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 *UCLA, Spring 2023, Spring 2024*
- Math 32A/32B: Calculus of Several Variables *UCLA, Fall 2021 - Winter 2024*
- **Summer Bootcamp in Linear Algebra** for math graduate students. *UCLA, Summer 2023*
- M 371E: Instructor of Record and **CalcLab Coordinator** *UT Austin, Spring 2020 - Spring 2021*

Teaching Assistant Experience

- UGS 303: From Numbers to Chaos. *UT Austin, Fall 2018*
- Supplemental Instruction Leader for M 408K: Differential calculus. *UT Austin, Spring 2018*
- M 408M: Multivariable calculus. *UT Austin, Fall 2017*
- Young Scholars Program in Discrete Mathematics. *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 *UCLA, Winter 2024*
- UMSA talk: "3-spheres and the Hopf map" *UCLA, Fall 2023*
- Undergraduate Math Council: Speaker Series *UCLA, Fall 2022*
- Graduates Achieving Inclusion Now (GAIN) *Virtual, Fall 2021*
- Honors Linear Algebra Guest speaker *Rice University, Fall 2020*
- SMMG: "Number Games" *UT Austin, Spring 2020*
- Math Club: "Invertible Objects: An Elementary Introduction to Picard Groups". *UT Austin, Spring 2020*
- Math Club: REU / Summer Opportunities Panelist *UT Austin, Spring 2018*
- SMMG: "Surfaces, Space, and Hyperspace: An exploration of 2, 3, and higher dimensions". *UT Austin, Spring 2018*
- Math Club: "An Overview of Algebraic Topology" *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
Joint Math Meetings
CO-ORGANIZER
Jan 2024
- Organized session titled "Active Learning Strategies for a Large Class."

Departmental Service
UCLA
UCLA MATHEMATICS
Fall 2021 - Spring 2024
- Teaching Committee (Fall 2022 - Spring 2024)
- Course Development Committee (Fall 2021 - Spring 2022)

UT Austin Learning Seminars
UT Austin
CO-ORGANIZER
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.

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	*Univeristy 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*