

Deborah and Franklin Tepper Haimo Award

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. In 1993 the MAA Board of Governors renamed the award to honor Deborah and Franklin Tepper Haimo. Each year, at most three college or university teachers are honored with this award.

Carol S. Schumacher

Kenyon College

Dr. Carol Schumacher is recognized for her excellent teaching for more than 30 years at Kenyon College, where getting to know her students both as young mathematicians and as human beings has been a hallmark of her teaching and mentorship. By building these connections, she establishes a community with the students that helps launch them on their future life paths. As one of her students wrote “She loves the beauty of mathematics and inspires the same in her students, often a primary reason a Calculus I student decides to major in mathematics, or an upper-level major decides to continue pursuing research and higher education beyond Kenyon.”

However, her impact on mathematics is much greater than the sum of the students she has taught, as she has been involved with MAA Project NExT (New Experiences in Teaching) since its inception shortly after she earned tenure herself. To both Project NExT fellows and other workshop audiences, Carol has shared her approach to offering students “total immersion in the culture” of mathematics through active inquiry-based learning (IBL). To help instructors implement IBL in their mathematics classrooms, Dr. Schumacher has written two IBL texts: *Chapter Zero*, which serves to introduce students to methods of proof and sets, relations, and functions, and *Closer and Closer: Introducing Real Analysis*. Indeed, Carol Schumacher is a national leader in the use of inquiry-based learning in the postsecondary mathematics classroom.

Dr. Schumacher served more than a decade as a member of the MAA’s Committee on the Undergraduate Program in Mathematics, chairing the committee from 2008 to 2011. During her tenure as chair, Carol initiated the process that led to the *2015 CUPM Curriculum Guide to Majors in the Mathematical Sciences*. She co-chaired the committee that prepared the final *Curriculum Guide* with Dr. Martha Siegel, who wrote that Carol’s “particular

stewardship of the Course Area Group reports showed her grasp of the depth and the breadth of the undergraduate mathematics curriculum.” Although the *Curriculum Guide* left pedagogical issues for another MAA committee, Dr. Schumacher’s depth of expertise with inquiry-based learning and understanding of its impact on student learning was reflected in the *Curriculum Guide’s* Cognitive Recommendation 4: “Students should develop mathematical independence and experience open-ended inquiry.”

The MAA recognizes Carol Schumacher for the profound impact she has had on multitudes of students directly as a faculty member at Kenyon College, through her mentorship of and inspiration to mathematics faculty through MAA Project NExT and the IBL community, and as a driving force behind the 2015 CUPM *Curriculum Guide*. The MAA is honored to present her with the Deborah and Franklin Tepper Haimo Award for Distinguished College or University Teaching of Mathematics.

Response

I am deeply moved to be one of this year’s recipients of the Haimo Award. Previous awardees include many of the best mathematics teachers I know, many of them mentors to me. I am profoundly humbled to have my name listed along with theirs. As a teacher and a mathematician, I have been formed by wonderful teachers and fantastic colleagues. I am grateful to Susan and Sally Shockey, two sisters that taught my high school math courses and jump-started my love of mathematics. Bob Eslinger opened my eyes to creativity in mathematics and taught classes in which I experienced the thrill of mathematical discovery. Stan Yoshinobu reminds me that teaching and learning are, first and foremost, human activities; what we do in our classrooms can change students’ lives in profound ways and that is an awesome responsibility. Mike Starbird inspires me to teach ambitiously, working to design courses that will continue to impact my students many years after they leave my class. My Kenyon colleagues motivate me with their creative teaching and tireless dedication to their students. I learn from them every day. (And I am continually amazed at the grace with which they put up with my crazy antics and strong opinions.) The MAA and Project NExT communities keep me supplied with stimulating new teaching ideas and revitalizing mathematical insights. Moreover, I am the teacher I am because of my wonderful parents, who always encouraged my love of learning; my loving (and hilarious!) husband Ben who is also a colleague and friend; beloved siblings (the genetic kind and also those that I was lucky enough to acquire through marriage) and my wonderful daughters, Sarah and Glynis. Finally, my students are an inexhaustible source of joy. They inspire me by enthusiastically engaging with new mathematical

ideas and doggedly working to overcome obstacles. They are always helping me find ways to improve my teaching for the next generation of students. One of the great thrills of my life was to teach mathematics to Sarah and Glynis. (Yes, they did take courses from their mom who learned a lot from them!)

Biographical Sketch

Carol S. Schumacher was born in Bolivia and lived there until she was a teenager when her family moved to Española, New Mexico. Carol went to high school in New Mexico. She earned a BA at Hendrix College in Arkansas and received a PhD in mathematics from The University of Texas at Austin. She wrote a thesis in the geometry of Banach spaces under the direction of the late Ted Odell. Carol has been a faculty member at Kenyon College in Ohio since 1988. Carol has served four terms as department chair, one term as chair of the faculty and is the recipient of Kenyon's Trustee Teaching Award. She is also the recipient of Ohio Section MAA's Distinguished Teaching Award.

Carol is the author of *Closer and Closer: Introducing Real Analysis* and *Chapter Zero: Fundamental Notions of Abstract Mathematics, 2E*. Both books are written for use in a course that emphasizes inquiry-based learning, an approach that she uses in many of her upper-level courses. Schumacher is active in the Mathematical Association of America. She was co-chair of the 2015 *CUPM Curriculum Guide to Majors in the Mathematical Sciences* and served a term as MAA VP.