Ryan J. Rogers

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Education

University of Kentucky, Lexington, KY, USA

Ph.D. Mathematics   May 2024 (Expected)
- Advisor: David C. Royster

M.A. Mathematics   May 2021
- Advisor: Peter D. Hislop
- Oral Exam Topic: Honeycomb Schrödinger Operators in the Tight-Binding Model

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
- Advisor for Capstone Project in Mathematics: Ning Zhong

Research Interests

Mathematics Education, Analysis, Partial Differential Equations

Publication

(1) Rogers R. J., Zhong, N. (2019). From Euclidean Spaces to Metric Spaces. *Journal of Student Research, 8*(1), 14-17.

Presented Talks

- "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 (Defense 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

Awards and Scholarships

Teaching Assistantship, University of Kentucky   Aug. 2018 - Present
Robert Patterson McKibbin Prize, University of Cincinnati   Apr. 2018
Helen Weinberger Phi Beta Kappa Award, University of Cincinnati   Apr. 2018
Cincinnatus 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 - Present

- 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
- Primary Instructor
  - MA 193: Calculus I Workshop   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

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

- **Graduate Student 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