

# RYAN J. ROGERS

Department of Mathematics  
University of Kentucky  
Lexington, KY 40506

*Office:* Patterson Office Tower (POT) 722  
*Email:* rjro233@uky.edu  
*Website:* <https://math.as.uky.edu/users/rjro223>

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## EDUCATION

**University of Kentucky**, Lexington, KY, USA

Ph.D. Mathematics May 2024 (Expected)

- Dissertation: A Multiple-Case Study on the Impact of an Introductory Real Analysis Course on Undergraduate Students' Understanding of Function Continuity  
– Advisor: David C. Royster

M.A. Mathematics May 2021

- Oral Exam: Honeycomb Schrödinger Operators in the Tight-Binding Model  
– Committee Chair: Peter D. Hislop

**University of Cincinnati**, Cincinnati, OH, USA

B.S. Mathematics (Minor: Spanish) Dec. 2017

- *Summa Cum Laude* (Cumulative GPA: 4.000/4.000)
- Capstone Project in Mathematics: From Euclidean Spaces to Metric Spaces  
– Supervisor: Ning Zhong

## RESEARCH INTERESTS

Undergraduate Mathematics Education, Analysis, Partial Differential Equations

## PUBLICATION

- (1) R. J. Rogers and N. Zhong. From Euclidean spaces to metric spaces. *Journal of Student Research*, 8(1), 2019.

## PRESENTED TALKS

- “A Multiple-Case Study on the Impact of an Introductory Real Analysis Course on Undergraduate Students' Understanding of Function Continuity (Final Doctoral Exam),” University of Kentucky, Spring 2024
- “Real Analysis and Undergraduate Students' Understanding of Function Continuity (AMS Special Session on Informal Learning, Identity, and Attitudes in Mathematics, III),” Joint Mathematics Meetings 2024
- “A Multiple-Case Study on Real Analysis and Undergraduate Students' Understanding of Function Continuity (Seminar in Advances in Mathematics and Mathematics Education),” Campbellsville University, Fall 2023
- “Real Analysis and Undergraduate Students' Understanding of Function Continuity (Spectra Survey of Mathematics Conference),” University of Kentucky, Summer 2023
- “Undergraduate Students' Understanding of Function Continuity (Pi Mu Epsilon Initiation Ceremony Presentation),” Berea College, Spring 2023

- “The Impact of an Introductory Real Analysis Course on Undergraduate Students’ Understanding of Function Continuity (Ph.D. Qualifying Exam),” University of Kentucky, Summer 2022
- “Honeycomb Schrödinger Operators in the Tight-Binding Model (Final Exam for Master of Arts),” University of Kentucky, Spring 2021
- “Homogenization of the Heat Equation,” University of Kentucky, Spring 2021
- “Fourier Analysis and the Gauss Circle Problem,” University of Kentucky, Fall 2019

## CONFERENCES AND WORKSHOP

- Joint Mathematics Meetings 2024 Jan. 2024
- Spectra Survey of Mathematics Conference, University of Kentucky May 2023  
– Local Organizer
- PEER Virtual Gateway Workshop Mar. 2023

## AWARDS AND SCHOLARSHIPS

- Teaching Assistantship, University of Kentucky Aug. 2018 - June 2024
- Inclusive Excellence Award, University of Kentucky Apr. 2024
- Research Assistantship, University of Kentucky May 2023 - Aug. 2023
- Robert Patterson McKibbin Prize, University of Cincinnati Apr. 2018
- Helen Weinberger Phi Beta Kappa Award, University of Cincinnati Apr. 2018
- Cincinnati Century Scholarship, University of Cincinnati Aug. 2014 - Dec. 2017
- Darwin T. Turner Scholarship, University of Cincinnati Aug. 2014 - Dec. 2017

## TEACHING EXPERIENCE

**University of Kentucky** - Teaching Assistant Aug. 2018 - June 2024

- Primary Instructor
  - MA 193: Supplementary Math Workshop I: Calculus I Fall 2018
  - MA 123: Elementary Calculus and Its Applications Summer 2020
  - MA 123: Elementary Calculus and Its Applications Summer 2021
  - MA 202: Mathematical Problem Solving for Elementary Teachers Spring 2022
  - MA 123: Elementary Calculus and Its Applications Summer 2022
  - MA 201: Mathematics for Elementary Teachers Fall 2022
  - MA 241: Geometry for Middle School Teachers Fall 2023
  - MA 194: Supplementary Math Workshop II: Calculus II Spring 2024
  - MA 123: Elementary Calculus and Its Applications Summer 2024
- Recitation Instructor
  - MA 113: Calculus I Fall 2018
  - MA 110: Algebra and Trigonometry for Calculus Spring 2019
  - MA 110: Algebra and Trigonometry for Calculus Fall 2019
  - MA 123: Elementary Calculus and Its Applications Spring 2020
  - MA 213: Calculus III Fall 2020
  - MA 213: Calculus III Spring 2021
  - MA 110: Algebra and Trigonometry for Calculus Fall 2021
  - FTK 113/137: FastTrack to Calculus Summer 2022
  - MA 123: Elementary Calculus and Its Applications Spring 2023  
\* Lead TA
  - MA 114: Calculus II Spring 2024

**University of Cincinnati** - Math and Science Support Center Jan. 2016 - Apr. 2017

- Supplemental Review Session Leader
  - MATH 1062: Calculus II Spring 2016
  - MATH 1061: Calculus I Spring 2017

#### OTHER APPLICABLE EXPERIENCE

- **Mathnasium of Hyde Park** - Mathnasium Instructor May 2018 - Aug. 2019
- **The Knowledge Roundtable** - Mathematics Tutor Mar. 2018 - Apr. 2018

#### SERVICE AND OUTREACH

- **Working Group Member**, University of Kentucky EEIJMS Jan. 2023 - Present
- **Peer Mentor**, University of Kentucky Aug. 2022 - May 2023
- **Secretary**, University of Kentucky Chapter of Spectra Aug. 2022 - May 2023
- **Chief Financial Officer**, Love Peace And Charity Dec. 2017 - Present
- **Mathematics Tutor**, Purcell Marian High School Apr. 2018 - May 2018
- **Mentor**, College Mentors for Kids Jan. 2015 - Dec. 2016

#### AFFILIATIONS

- American Mathematical Society
- Mathematical Association of America
- Society for Industrial and Applied Mathematics
- The Phi Beta Kappa Society
- Spectra
- The National Society of Collegiate Scholars
- Alpha Lambda Delta National First-Year Honor Society