

# Richard Wong

ASSISTANT ADJUNCT PROFESSOR (HE/HIM/HIS)

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## Employment

### Assistant Adjunct Professor in Mathematics, Step II

University of California, Los Angeles

July 2021 - Present

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## Education

### Ph.D. in Mathematics

University of Texas at Austin

May 2021

ADVISED BY ANDREW J. BLUMBERG

- Thesis: *Endotrivial modules for cyclic  $p$ -groups and generalized quaternion groups via Galois descent*
- Concentration in Teaching and Mentoring
- Concentration in Communicating Science

### B.S. Summa Cum Laude in Mathematics, *highest honors*

Rutgers University

May 2015

MATHEMATICS HONORS TRACK

- SAS Honors Program
- Matthew Leydt Society, Class of 2015

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## Publications

### [1] Endotrivial modules for cyclic $p$ -groups and generalized quaternion groups via Galois descent

Jeroen Meer, Richard Wong

Submitted, arxiv: 2107.06308 (2021)

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## Teaching Experience

### Math 32AH/BH: Calculus of Several Variables (Honors)

UCLA, Fall 2021-Winter 2022

- Proof-based treatment of the topics of differential (32AH) and integral (32BH) multivariable calculus, spanning material in linear algebra, real analysis, and differential geometry.
- Developed collaborative, inquiry-based assignments that emphasize mathematical exposition.
- 32AH (Fall 2021), 32BH (Winter 2022)

### Math 32A/B: Calculus of Several Variables

UCLA, Fall 2021-Present

- Topics in differential (32A) and integral (32B) multivariable calculus.
- Developed collaborative, inquiry-based assignments that emphasize mathematical exposition.
- 32A (Fall 2021, Spring 2022), 32B (Winter 2022)

### M 371E: Learning Assistant Experience in Mathematics

UT Austin

INSTRUCTOR OF RECORD AND **CALCLAB COORDINATOR**

Spring 2020 - Spring 2021

- Taught undergraduates how to effectively teach and support students in the learning of mathematics.
- Ran CalcLab, a program where students enrolled in calculus courses can receive help and work with classmates.
- Transitioned CalcLab to an online Calculus resource through Zoom.

### University of Texas at Austin Summer Mincourses

UT Austin

MINICOURSE LEADER

Summers 2017-2020

- Minicourse Leader for Intro to Spectral Sequences; Equivariant Stable Homotopy Theory; and Homological Algebra.
- Gave lectures introducing graduate-level mathematics to graduate students and advanced undergraduate students.
- Created problem sets to accompany the lectures, and ran collaborative problem sessions.

### Teaching Assistant Experience

- **UGS 303: From Numbers to Chaos.**
- Supplemental Instruction Leader for M 408K: Differential calculus.
- M 408M: Multivariable calculus.
- **Young Scholars Program in Discrete Mathematics.**

UT Austin, Fall 2018

UT Austin, Spring 2018

UT Austin, Fall 2017

Rutgers University, Summer 2013

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## Outreach and Mentoring

### Founding Co-Organizer

UT Austin

MATHEMATICIANS OF COLOR ALLIANCE AT TEXAS (MOCAT)

Summer 2020 - Summer 2021

- Created a community of undergraduate and graduate students of color to recruit, retain, support, and empower underrepresented groups in mathematics.
- Planned expository talks, held social events, and mentored undergraduate students.
- Organized *Existence and Uniqueness*, a departmental book club on *Living Proof*.
- Tensor SUMMA 2021 Grant Recipient.
- Presented at the 2021 Mathfest MAA Outreach Poster Session

### Directed Reading Program Mentor

UT Austin, Fall 2016 - Fall 2020

- Mentored 9 undergraduate student projects in various subjects in algebra and topology.

