# D. Zack Garza

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EDUCATION	University of Georgia, Athens,GA, USA	Aug 2019 – Present
	<ul><li>Ph.D. in Mathematics (Expected)</li></ul>	
	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
	<ul> <li>Concurrent Enrollment</li> <li>CS 70: Discrete Mathematics and Probability Theory</li> <li>EE 20: Structure and Interpretation of Systems and Signals</li> <li>Cumulative GPA: 3.33</li> </ul>	
	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	<ul> <li>Mathematics Subject GRE Workshop</li> </ul>	Mar 2019
TALKS	<ul> <li>Homotopy and the Hopf Fibration</li> </ul>	Jun 2018
	■ Topological Fixed Point Theorems	Mar 2018
	■ Homology and The Snake Lemma	Nov 2017
	<ul> <li>Algebraic Geometry: A Historical Primer</li> </ul>	Oct 2017
	<ul> <li>Introduction to Functional Programming</li> <li>Intermediate LATEX</li> </ul>	Oct 2017 May 2017
	■ Introduction to LATEX	Apr 2017
	■ Intermediate LATEX	Feb 2017
	<ul> <li>Organizing Research Projects with L<sup>A</sup>T<sub>E</sub>X</li> </ul>	Jan 2017
	<ul> <li>Category Theory as an Organizational Tool</li> </ul>	Jan 2017
	■ Introduction to L <sup>A</sup> T <sub>E</sub> X	Nov 2016
	Introduction to Category Theory, Part 2	Nov 2016
	<ul><li>Introduction to Category Theory, Part 1</li><li>Haskell for Mathematicians</li></ul>	Oct 2016 Oct 2016
	<ul> <li>Discrete Mathematics: Graphs and Trees</li> </ul>	May 2014
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AWARDS	<ul> <li>UC San Diego Academic Enrichment Program</li> <li>Summer Undergraduate Research Scholarship (Declined)</li> </ul>	2018
	■ Diana C. Miles Scholarship	2017 – 2018
	■ Errett Bishop Scholarship	2016 - 2017
	Richard L. and Fern W. Erion and Laidlaw-Erion Scholarship	2016 – 2017
	<ul><li>Provost Honors (Muir College, UC San Diego)</li></ul>	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	
IEACHING		Fall 2019
	<ul> <li>Graduate School Teaching Seminar (GRSC 7770)</li> </ul>	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

Fall 2015 - Spring 2016

- Software Engineer, Intern/Contractor
  - Developed server-side OpenGL 3D graphics engine and associated mathematical libraries.

## **CONFERENCES ATTENDED**

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

## **COURSEWORK**

## **Graduate Coursework**

<ul> <li>Algebraic Topology</li> </ul>	Fall 2017 – Spring 2018
<ul> <li>Quantum Mechanics for Mathematicians</li> </ul>	Spring 2017
■ Functional Analysis	Fall 2016 – Winter 2017
■ Algebra	Fall 2017

# **Undergraduate Coursework**

■ Real Analysis

<ul> <li>Cryptography</li> <li>Numerical Methods and Physical Modeling</li> <li>Image Processing</li> </ul>	Winter 2018 Fall 2017 Fall 2017
Applied Linear Algebra	Summer 2017
Partial Differential Equations	Summer 2017
■ Computer Vision	Spring 2017
■ Complex Analysis	Spring 2017
<ul> <li>History of Mathematics (Hyperbolic Geometry)</li> </ul>	Spring 2017
■ Theory of Computation	Winter 2017
■ Introductory Machine Learning	Winter 2017
<ul> <li>Discrete Math and Graph Theory</li> </ul>	Winter 2017
<ul><li>Design and Analysis of Algorithms</li></ul>	Fall 2016

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

<ul> <li>Mathematical Reasoning and Proof</li> </ul>	Summer 2015
<ul> <li>Vector Calculus</li> </ul>	Summer 2015
<ul> <li>Structure and Interpretation of Signals and Systems</li> </ul>	Spring 2015

 Assembly Programming (x86) Spring 2015 ■ C++ Programming Spring 2015

<ul> <li>Finite Mathematics and Linear Programming</li> <li>Discrete Mathematics and Probability Theory</li> <li>Structure and Interpretation of Computer Programs (Python)</li> </ul>	Spring 2015 Fall 2014 Fall 2014
<ul><li>Elementary Statistics</li><li>Introduction to Unix</li></ul>	Summer 2014 Summer 2014
Discrete Mathematics	Spring 2014
<ul><li>Electrical Circuit Theory</li><li>Differential Equations and Linear Algebra</li></ul>	Spring 2014 Spring 2014
■ Data Structures	Fall 2012
■ General Chemistry	Spring 2013 – Summer 2013
<ul> <li>Physics: Mechanics, Electromagnetism, Optics, and Waves</li> </ul>	Fall 2012 – Spring 2013
■ Calculus: Single and Multivariable	Fall 2012 – Spring 2013
<ul> <li>Systems Programming with C</li> </ul>	Fall 2012
■ Discrete Structures in Computer Science	Fall 2012
■ Object-Oriented Programming	Spring 2012