fall 2015 – Spring 2016

- Mathematical Reasoning and Proof                                          Summer 2015
- Vector Calculus                                                           Summer 2015
- Structure and Interpretation of Signals and Systems                       Spring 2015
- Assembly Programming (x86)                                                Spring 2015
- C++ Programming                                                           Spring 2015
- Finite Mathematics and Linear Programming                                 Spring 2015
- Discrete Mathematics and Probability Theory                                Fall 2014

- Structure and Interpretation of Computer Programs (Python)    Fall 2014

- Elementary Statistics    Summer 2014
- Introduction to Unix    Summer 2014
- Discrete Mathematics    Spring 2014
- Electrical Circuit Theory    Spring 2014
- Differential Equations and Linear Algebra    Spring 2014
- Data Structures    Fall 2012

- General Chemistry    Spring 2013 – Summer 2013
- Physics: Mechanics, Electromagnetism, Optics, and Waves    Fall 2012 – Spring 2013
- Calculus: Single and Multivariable    Fall 2012 – Spring 2013
- Systems Programming with C    Fall 2012
- Discrete Structures in Computer Science    Fall 2012
- Object-Oriented Programming    Spring 2012