### Speaker

Virtual

GRADUATES ACHIEVING INCLUSION NOW (GAIN)

Fall 2021

- Discussed issues of discrimination and systemic inequity, as well as action items to improve graduate student experiences.
- Spoke on the topic of allyship and mentorship

### Speaker

UT Austin

SATURDAY MORNING MATH GROUP

Spring 2018, Spring 2020

- SMMG is an outreach program aimed at junior high and high school students, their parents, and their teachers.
- Gave an inquiry-based talk titled: "Surfaces, Space, and Hyperspace: An exploration of 2, 3, and higher dimensions".
- Gave an inquiry-based talk titled: "Number Games"

### Speaker

UT Austin

UT AUSTIN MATH CLUB

Spring 2017, Spring 2020

- Gave an introductory talk titled "An Overview of Algebraic Topology".
- Participated in a panel advertising summer opportunities in mathematics.
- Gave an introductory talk titled "Invertible Objects: An Elementary Introduction to Picard Groups".

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## Service

### Teaching Committee

UCLA

DEPARTMENTAL SERVICE

Fall 2022 - present

- This committee monitors departmental teaching policy and its effectiveness in undergraduate education. It also evaluates nominations for departmental teaching awards.

### Course Development Committee

UCLA

DEPARTMENTAL SERVICE

Fall 2021 - Spring 2022

- This committee is charged with developing and updating course syllabi, designing new courses in the curriculum, and maintaining and updating course web-pages.

### Founding Organizer

UT Austin

SUMMER MINI-COURSES 2017-2020

Summers 2017-2021

- Organized a series of week-long graduate student-run minicourses on various tools and research topics.
- Gave lectures on homological algebra, spectral sequences and equivariant stable homotopy theory.
- Transitioned the Minicourse to an online format, serving over 400 participants from around the world.

### Co-Organizer

UT Austin

UT AUSTIN LEARNING SEMINARS

Spring 2017, Fall 2018

- Quantum Topology and Categorification Seminar, on TQFT and the Jones Polynomial
- Homotopy Theory Learning Seminar, on families in the stable homotopy groups of spheres.

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## Scholarships, Honors & Awards

2022	CEILS 2022 Scientific Teaching Fellow	UCLA
2020	<b>SSD Appreciation Award (“Clock Award”)</b>	UT Austin
2020	<b>FIC Graduate Student Teaching Award</b>	UT Austin
2018	Teaching Preparation Certificate	UT Austin
2017	Inclusive Classrooms Leadership Certificate	UT Austin
2015-2020	Provost’s Graduate Excellence Fellowship	UT Austin
2015	<b>Wolfson Annual Award for Academic Excellence in Mathematics</b>	Rutgers University
2014, 2015	<b>Weill Scholarship in Mathematics</b>	Rutgers University
2014	REU Participant	IU-Bloomington
2014	<b>John Bogart Prize</b>	Rutgers University
2013	<b>Alan Marc Schreiber Memorial Scholarship</b>	Rutgers University

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## Invited Conference Talks

Oct. 2022	AMS Fall Western Sectional Meeting	University of Utah
Jul. 2021	Workshop on Homotopy Theory and Group Theory, IRP Higher Homotopical Structures	CRM Barcelona
Apr. 2021	Graduate Student Topology & Geometry Conference	Indiana University
Feb. 2021	eCHT Equivariant Algebra Reading Seminar	Virtual
Nov. 2020	eCHT Kervaire Invariant One Reading Seminar	Virtual
Oct. 2020	electronic Algebraic Topology Employment Network	Virtual
Sep. 2019	eCHT Kan Seminar	Virtual
Jul. 2019	Young Topologist’s Meeting 2019	EPFL
Mar. 2019	Graduate Student Topology & Geometry Conference	UIUC

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## Invited Seminar Talks

Oct. 2021	University of Louisiana at Lafayette Algebra Seminar	UL Lafayette
May 2021	Rose-Hulman Institute of Technology Seminar	Rose-Hulman
Mar. 2021	Seminario Virtual de Topología Algebraica	CIMAT Merida
Oct. 2020	The Ohio State University Student Homotopy Theory Seminar	OSU
Oct. 2020	University of Illinois, Urbana-Champaign Topology Seminar	UIUC
Oct. 2020	University of Chicago-Northwestern University Joint Topology Seminar	Northwestern
Jul. 2020	GROOT Summer Seminar	Virtual