

Paul R. Halmos - Lester R. Ford Awards

Adrian Rice

“Partnership, Partition, and Proof: The Path to the Hardy–Ramanujan Partition Formula,” *The American Mathematical Monthly*, 125:1, 3–15, 10.1080/00029890.2017.1389178.

The Hardy-Ramanujan partition formula, which expresses the number of partitions of a natural number as a series involving π , e , and other unexpected quantities, remains one of the most stunning triumphs in the theory of numbers. It elegantly combines the uncanny intuition of Ramanujan with the analytical wizardry of Hardy and it marked the birth of the spectacularly successful circle method. This beautiful article celebrates the centennial of the partition formula, taking the reader on a tour through its historical development, including later contributions of Rademacher and criticism of Selberg. Adrian Rice chronicles the story in stages, portraying the famed result not as a singular event, but rather as the culmination of a sequence of refinements and improvements pioneered by the rigorous Hardy and the enigmatic Ramanujan.

Response

I am delighted and deeply honored to have been selected as a recipient of the Halmos-Ford Award for my article on the Hardy-Ramanujan partition formula. Working on it was a labor of love—which was fortunate, because the period of time from its conception to its eventual publication was about five years! Looking over the list of past recipients of this award is a fascinating and humbling experience, and I consider it a tremendous privilege to have my name included in such a distinguished group. My thanks go to Susan Colley, for her editorial help and attention to detail when preparing the piece for publication, to the members of the Halmos-Ford Award Committee, and of course to the Mathematical Association of America for this great honor.

Biographical Sketch

Adrian Rice received a BS in mathematics from University College London in 1992 and a PhD in the history of mathematics from Middlesex University in 1997 for a dissertation on Augustus De Morgan. He is currently chair of the Department of Mathematics at Randolph-Macon College in Ashland, Virginia. His research focuses on 19th- and early 20th-century mathematics, on which he has published research papers, articles and books, including *Mathematics Unbound: The Evolution of an International Mathematical Research Community, 1800–1945*, edited with Karen Hunger Parshall, *Mathematics in Victorian Britain*, edited with Raymond Flood and Robin Wilson, and *Ada Lovelace: The Making of a Computer Scientist*, written with Christopher Hollings and Ursula Martin. In his spare time, he enjoys reading, travel, and spending time with his wife and young son.