

# Awards and Prizes

## Henry L. Alder Awards

In January 2003 the MAA established the Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member to honor beginning college or university faculty whose teaching has been extraordinarily successful and whose effectiveness in teaching undergraduate mathematics is shown to have influence beyond their own classrooms. An awardee must have taught full time in a mathematical science in the United States or Canada for at least two, but not more than seven, years since receiving their PhD. Each year, at most three college or university teachers are to be honored with this national award and are to receive \$1,000 and a certificate of recognition from the MAA. Award recipients will be expected to make a presentation at the national meeting of the MAA. Nominations for the award may be made by any member of the MAA or by any section of the MAA.

### R. Abraham Edwards

*Lyman Briggs College, Michigan State University*

Dr. R. Abraham (Abe) Edwards received his PhD in mathematics education from Michigan State University in 2016 and joined the faculty at Michigan State's Lyman Briggs College as Teaching Professor that year. Dr. Edwards' teaching resume spans from College Algebra (in LBC's INQUIRE [INstilling QUAntitative and Integrative Reasoning] program), through the calculus sequence and an honors research seminar in Experimental Mathematics, to a senior seminar on Mathematics in the Romantic Age and study abroad courses on Science in a Global Context and Mathematics in Historical and Cultural Contexts. In addition, he has mentored multiple student research projects (14+ projects, involving 19+ students), including one that received a university first place award and two that led to publications co-authored with students (appearing in *Convergence* and in *The College Mathematics Journal*). Throughout, Dr. Edwards utilizes his training and research in mathematics education and passion for mathematics and its history to be a highly effective and impactful instructor. He has contributed to developing, testing, and implementing Primary Source Projects through his collaboration with the NSF-funded TRIUMPHS group (TRansforming Instruction in Undergraduate

Mathematics via Primary Historical Sources). Through a careful selection of sources, Dr. Edwards is able to highlight the work of non-Western mathematicians, drawing in students who seldom see themselves reflected in their STEM classes.

Dr. Edwards transforms students who were apt to describe their mathematical background as painful into productive and engaged students who describe having enjoyed their experiences in his classes. A mark of his success is the number of his College Algebra students that went on to thrive in upper-level mathematics courses. One example is a College Algebra student whose ensuing mathematics courses with Dr. Edwards included Calculus II and III, a research project, and the study abroad course, and who is currently enrolled in a PhD chemistry program. His summer abroad course, Mathematics in Historical and Cultural Contexts, was offered in 2019 and 2022 with visits to Paris, Florence, and London. The course takes place in museums, cathedrals, libraries, and cafes, utilizing his collaboration with colleagues at European universities to give students “behind the scenes” access to remarkable sites and artifacts associated with the history of mathematics. Of particular note is that about half of the participants in this course started their first-year college mathematics experience with Dr. Edwards in College Algebra.

Beyond the classroom, Dr. Edwards demonstrates his commitment to mathematics education through mentorship of Undergraduate Learning Assistants at LBC, contributions to TRIUMPHS, leading a popular 2022 MathFest workshop, Learning from History: Teaching with Primary Source Projects in Your Mathematics Classroom, and other presentations on mathematics teaching at local, national, and international conferences. Dr. Edwards received the MAA Michigan Section’s 2022 Distinguished Teaching Award and was a finalist for the Michigan State University-wide 2022 President’s Teaching Award. With enthusiasm, we recognize Dr. Edwards as a recipient of the 2023 Henry L. Alder Award.

## Response

Teaching awards, although given to an individual, are a reflection of what we value as a community. I am grateful to the MAA for establishing a community of mathematics teacher-scholars who value innovative approaches to mathematics education, mentorship of young people, collaboration, creativity, and inclusivity. If my classroom reflects any of these values, it is due in large part to the work of others who have dedicated their own time and energy to making me a better teacher. This would include my colleagues at Michigan State University who inspire me by their examples of innovation and interdisciplinary work, my students who support and challenge each other through collaboration and kindness, and my faith community who have helped me see

teaching as a means to glorify our Creator. I am grateful for the many opportunities I've had in my career to pursue ideas that push the boundaries of traditional mathematics teaching, such as leading a study abroad program in the history of mathematics, co-teaching with a historian of science, and designing new courses at the intersection of mathematics, poetry, and philosophy. I am thankful for the many exemplary teachers I've had, from Bruce Hoftzyer who taught me high-school algebra, to Bruce Sagan who taught me combinatorics, and so many others in-between. Finally, I am inspired each day by my wife, who teaches our children to value both great ideas, and great ideals.

### **Biographical Sketch**

Dr. Edwards grew up in rural Ohio, in a home where there were few luxuries, but always plenty of books. He was inspired to pursue a mathematical life by a high school teacher. Along the way he has worked as a school janitor, taught high school math and science, directed concert band, performed in multiple plays, carried out statistical analysis for NASA, taught in community colleges, directed a church choir, and led a teacher exchange program to bring German pre-service teachers to the United States for field experience. He obtained a PhD in 2016 under the supervision of Vince Melfi. Since then, he has taught a wide variety of undergraduate mathematics courses at Michigan State University and tried to occupy a research space at the intersection of mathematics and history. It has been said that people who do interdisciplinary research have never been truly disciplined, but Dr. Edwards truly enjoys collaborating with historians, philosophers, sociologists, chemists, and other mathematicians. His favorite collaboration to date has been the NSF-funded "TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources" (TRIUMPHS) project. Every two years he convinces a crowd of undergraduates to roam around Europe with him, studying the history of mathematics and eating gelato. In his spare time, he reads books from long-dead theologians and plays a variety of musical instruments.