Richard Wong

Assistant Adjunct Professor (He/Him/His)
Department of Mathematics, UCLA, Los Angeles, CA 90095

Employment

Assistant Adjunct Professor in Mathematics, Step II
University of California, Los Angeles
July 2021 - Present
- CEILS 2022 Scientific Teaching Fellow
- 2023 Liggett Instructor Award
- 2023 Project NExT Fellow

Education

Ph.D. in Mathematics
University of Texas at Austin
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
May 2015
- Mathematics Honors Track
- 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
Submitted, arxiv: 2107.06308 (2021)

Selected Teaching Experience

Math 32AH/32BH: Calculus of Several Variables (Honors)
UCLA, Fall 2021-Present
- 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, Fall 2022, Fall 2023), 32BH (Winter 2022, Winter 2023)

Math 49: Explorations of Mathematics in the Physical World
UCLA, Summer 2023
- Taught incoming first year students from low-income and URM backgrounds that intend to major in STEM.
- Created an inquiry-based survey course to demonstrate how scientists utilize mathematics and programming.
- Taught Python for data science (scipy, pandas, matplotlib).

Math 115A: Linear Algebra
UCLA, Spring 2023
- Proof-based Linear Algebra. This is a second course in linear algebra.
- Developed collaborative, inquiry-based assignments that emphasize proof-writing skills.

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.

Other Teaching Experience
- Math 32A/32B: Calculus of Several Variables
- Summer Bootcamp in Linear Algebra for math graduate students.
- Minicourse Leader, University of Texas at Austin Summer Minicourses.

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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.**

Outreach and Mentoring

**Founding Co-Organizer**

*MATHEMATICIANS OF COLOR ALLIANCE AT TEXAS (MoCAT)*

- 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

**Founder and Organizer**

*SUMMER MINI-COURSES 2017-2020*

- 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 Minicourses to an online format, serving over 400 participants from around the world.

**Direct Reading Program Mentor**

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

Invited Speaker

- **Undergraduate Math Council: Speaker Series**
- **Graduates Achieving Inclusion Now (GAIN)**
- **Honors Linear Algebra Guest speaker**
- **SMMM: “Number Games”**
- **Math Club: “Invertible Objects: An Elementary Introduction to Picard Groups”**
- **Math Club: REU / Summer Opportunities Panelist**
- **SMMM: “Surfaces, Space, and Hyperspace: An exploration of 2, 3, and higher dimensions”**
- **Math Club: “An Overview of Algebraic Topology”**

Service

**Co-Organizer**

*PROJECT NEXT SPECIAL SESSION*

- Co-organized session on Active Learning Strategies for a Large Class.

**Teaching Committee**

*DEPARTMENTAL SERVICE*

- Monitored departmental teaching policy and its effectiveness in undergraduate education.
- Evaluated nominations for departmental teaching awards.

**Course Development Committee**

*DEPARTMENTAL SERVICE*

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

**Co-Organizer**

*UT AUSTIN LEARNING SEMINARS*

- 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**  
- **Project NExT (New Experiences in Teaching) Fellow**

**2022**  
- **CEILS 2022 Scientific Teaching Fellow**

**2020**  
- **SSD Appreciation Award (“Clock Award”)**
- **FIC Graduate Student Teaching Award**
- **Teaching Preparation Certificate**
- **Inclusive Classrooms Leadership Certificate**

**2015-2020**  
- **Provost’s Graduate Excellence Fellowship**

**2015**  
- **Wolfson Annual Award for Academic Excellence in Mathematics**

**2014, 2015**  
- **Weill Scholarship in Mathematics**

**2014**  
- **REU Participant**

**2013**  
- **John Bogart Prize**
- **Alan Marc Schreiber Memorial Scholarship**

## Invited Conference Talks

- **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  
  - EPFL

- **Jul. 2019**  
  - Young Topologist’s Meeting 2019  
  - Virtual

- **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