D. Zack Garza

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EDUCATION

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

University of California, San Diego, La Jolla, CA, USA — Aug 2015 – Jun 2018
- B.S. in Pure 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. in Mathematics
- A.S. in Physics
- A.A. in 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

- Louise Hoffmasterand and Frank R. Etchberger Graduate Scholarship — 2019 – 2020
- UC San Diego Academic Enrichment Program
  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 of the Society of Undergraduate Mathematics Students at UC San Diego — 2016 – 2018

Officer of the Mathematics Club at 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

CONFERENCES

- University of Maryland Geometry Festival — May 2019
- Arizona Winter School: Topology and Arithmetic — Apr 2019
- UC San Diego Complex Algebraic Geometry — Jan 2019
- Witt Vectors, Deformations, and Absolute Geometry — Jun 2018
- Latinx in the Mathematical Sciences — Mar 2018

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.

COURSEWORK

Graduate Coursework

- Algebra — Fall 2019
- Real Analysis — Fall 2019
- Differential Topology — Fall 2019
- Lie Algebras — Fall 2019
- 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