

In 1991 the Mathematical Association of America instituted Awards for Distinguished College or University Teaching of Mathematics in order to honor college or university teachers who have been widely recognized as extraordinarily successful, and whose teaching effectiveness has been shown to have had influence beyond their own institutions.

Citation

Dr. Brian P. Hopkins

The New Jersey Section of the Mathematical Association of America is pleased to present its 2011 sectional award for Distinguished College or University Teaching of Mathematics to Dr. Brian Preston Hopkins.



Brian Hopkins has a knack for posing problems. His courses feature individual or group projects with interesting problems, carefully chosen to lead students to discover mathematics for themselves. Discovery happens at all levels, from elementary counting problems in Finite Mathematics, to complex applications of modern mathematics in symbolic dynamics, phylogenetic trees, or the mathematics of search engines. This active-problem-solving

approach leads to classes in which students are willing to take chances and offer answers even when they are not certain of the correctness of their suggestions—classes with an atmosphere of mutual respect and exploration.

Dr. Hopkins bases his advanced courses in the applications of modern mathematics on contemporary research articles. The projects assigned in such courses, and in more standard courses such as Discrete Mathematics, Linear Algebra, and Abstract Algebra, have led several students to do independent research under Dr. Hopkins' direction. In this way, students have produced a number of talks or posters at local and national conferences and five honors theses in the Saint Peter's College Honor Program. Other support for undergraduate research has come from the Mathematical Association of America's Strengthening Underrepresented Minority Mathematics Achievement program and the Center for Undergraduate Research Mathematics at Brigham Young University.

His own research is also a source of independent research problems for students. Dr. Hopkins has published a variety of classroom notes and a number of articles on topics in pure mathematics. He is the editor of the recent *Resources for Teaching Discrete Mathematics* (MAA Notes #74). He and his coauthor, Robin Wilson, won the 2005 George Pólya Award for expository excellence for their article "The Truth About Königsberg," which has been widely reprinted. And in conjunction with his research, Dr. Hopkins has given dozens of presentations and participated in numerous seminars, symposia, and panels around the world.

Whether through his courses or through his research, Dr. Hopkins has given Saint Peter's College mathematics majors the experience of reading and summarizing contemporary research articles and doing original work. They have worked on material that has not made it into the textbooks yet. As one student put it, "The instructor takes the course beyond the conventional survey into a climate of creative and analytic research." Several students who have gone to graduate school in various fields, not just in mathematics, have reported that Dr. Hopkins' courses provided very valuable

preparation.

In addition to his work with the students of Saint Peter's College, Dr. Hopkins also does exciting work in the professional development of K-12 teachers. He has given workshops under the sponsorship of the Institute for Advanced Study, the New Jersey Professional Development and Outreach group, its Institute for New Jersey Mathematics Teachers at Ocean Grove, the Northwest Mathematics Interaction, and the Pikes Peak Math Teachers' Circle. In these workshops, Dr. Hopkins leads K-12 teachers through problem-solving techniques and hands-on exercises with manipulatives designed to increase the teachers' effectiveness in the classroom. There are glowing testimonials as to the effectiveness of these workshops. One participant described Dr. Hopkins as "a seasoned mathematician who seemed to know exactly how to help secondary teachers not only learn mathematics and subsequently teach it to their own students, but how to get them *interested in* and *excited about* mathematics."

Dr. Hopkins earned a B.A. in Philosophy and a B.S. in Mathematics, both from the University of Texas in 1990. His Ph.D. in Mathematics was awarded by the University of Washington in 1997. He was a Visiting Assistant Professor at Seattle University from 1996 to 2001, when he joined the Mathematics Department at Saint Peter's College, where he is now an Associate Professor. He was a Visiting Scholar at Harvey Mudd College in 2009. He has twice received the Francis A. Varrichio Award for Excellence in Teaching, awarded by the Saint Peter's College chapter of Pi Mu Epsilon. He is a member of the American Mathematics Society, the Mathematical Association of America, the National Council of Teachers of Mathematics, and the National Association of Recording Arts & Sciences.

Dr. Michael Sheehy of the Mathematics Department, St. Peter's College, nominated Dr. Hopkins for this Distinguished Teaching Award.

Response from Brian Hopkins

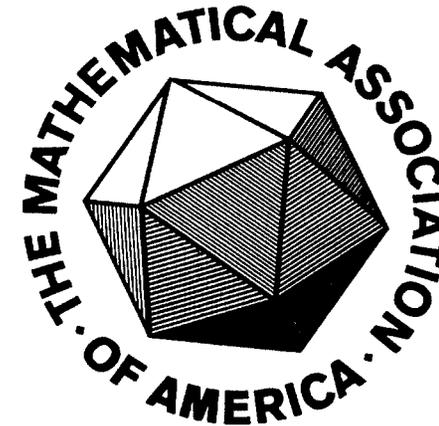
Although there is one name cited for this award, the honor is shared by many: ten years of students at Saint Peter's College, from Finite Mathematics students engaged in the Kevin Bacon game saying "this isn't math" while they learn graph theory, to upper division majors working long hours on infamous "Hopkins projects" that go past what the textbooks cover; faculty and administrator colleagues at SPC who encourage my research and teaching; secondary school teachers from around the country who spend their time with me on content-based professional development; and various funders that make programs like undergraduate research and teacher professional development institutes possible.

Several of my own experiences with creative pedagogy inspire my teaching. At the University of Texas, James Vick offered a mathematics writing course on "Proofs, Conjectures, and Controversies," and Michael Starbird helped me learn point-set topology via the Moore method. At the University of Washington, I was influenced by John Sullivan's deep appreciation of historical sources and Virginia Warfield's use of education research in teaching. At the Institute for Advanced Study's Park City Mathematics Institute, carefully crafted lecture-free courses developed by the Education Development Center helped me see the effectiveness of a very different kind of instruction. My research interests and especially my collaborators keep me excited about the field and always learning; I see less and less separation between research and teaching as I do more of each. I am thankful for the many and varied opportunities to use these and many other inspirations in the very important work of helping others learn.

**RECIPIENTS OF MAA-NJ DISTINGUISHED
TEACHING AWARD**

**MATHEMATICAL ASSOCIATION OF AMERICA
NEW JERSEY SECTION**

Sr. M. Stephanie Sloyan, Georgian Court College	1992
Eileen Polani, St. Peter's College	1993
Richard Bronson, Fairleigh Dickinson University	1994
Siegfried Haenisch, The College of New Jersey	1995
Andrew Demetropoulos, Montclair State University	1996
Roger Pinkham, Stevens Institute of Technology	1997
Virginia Lee, Brookdale Community College	1998
Amy Cohen, Rutgers University-New Brunswick	1999
Janet H. Caldwell, Rowan University	2000
Evan Maletsky, Montclair State University	2002
Stephen J. Greenfield, Rutgers University-New Brunswick	2003
Arthur Schwartz, Mercer County Community College	2004
Bonnie Gold, Monmouth University	2006
Bruce G. Bukiet, New Jersey Institute of Technology	2008
Thomas Osler, Rowan University	2009
Robert L. Wilson, Rutgers University	2010



**Award for Distinguished College or
University Teaching of Mathematics**

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MEMBERS OF THE SELECTION COMMITTEE

Bruce G. Bukiet, New Jersey Institute of Technology
Janet H. Caldwell, Rowan University
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Kenneth Wolff, Montclair State University

Spring Meeting

**Saturday, April 2, 2011
Essex County College
Newark, New Jersey**