

# D. Zack Garza

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EDUCATION	<b>University of Georgia</b> , Athens, GA, USA	Aug 2019 – Present
	▪ Ph.D. in Mathematics (Expected)	
	<b>University of California, San Diego</b> , La Jolla, CA, USA	Aug 2015 – Jun 2018
	▪ B.S. Mathematics ▪ Minor in Computer Science ▪ Major GPA: 3.723	
	<b>University of California, Berkeley</b> , 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	
	<b>Sierra College</b> , Rocklin, California, USA	Sep 2011 – Jun 2014
	▪ A.A. Mathematics ▪ A.S. Physics ▪ A.A. Fine Arts	
PRESENTATIONS	▪ Poster: <i>Spectral Sequences and Higher Homotopy Groups of Spheres</i> 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 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	<b>President, Society of Undergraduate Mathematics Students</b> , UC San Diego	2016 – 2018
	<b>Officer, Mathematics Club</b> , Sierra College	2013 – 2014
TEACHING	University of Georgia	
	▪ Graduate School Teaching Seminar (GRSC 7770)	Fall 2019

	Private Tutoring	2014 – Present
	<ul style="list-style-type: none"> <li>Calculus, Linear Algebra, Differential Equations, Real Analysis, Abstract Algebra, Complex Analysis, Point-Set Topology, Number Theory, Probability</li> </ul>	
<b>CONFERENCES</b>	<ul style="list-style-type: none"> <li>University of Maryland Geometry Festival</li> <li>Arizona Winter School: Topology and Arithmetic</li> <li>UC San Diego Complex Algebraic Geometry</li> <li>Witt Vectors, Deformations, and Absolute Geometry</li> <li>Latinx in the Mathematical Sciences</li> </ul>	May 2019 Apr 2019 Jan 2019 Jun 2018 Mar 2018
<b>WORK EXPERIENCE</b>	<b>Retail Scientifics</b> , San Diego, CA <ul style="list-style-type: none"> <li>Data Scientist &amp; Full Stack Engineer               <ul style="list-style-type: none"> <li>API development for real-time predictive modeling, time-series forecasting, and machine learning.</li> </ul> </li> </ul> <b>Google Summer of Code</b> , Berkeley, CA <ul style="list-style-type: none"> <li>Student Developer               <ul style="list-style-type: none"> <li>Contributed Haskell code to the open source project Hackage.</li> </ul> </li> </ul> <b>Shutterfly</b> , Santa Clara, CA <ul style="list-style-type: none"> <li>Software Engineer, Intern/Contractor               <ul style="list-style-type: none"> <li>Developed server-side OpenGL 3D graphics engine and associated mathematical libraries.</li> </ul> </li> </ul>	Jan 2016 – Aug 2019 Apr 2015 – Aug 2015 Jun 2014 – Jan 2015
<b>COURSEWORK</b>	<b>Graduate Coursework</b> <ul style="list-style-type: none"> <li>Algebraic Topology</li> <li>Quantum Mechanics for Mathematicians</li> <li>Functional Analysis</li> <li>Algebra</li> </ul> <b>Undergraduate Coursework</b> <ul style="list-style-type: none"> <li>Cryptography</li> <li>Numerical Methods and Physical Modeling</li> <li>Image Processing</li> <li>Applied Linear Algebra</li> <li>Partial Differential Equations</li> <li>Computer Vision</li> <li>Complex Analysis</li> <li>History of Mathematics (Hyperbolic Geometry)</li> <li>Theory of Computation</li> <li>Introductory Machine Learning</li> <li>Discrete Math and Graph Theory</li> <li>Design and Analysis of Algorithms</li> <li>Number Theory</li> <li>Advanced Data Structures</li> <li>Knot Theory</li> <li>Point-Set Topology</li> <li>Mathematical Algorithms and Systems Analysis in Computer Science</li> <li>Probability</li> <li>Software Tools and Techniques</li> <li>Combinatorics</li> <li>Abstract Algebra</li> <li>Real Analysis</li> <li>Mathematical Reasoning and Proof</li> <li>Vector Calculus</li> <li>Structure and Interpretation of Signals and Systems</li> <li>Assembly Programming (x86)</li> <li>C++ Programming</li> </ul>	Fall 2017 – Spring 2018 Spring 2017 Fall 2016 – Winter 2017 Fall 2017 Winter 2018 Fall 2017 Fall 2017 Summer 2017 Summer 2017 Spring 2017 Spring 2017 Spring 2017 Winter 2017 Winter 2017 Winter 2017 Fall 2016 Summer 2016 Spring 2016 Spring 2016 Winter 2015 Winter 2015 Winter 2015 Winter 2015 Fall 2015 Fall 2015 – Spring 2016 Fall 2015 – Spring 2016 Summer 2015 Summer 2015 Spring 2015 Spring 2015 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