

Richard Wong

ASSISTANT TEACHING PROFESSOR (HE/HIM/HIS)

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Employment

Assistant Teaching Professor in Mathematics

Rice University

July 2024 - Present

- Member of the HHMI Driving Change Initiative

Assistant Adjunct Professor in Mathematics, Step II

University of California, Los Angeles

July 2021 - July 2024

- 2023 Liggett Instructor Award
- 2023 Project NExT Fellow
- CEILS 2022 Scientific Teaching Fellow

Education

Ph.D. in Mathematics

University of Texas at Austin

ADVISED BY ANDREW J. BLUMBERG

May 2021

- 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

MATHEMATICS HONORS TRACK

May 2015

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

Publications

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

Jeroen Meer, Richard Wong

Under Revision, Journal of Homotopy and Related Structures, arxiv: 2107.06308 (2021)

Selected Teaching Experience

Math 101: Calculus I

Rice University, Fall 2024

- Worked with HHMI team to redesign Calculus in an accessible way that is inclusive and equitable for all students.

Math 102: Calculus II

Rice University, Fall 2024 - present

- Worked with HHMI team to redesign Calculus in an accessible way that is inclusive and equitable for all students.
- Math 102 Coordinator for Fall 2024-25

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

UCLA, Fall 2021-Winter 2024

- Proof-based treatment 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, Fall 2022, Fall 2023), 32BH (Winter 2022, Winter 2023, Winter 2024)

Math 94: Explorations of Mathematics in the Physical World

UCLA, Summer 2023

- Taught summer bridge program for incoming first year STEM students from FGLI or URM backgrounds.
- Created an inquiry-based survey course to demonstrate how scientists utilize mathematics and programming.
- Taught Python for data science (scipy, pandas, matplotlib).

Other Teaching Experience

- Math 115A: Linear Algebra
- Math 32A/32B: Calculus of Several Variables
- **Summer Bootcamp in Linear Algebra** for math graduate students.
- M 371E: Instructor of Record and **CalcLab Coordinator**

UCLA, Spring 2023, Spring 2024
UCLA, Fall 2021 - Winter 2024
UCLA, Summer 2023
UT Austin, Spring 2020 - Spring 2021

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

Outreach and Mentoring

Directed Reading Program Mentor

Rice University, Fall 2024 - present

- Mentored 5 undergraduate students in algebraic topology and category theory.

Summer Mini-Courses 2017-2020

UT Austin

FOUNDER AND ORGANIZER

Summers 2017-2021

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

MoCAT

UT Austin

FOUNDING CO-ORGANIZER

Summer 2020 - Summer 2021

- 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

DRP Mentor

UT Austin, Fall 2016 - Fall 2020

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

Speaker

- Panelist, UMC and WIM Equity, Diversity, and Inclusion Panel
- UMSA talk: "3-spheres and the Hopf map"
- Undergraduate Math Council: Speaker Series
- Graduates Achieving Inclusion Now (GAIN)
- Honors Linear Algebra Guest speaker
- SMMG: "Number Games"
- Math Club: "Invertible Objects: An Elementary Introduction to Picard Groups".
- Math Club: REU / Summer Opportunities Panelist
- SMMG: "Surfaces, Space, and Hyperspace: An exploration of 2, 3, and higher dimensions".
- Math Club: "An Overview of Algebraic Topology"

UCLA, Winter 2024
UCLA, Fall 2023
UCLA, Fall 2022
Virtual, Fall 2021
Rice University, Fall 2020
UT Austin, Spring 2020
UT Austin, Spring 2020
UT Austin, Spring 2018
UT Austin, Spring 2018
UT Austin, Spring 2017

Service

Departmental Service

Rice University

RICE MATHEMATICS

Fall 2024 - present

- Math 102 Course Coordinator (Fall 2024-present)
- Calculus Committee member.
- Undergraduate Colloquium co-organizer.
- Teaching Seminar co-organizer.

University Service

Rice University

Fall 2024 - present

- OASUS STEM Learning Specialist hiring committee member.
- RESP Faculty Fair participant.

socAlgTop Conference

IPAM

CO-ORGANIZER

May 2024

- Organized miniconference for the Southern California algebraic topology community

Project NExT Special Session

Co-ORGANIZER

- Organized session titled "Active Learning Strategies for a Large Class."

Joint Math Meetings

Jan 2024

Departmental Service

UCLA MATHEMATICS

- Teaching Committee (Fall 2022 - Spring 2024)
- Course Development Committee (Fall 2021 - Spring 2022)

UCLA

Fall 2021 - Spring 2024

UT Austin Learning Seminars

Co-ORGANIZER

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

UT Austin

Spring 2017, Fall 2018

Scholarships, Honors & Awards

2023	Liggett Instructor Award	UCLA
2023	Project NExT (New Experiences in Teaching) Fellow	MAA
2022	CEILS 2022 Scientific Teaching Fellow	UCLA
2020	SSD Appreciation Award ("Clock Award")	UT Austin
2020	FIC Graduate Student Teaching Award	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	Wolfson Annual Award for Academic Excellence in Mathematics	Rutgers University
2014, 2015	Weill Scholarship in Mathematics	Rutgers University
2014	REU Participant	IU-Bloomington
2014	John Bogart Prize	Rutgers University
2013	Alan Marc Schreiber Memorial Scholarship	Rutgers University

Selected Conference Talks

Aug. 2025	MAA Mathfest	Sacramento
Jan. 2024	Joint Math Meetings (AIM and AMS Special Sessions)	San Francisco
Oct. 2023	2023 AMS Fall Central Sectional Meeting	Creighton University
Oct. 2022	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

Invited Seminar Talks

Apr. 2023	University of Oregon Topology Seminar	University of Oregon
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