Kyle Monette

Ph.D. Candidate
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Passionate and strong mathematics PhD candidate with experience in teaching, research, and industry. Dedicated mathematics educator with 4+ years of excellence in course development and engaging learning environments. Technologically proficient with multiple languages and interfaces. Adept at managing multiple responsibilities with organization and efficiency. Committed to detail, comprehension, and excellence.

Education

Ph.D. Applied Mathematics 2024 – 2027 (expected) University of Rhode Island Kingston RI
Research: Numerical Linear Algebra, with focus on large scale computations – eigenvalue and SVD problems; Applications in scientific computing.
Advisors: Drs. James Baglama and Vasilije Perović

M.S. Mathematics 2024 University of Rhode Island Kingston, RI

B.S. Mathematics 2022 Clarkson University Potsdam, NY

Work Experience

Graduate Teaching Assistant University of Rhode Island **August 2022 – present**

Serve as primary instructor for undergraduate mathematics courses with 45 students. Prepared custom lecture notes and assignments for each course. Provided timely and constructive feedback. Developed new supplemental worksheets and videos. Consistently received excellent student evaluations and high overall instructor rating (average 4.3/5).

Courses Taught:

MTH 215 Introduction to Linear Algebra ⋆ (2 times)
MTH 131 Applied Calculus
MTH 141 Calculus I (2 times)
MTH 103 Applied Precalculus (5 times)

⋆ – non-coordinated course

Content Writer Edfinity **March 2024 – April 2026**

Authored 1,000+ math homework questions and solutions in Perl (WebWork). Communicated with company leads and educators. Succeeded in meeting project deadlines and writing with accuracy, clarity, and attention to detail. Utilized cutting–edge AI models to generate new products.

Teaching Assistant Williams College **February 2022 – May 2022**

Hosted office hours and graded assignments during one semester for Computational Linear Algebra. Actively engaged with students to support their learning and understanding of complex mathematical concepts. Strengthened my programming ability in `R` and wrote solutions using Markdown.

Undergraduate Teaching Assistant Clarkson University **August 2020 – December 2021**

Led recitations, graded homework, and hosted review sessions for Calculus III and Differential Equations. Assisted faculty in the return to campus after COVID-19.

Professional Development and Certifications

Online Pedagogy Competency Course **February 2026**

Developed a comprehensive 14-week online course on Brightspace with measurable learning objectives, discussion posts, homework assignments, and video lectures. Applied evidence-based practices in online pedagogy and instructional design.

Basic Brightspace Certification **November 2025**

Developed fundamental skills for instructing with the Brightspace (D2L) learning management system. Created a demonstration course incorporating interactive features, earning certification.

EDC 586 – College Teaching **Spring 2023**

Completed a one-credit course for graduate teaching assistants to explore evidence-based teaching skills, create a portfolio for future careers, and learn discipline-specific signature pedagogies. Implemented new insights and methodologies into my courses as a consequence.

MTH 420 – Mathematical Foundations for Teachers **Fall 2022**

Completed a three-credit, project-based course revisiting mathematical topics and associated teaching practices. Wrote peer-reviewed lesson plans and strengthened ability to teach 100-level math courses.

Relevant Graduate Coursework

Numerical Linear Algebra (two courses)	Linear Algebra
Numerical Analysis	Numerical Partial Differential Equations
Optimization Methods	Functional Analysis (two courses: theory, applications)
Mathematics for Data Science	Linear Control Systems

Service and Activities

Math Level-Up Bootcamp **Summer 2025 – Summer 2026**

Led mini-lectures and recitations in precalculus over two weeks in a pilot program to prepare incoming freshman for calculus. Students demonstrated very strong improvement according to pre- and post-test scores, and the program was deemed highly successful by program leaders.

Calc-Bowl Problem Creation **Spring 2024 – ongoing**

Volunteered for a department's annual event for high school students to compete in solving calculus problems. Contributed questions to be used and assisted with logistics during the event.

MTH 103 Course Assistance **Summer 2023 – ongoing**

Created and maintain a YouTube channel @mth103uri with solutions to worksheets and practice exams. The channel is accessed by 1,000 students taking MTH 103 during the academic year, and hosts 60 videos with a combined 24,000 views and 57 subscribers. Assisted in the writing of exams and course logistics. Collaborated with faculty on modifications to the curriculum and methodology.

Transitioning Homework Software **Summer 2023**

Spearheaded the transition of multiple courses into a new online homework software Edfinity. Assisted faculty in custom configurations and technical support. Students and faculty reported an increase in usability and engagement.

Graduate Student Mentor **Summer 2023 – ongoing**

Served as a mentor to incoming graduate students in the department. Assisted new students with settling into the program. Provided advice on course logistics and creating their course webpage. Created a Slack channel to increase collaboration and engagement, fostering a more cohesive graduate student community.

Seminar Presentations

New Insights into the Equivalence of Thick and Implicit Restarting Lanczos
International Linear Algebra Society (ILAS) Conference — May 2026

Orthogonal Similarity Reductions in Eigenvalue Problems
AMS Graduate Student Conference, Brown University — April 2026

Computing the Spectral Density of a Matrix
University of Rhode Island, Applied Mathematics Seminar — March 2025

Gaussian Quadrature and Tridiagonal Matrices
University of Rhode Island, Applied Mathematics Seminar — December 2024

GMRES – An Iterative Method for Solving Linear Systems
University of Rhode Island, Applied Mathematics Seminar — April 2024

Matrix Products Coinciding with Concatenation
Mathematics Conference and Competition of Northern New York (MCCNNY) — March 2024

The Double Pendulum: Lagrangian Mechanics and Chaos
Mathematics Conference and Competition of Northern New York (MCCNNY) — March 2022

Awards and Honors

R. Gerald Bradshaw Award (For academic excellence in mathematics) — 2021
President's List and Dean's List, Clarkson University — 2018 – 2021

Technical and Personal Strengths

Technical Strengths
MATLAB, Mathematica, Python, R
LaTeX, Microsoft Suite, WordPress
Windows, Mac, Linux

Personal Strengths
Linear Algebra, Numerical Analysis, Optimization
Technical Writing, Public Speaking, Communication
Efficiency, Versatility, Inquisitiveness

Professional Affiliations

American Mathematical Society (AMS) — 2022 – present
Mathematical Association of America (MAA) — 2022 – present
Society for Industrial and Applied Mathematics (SIAM) — 2022 – present