

Jonathan Alcaraz

EDUCATION

Enrolled

PhD in Mathematics

University of California, Riverside

Thesis Advisor: Stefano Vidussi

2018

M.S. in Pure Mathematics

University of California, Riverside

2016

B.S. in Pure Mathematics

University of California, Riverside

TEACHING EXPERIENCE

2018-2021

Associate-In Instructor

University of California, Riverside

See full teaching history below.

2016-Present

Teaching Assistant

University of California, Riverside

See full teaching history below.

AWARDS AND FELLOWSHIPS

Chancellor's Distinguished Fellowship

2016

Outstanding Teaching Assistant Award

2019-2020

Vernon A. Kramer Memorial Service Award

2019-2020

Jones Junior Fellowship

2021

CNAS Diversity, Equity, and Inclusion Award

2021

Teaching Assistant Fellowship

2021-2022

Dissertation Year Program Fellowship

2021-2022

CONTACT

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math.jonathanalcaraz.com

SERVICE

PMA Grad Student Mentor

2019-Present

Graduate student mentor and organizer for the UCR Student Chapter of the Pacific Math Alliance.

Vice-President of AMS Student Chapter

2019-2021

Vice-President of the graduate student chapter of the American Math Society at UCR. Responsible for co-organizing the UCR Math Graduate Student Seminar.

Graduate Student Ambassador

2019-2021

Volunteer position helping the UCR Math department with recruitment of new graduate students.

MathConnections Conference Co-Organizer

2019

Organizing a graduate student conference at UCR in an effort bring together the math community in Southern California.

SKILLS

Proficiency with LaTeX

Proficiency with Google Products

TEACHING-RELATED PROJECTS

Topology Qualifying Exam Prep Seminar

2019-2020

In charge of leading a seminar for grad students who are preparing for their qualifying exam in Topology. Duties include compiling and sharing study materials, sharing and presenting solutions to practice problems, and moderating discussions regarding the material.

Microtutorials in Mathematics

2017-2019

Participated in the creation of videos for supplemental instruction for undergraduate calculus classes, including Calculus for Life Sciences and Business Calculus. Duties include finding appropriate problems, writing scripts, and performing solutions to be recorded.

Advanced Mathematics Program

2019

Instructor for a summer program for students transitioning from lower-division to upper-division coursework; providing crash courses in Real Analysis and Group Theory meant to prepare the students for the material they would see in their proof-based courses. Duties include preparing and presenting mini-lectures, moderating discussions, compiling exercises, and being available for mentorship.

Undergraduate Research

2019

Together with another graduate student, mentored a group of undergraduates working on a research project as part of a department undergraduate research program. The project involved learning about bistellar flips of triangulations of convex hulls in Euclidean space. Duties include assigning readings, moderating discussions, being available to discuss material, and helping students prepare to present what they've learned.

TEACHING HISTORY AS A PRIMARY INSTRUCTOR

Summer 2021

Multi-Variable Calculus I

Math 10A

Fall 2020

Calculus for Life Sciences I

Math 7A

Spring 2020

Introduction to Functions II

Math 6B

Summer 2018

Introduction to Functions II

Math 6B

TEACHING HISTORY AS A TA

Fall 2021

Geometry

Math 133

Spring 2021

Introduction to Topology

Math 145B

Introduction to Discrete Structures

Math 11

Winter 2021

Introduction to Probability and Statistics

Math 149B

Summer 2020

Calculus for the Life Sciences I

Math 7A

Pre-Calculus

Math 5

Winter 2020

Introduction to Discrete Structures

Math 11

Intermediate Analysis

Math 150A

Fall 2019

Multivariable Calculus

Math 10A

Introduction to Set Theory

Math 144

Spring 2019

Topology

Math 145B

Winter 2019

Topology

Math 145A

First-Year Calculus

Math 9A

Fall 2018

Calculus for Life Science Majors

Math 7B

First-Year Calculus

Math 9C

Spring 2018

First-Year Calculus

Math 9C

Multivariable Calculus

Math 10A

Winter 2018

College Algebra

Math 4

First-Year Calculus

Math 9B

Fall 2017

First-Year Calculus

Math 9C

Spring 2017

College Algebra

Math 4

First-Year Calculus

Math 9C

Winter 2017

College Algebra

Math 4

First-Year Calculus

Math 9A

Fall 2016

College Algebra

Math 4

TALKS

2021

Surface Bundles and Group Extensions

30 April

USTARS

2020

An Introduction to Interval Bundles

10 January

UCR Graduate Student Seminar

2019

Fibering Rigidity of the Atiyah-Kodaira Bundle

6 November

UCR Topology Seminar

The Bigon Criterion

9 July

MSRI: Geometric Group Theory @ CMO

Constructing Atiyah-Kodaira Fibrations

23 May

UCR Topology Seminar

Your Daily Recommended Serving of Fiber Bundles

8 March

UCR Graduate Student Seminar

The Mapping Class Groups of Some Surfaces

21 February

UCR Topology Seminar

An Introduction to Surfaces, Fiber Bundles, and Other Words

14 February

UCR Topology Seminar

2018

Bigon Criterion

1 November

UCR Topology Seminar

Intersection Numbers of Simple Closed Curves on Surfaces

25 October

UCR Topology Seminar

Constructing Arithmetic Hyperbolic Surfaces

1 June

UCR Graduate Student Seminar

CONFERENCES AND WORKSHOPS

2020

Topology Students Workshop

July

Hosted Virtually by Georgia Tech

Joint Mathematics Meeting

January

Colorado Convention Center

2019

Math Alliance: Field of Dreams

November

Renaissance St. Louis Airport Hotel

Cascade Topology Seminar

September

University of Manitoba

MSRI: Geometric Group Theory

July

Casa Matemática Oaxaca

LG&TBQ

June

University of Wisconsin

GSCAGT

June

Temple University

MathConnections

May

UC Riverside

Redbud Topology Conference

April

University of Oklahoma

Graduate School on the Geometry of Teichmüller spaces

April

SCGP at Stony Brook University

2018

MathConnections

May

UC Riverside

Joint Mathematics Meeting

January

San Diego Convention Center

2017

AMS Fall Western Sectional

November

UC Riverside

MathConnections

May

UC Riverside

MAA SoCal-Nev Section Meeting

April

Cal State Northridge