2005 JPBM Communications Award

The 2005 Communications Award of the Joint Policy Board for Mathematics (JPBM) was presented at the 111th Annual Meeting of the AMS in Atlanta in January 2005.

The JPBM Communications Award is presented annually to reward and encourage journalists and other communicators who, on a sustained basis, bring accurate mathematical information to non-mathematical audiences. The award carries a cash prize of $1,000.

Previous recipients of the JPBM Communications Award are James Gleick (1988), Hugh Whitemore (1990), Ivars Peterson (1991), Joel Schneider (1993), Martin Gardner (1994), Gina Kolata (1996), Philip J. Davis (1997), Constance Reid (1998), Ian Stewart (1999), John Lynch and Simon Singh (special award, 1999), Sylvia Nasar (2000), Keith J. Devlin (2001), Claire and Helaman Ferguson (2002), and Robert Osserman (2003).

The 2005 JPBM Communications Award was presented to BARRY CIPRA. The text that follows presents the award citation, a brief biographical sketch, and the recipient's response upon receiving the award.

Citation

The Joint Policy Board for Mathematics presents its 2004 Communications Award to Dr. Barry Cipra who, for nearly twenty years, has written about mathematics of every kind—from the most abstract to the most applied. His lucid explanations of complicated ideas at the frontiers of research have appeared in dozens of articles in newspapers, magazines, and books.

While some of his audience undoubtedly consists of mathematicians themselves, he writes for scientists and scholars who are mathematically literate. In this way, he has reached many thousands of scientists. Dr. Cipra's work has educated mathematicians and nonmathematicians alike by exposing them to current and deep mathematical ideas about the beauty and power of mathematics. Barry Cipra has given his readers a greater understanding of the ideas of mathematics, but most importantly he has changed their perception of the nature of mathematics.
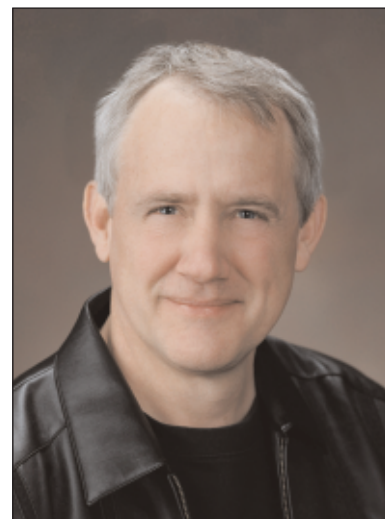
Barry Cipra

Biographical Sketch

Barry Cipra received his doctoral degree in mathematics from the University of Maryland in 1980. After a brief career as an academic, he turned to freelance writing, and he has continued with that work for the past 15 years. He has written many articles for *Science* magazine, one of the premier journals of scientific exposition. Examples of the intriguing titles of his articles are "Simple recipe creates acid test for primes" and "How to play platonic billiards". He is a regular contributor to *SIAM News*, writing many dozens of articles that are accessible and illuminating. He has authored five volumes of *What's Happening in the Mathematical Sciences* for the AMS, each including a compilation

of expository articles on recent mathematical developments aimed at the mathematically literate public. Those volumes have been widely distributed (and admired) in the scientific community and in Washington.

Cipra received the 1991 Merten M. Hasse Prize from the Mathematical Association of America for an expository article on the Ising model, published in the December 1987 issue of the *American Mathematical Monthly*. He is the author of *Misteaks…and how to find them before the teacher does…* (a calculus supplement), published by A K Peters, Ltd.

Cipra completed his Ph.D. degree under the direction of Michael Razar, with much help from Steve Kudla. He was a Moore Instructor at the Massachusetts Institute of Technology, a research instructor at the Ohio State University, and an assistant professor at St. Olaf College in Northfield, Minnesota, before turning to freelance writing.

Response

It is a great honor to receive the JPBM Communications Award. To be able to write about mathematics for a living—to meet so many first-rate mathematicians and learn about their exciting work—is a pleasure beyond description. This is an amazing age in which to be reporting on mathematics and its applications. I never would have guessed, in 1987, that I would wind up reporting on the proofs of Fermat's Last Theorem and the Kepler Conjecture (and, very possibly, the Poincaré Conjecture). I have witnessed an incredible growth in the applications of mathematics, especially in biology, which fifteen years ago was barely a whisper at math meetings and now is a prominent theme at many. Perhaps most surprisingly, I've seen mathematics go from a virtual nonentity in popular culture to become the basis (or McGuffin) of award-winning plays and movies.

I've been helped by many people over the years. Chief among them are Klaus Peters, Lynn Steen, Ed Block, Paul Sally, and Sam Rankin. I would like to thank my editors, especially Gail Corbett, Tim Appenzeller, and Paul Zorn, who have made the final, published versions of my articles so much better than their first drafts. Indeed, the key to writing, I've found, is expressible in a familiar mathematical term: iteration. The hard part, as mathematicians well know, is making sure the iterative process converges to the desired result