Mathematicians Awarded for 2024 Expository Mathematical Writing in MAA Publications

WASHINGTON DC - MAY 23, 2024

We are excited to announce the 2024 award recipients for the Chauvenet Prize, the Euler Book Prize, the Daniel Solow Author's Award, the George Pólya Awards, the Paul R. Halmos-Lester R. Ford Awards, the

reader to consider, from sports statistics to SAT scores to the Titanic, providing something for everyone.

Euler Book Prize

Sarah Hart, Gresham Professor of Geometry, at Gresham College, London

Once Upon a Prime: The Wondrous Connections Between Mathematics and Literature. New York: Macmillan, 2023

is a lively, well-researched excursion through the overlapping worlds of mathematics and literature. Drawing from diverse literary and mathematical traditions and cultures, Hart compellingly and wittily reveals mathematics's role in literature. This book will help every reader see both mathematics and literature in a new light, expanding the joy of reading literature and learning mathematics.

"I'm delighted that my book's exploration of the beautiful links between mathematics and literature has resonated so strongly with readers."

Daniel Solow Author's Award

Joel David Hamkins, O'Hara Professor of Logic at the University of Notre Dame

Proof and the Art of Mathematics. Cambridge University Press, 2022.

Organized around mathematically rich topics rather than methods of proof," it allows "students to learn to write proofs [by engaging] with material that is itself intrinsically interesting. The emphasis is on writing clearly and well, and on communicating intuition." Instructors who used this book noted that their "students had not realized that math had so many different faces" and were amazed that it involved so many different ways of thinking. Proof and the Art of Mathematics offers readers "a look behind the curtain at the workings of the mind" of a mathematician.

"What a joy it has been to share the beauty of mathematics with aspiring mathematicians and help them learn the art of proofwriting!"

George Pólya Awards

Damiano Fulghesu, James A. Sellers, Courtney K. Taylor

"Infinite Families of Infinite Series With Integer Sums" 54, no. 1 (2023).

In the article, “Infinite Families of Infinite Series With Integer Sums” by Damiano Fulghesu, James A. Sellers & Courtney K. Taylor, the authors have created a splendid deep dive into a topic that many of our students, even at the calculus level, find curious: infinite series that actually converge! Moreover, the series that the authors develop with the reader converges to an integer, making the series especially curious for students and faculty alike. The authors develop families of convergent infinite series aap faculty

triangular area (have a lot of paper handy). They might have to establish intricate trig identities or solve strange problems from solid geometry. And, once the math was done, they'd still have to translate Latin poetry, write intelligently about the essays of John Ruskin, and identify major battles from the Punic Wars. In short, applicants had to be extremely well-educated just to get into Bryn Mawr. Knowing that I would have stood no chance of passing a matriculation exam, [33]

mathematical tools can be used for physically relevant problems such as automotive blind spots and mirrors of all types. The article features lively diagrams, elucidating photographs, and historical and technological context.

We're thrilled to be honored by the MAA with a Halmos-Ford award for our paper “Frobenius Integrability, Automotive Blind Spots, Non-reversing Mirrors, and Panoramic Mirrors''. Thanks for that MAA!

Rafael López

What Is the Shape of a Cupola? The American Mathematical Monthly, 130:3, 222-238.

This beautiful article considers the problem of determining the shape of a

“The Beauty of Halving It All.” 31, no. 2 (2024): 14–17.

In the article “The Beauty of Halving it All,” the authors divide a triangle into equal areas with a straight line and then consider the family of all lines with this property. Explaining the ensuing images and observations involves envelopes, combinatorics, and differential equations. Extensions to regue ons

In bacterial growth models we often use average time to division to get a simple exponential function for the number of bacteria at a given time. However, as the authors of this article demonstrate, the growth of the bacteria population depends in interesting and surprising ways on the overall distribution of the time to division, rather than just the average. In fact, for the natural distributions the authors examine, the usual model significantly underestimates the bacterial population's growth over time. This paper’s elucidating mix of theory and simulation shows readers the surprising depths of an apparently simple problem.

“I am honored to receive the Carl B. Allendoerfer Award, together with my coauthor Matthew Wright. Our paper was inspired by conversations with one of my high school math teacher colleagues, Will Rose, who questioned the underlying premises of bacterial growth. I did work