

ematics Standards. As such, he was the principal representative of the mathematics research community in the creation of the CCSS. The happy fact that so many mathematicians can read these standards with approval can be attributed in considerable part to his involvement.

Biographical Sketch

William McCallum was born in Sydney, Australia, and received his Ph.D. in mathematics from Harvard University in 1984 under the supervision of Barry Mazur. He has taught at the University of California, Berkeley, and the University of Arizona, where he is currently University Distinguished Professor. He is a founding member of the Harvard Calculus Consortium and has been a research fellow at the Mathematical Sciences Research Institute, the Institut des Hautes Études Scientifiques, and the Institute for Advanced Studies. His honors include a Centennial Fellowship from the American Mathematical Society and a Director's Award for Distinguished Teaching Scholars from the National Science Foundation. In 2006 he founded the Institute for Mathematics and Education at the University of Arizona. His professional interests include arithmetical algebraic geometry and mathematics education.

Response from William McCallum

I am deeply honored to receive this award and accept it not only on my own behalf but also on behalf of the growing community of mathematicians who have chosen to dedicate their time and intellect to the scholarship of mathematics education. This community includes many previous recipients of this award and many others who deserve similar accolades. I am grateful for their leadership and inspiration. I am also grateful to the many mathematics educators and teachers with whom I have worked, both for their willingness to speak and for their willingness to listen as

I explored their communities. With the Institute for Mathematics and Education I have tried to build a home where mathematicians, educators, and teachers can meet, collaborate, and learn from each other, as I myself have learned from all three groups. I was fortunate to be at the right place at the right time when the Common Core State Standards initiative came along so that I was able to put my learning to good use. The Common Core is the best chance we have had in a long time to improve school mathematics education in this country; I invite my colleagues in the research community to join the effort to make it succeed.

About the Award

The Award for Distinguished Public Service is presented every two years to a research mathematician who has made a distinguished contribution to the mathematics profession during the preceding five years. The purpose of the award is to encourage and recognize those individuals who contribute their time to public service activities in support of mathematics. The award carries a cash prize of US\$4,000.

The Award for Distinguished Public Service is made by the AMS Council acting on the recommendation of the selection committee. For the 2012 award, the members of the selection committee were Richard A. Askey, C. H. Clemens, Roger E. Howe, Richard A. Tapia, and Sylvia M. Wiegand.

Previous recipients of the award are Kenneth M. Hoffman (1990), Harvey B. Keynes (1992), I. M. Singer (1993), D. J. Lewis (1995), Kenneth C. Millett (1998), Paul J. Sally Jr. (2000), Margaret H. Wright (2002), Richard Tapia (2004), Roger Howe (2006), Herbert Clemens (2008), and Carlos Castillo-Chavez (2010).

— Elaine Kehoe

2012 AMS–SIAM Birkhoff Prize

BJORN ENGQUIST received the 2012 AMS-SIAM George David Birkhoff Prize in Applied Mathematics at the Joint Mathematics Meetings in Boston in January 2012.

Citation

The 2012 George David Birkhoff Prize in Applied Mathematics is awarded to Bjorn Engquist for his contributions to a wide range of powerful computational methods over more than three decades.

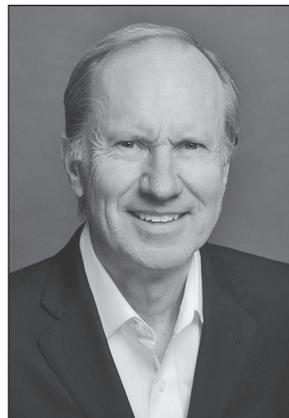
DOI: <http://dx.doi.org/10.1090/noti827>

These include the numerical analysis of boundary conditions for wave propagation, which provided deep understanding about constructing accurate numerical schemes, efficient shock capturing schemes for nonlinear conservation laws which have found their way far beyond fluid mechanics into such disparate fields as image processing and materials, techniques for numerical homogenization, and methods for computing across multiple scales. His work blends mathematical analysis, modeling, and computation and has led to numerical tools with enormous impact across a broad

range of applications, including aerodynamics, acoustics, electromagnetism, computational fluid mechanics, and computational geoscience.

Biographical Sketch

Bjorn Engquist was born in Stockholm, Sweden, in 1945. He studied as an undergraduate and graduate student at Uppsala University, where



Bjorn Engquist

he obtained his Ph.D. in 1975. After two years as a postdoc at Stanford University, he joined the faculty of the UCLA Department of Mathematics in 1978. He has been a professor at Uppsala University, the Royal Institute of Technology in Stockholm, and Princeton University. At Princeton he was also the director for the program in applied and computational mathematics. Since

2004 he has been the CAM Chair I Professor at the University of Texas at Austin and also director for the Center for Numerical Analysis at the Institute for Computational Engineering and Science. He has supervised thirty-three Ph.D. students. He was a speaker at the International Congresses of Mathematicians in 1982 and 1998, and he received the first SIAM Prize in Scientific Computing as well as the Celsius Medal, the Wallmark Prize, a Guggenheim Fellowship, and recently the Henrici Prize. He is a SIAM Fellow and member of the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences and a foreign member of the Norwegian Academy of Science and Letters.

Response from Bjorn Engquist

I am deeply honored and delighted to receive the 2012 George David Birkhoff Prize in Applied Mathematics. I greatly appreciate the citation and the recognition from the American Mathematical Society and the Society for Industrial and Applied Mathematics. I have always found computational science, which is at the interface between mathematics and applications, to be an exciting and a fruitful field for research. It is highly rewarding to see mathematical advances impact science and engineering. I am grateful to all collaborators throughout my career.

I thank my advisor, Heinz-Otto Kreiss, for his guidance and insight. I also thank many of my colleagues from the important early years, when I was fortunate to collaborate with Andrew Majda and Stanley Osher, to the present time working with Richard Tsai and Lexing Ying. I am also thankful

for the inspiring interaction with my many excellent students, from whom I learned at least as much as they from me. Many thanks to Weinan E and Tom Hou from our time at UCLA and beyond and to Olof Runborg and Anna-Karin Tornberg from the time at the Royal Institute of Technology in Stockholm.

About the Prize

The Birkhoff Prize recognizes outstanding contributions to applied mathematics in the highest and broadest sense and is awarded every three years. Established in 1967, the prize was endowed by the family of George David Birkhoff (1884–1944), who served as AMS president during 1925–1926. The prize is given jointly by the AMS and the Society for Industrial and Applied Mathematics (SIAM). The prize carries a cash award of US\$5,000.

The recipient of the Birkhoff Prize is chosen by a joint AMS-SIAM selection committee. For the 2012 prize, the members of the selection committee were Andrew J. Majda, James A. Sethian (chair), and Michael S. Waterman.

Previous recipients of the Birkhoff Prize are Jürgen K. Moser (1968), Fritz John (1973), James B. Serrin (1973), Garrett Birkhoff (1978), Mark Kac (1978), Clifford A. Truesdell (1978), Paul R. Garabedian (1983), Elliott H. Lieb (1988), Ivo Babuška (1994), S. R. S. Varadhan (1994), Paul H. Rabinowitz (1998), John N. Mather (2003), Charles S. Peskin (2003), Cathleen S. Morawetz (2006), and Joel Smoller (2009).

—*Elaine Kehoe*