

2018 Award for Distinguished Public Service

SYLVAIN CAPPELL was awarded the 2018 Award for Distinguished Public Service at the 124th Annual Meeting of the AMS in San Diego, California, in January 2018.



Sylvain Cappell

Citation

The 2018 AMS Award for Distinguished Public Service is presented to Sylvain Cappell, Julius Silver Professor of Mathematics at New York University, for his remarkable mentoring of talented young mathematicians, his dedication to protecting human rights, and his extraordinary involvement in outreach. During his years at the Courant Institute, Cappell has displayed an

exceptional ability to recognize and nurture mathematical talent. He was a founder of the Courant Institute's Center for Mathematical Talent and has continuously served on its board. Cappell has identified, counseled, and mentored dozens of mathematicians, starting at the primary levels through to the university and professoriate. Many of these individuals went on to distinguished careers in mathematics. For several decades, he mentored faculty and developed math-related workshops for the Faculty Resource Network. Cappell has also immersed himself in service to the mathematics profession in other ways. He has been an eloquent spokesman for human rights, serving for two decades on the Advisory Boards for the Committee of Concerned Scientists and the academic organization Scholars at Risk. He has served as advisor to organizations ranging from the Rothschild Foundation and CalTech to NYC Math Circles, the Museum of Mathematics, and Math for America.

Mathematicians focused on research often forget that their profession requires public service in order to sustain it. Sylvain Cappell is a model for all mathematicians—a distinguished research mathematician devoted not only to doing mathematics but also to nurturing and serving it well.

Biographical Sketch

Sylvain Cappell was born in Belgium in 1946 to Holocaust survivors. His parental family immigrated to the United States in 1950. He obtained his BA (summa cum laude) from Columbia University in 1966 in math (while taking enough literature courses for a major), where he studied with Samuel Eilenberg. He obtained his PhD in mathematics from Princeton University in 1969, working under the supervision of William Browder, and then to 1974 held academic appointments there.

Since 1974 he has been at New York University's Courant Institute of Mathematical Sciences, a full professor since 1978, and in 2008 was appointed by NYU to its Julius Silver Professorship. He has also held visiting faculty appointments at Harvard University, the University of Pennsylvania, the Weizmann Institute of Science, the Institut des Hautes Études Scientifiques, and the Institute for Advanced Study.

His one hundred scientific publications include research works on geometric topology and its connections to many other areas of mathematics, including algebraic, symplectic, combinatorial, and differential geometry, as well as algebraic K -theory and global analysis. He was awarded both Sloan Foundation and Guggenheim Foundation Fellowships and has given invited addresses to both the American Mathematical Society and the International Congress of Mathematicians. He has chaired and served on external review committees for many leading universities, foundations, government science agencies, and research institutes in the United States and abroad. He has served on, including as chair, American Mathematical Society national committees, on the Council of the AMS, on the AMS Executive Committee, and subsequently as vice president of the AMS (2010–2013), and is an inaugural Fellow of the AMS. At NYU he has twice been chair of the Faculty Senate. He coedited the two volumes of *Surveys on Surgery Theory*, published by Princeton University Press.

Professor Cappell has supervised nineteen doctoral theses: two at Princeton and seventeen at NYU. Several of his former students and postdocs have chaired leading math

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departments in the United States and Europe, and these and others have been research and educational leaders. His extensive, long-term involvements in math education of young people include serving from its inception on the Advisory Council of the Museum of Mathematics and as advisor to the Math for America Foundation. He has long mentored math-gifted students of all ages in the tri-state region.

Professor Cappell is fluent in and lectures in several languages, including French (his first language) and Hebrew. He lives in Greenwich Village with his wife, Amy Cappell. They met as students in Bronx High School of Science (some students of which he has mentored over the years). His wife of thirty years taught art at Stuyvesant High School (from which Professor Cappell has also over the years mentored students). They have four children and four grandchildren, all living in New York City.

Response from Sylvain Cappell

I'm deeply honored to receive this award. Whatever efforts I've made which it denotes are a small return for my great good fortune in having had a mathematical life in which I've enjoyed inspiring, great teachers; brilliant, long-term research collaborators who made working sessions in Greenwich Village cafes and elsewhere a delight; consistently supportive colleagues at Courant Institute with whom I've shared scientific and educational goals; and wonderful students from youngsters to doctoral and postdocs with whom adventures in learning and working together have been a joy.

I'd like to acknowledge some of the outstanding institutions with which I've long been privileged to work on math educational and outreach activities. These include the National Museum of Mathematics, the Courant Institute's Center for Mathematical Talent, the Math for America Foundation, the New York Math Circles, and the Faculty Resource Network. I've also been privileged to be involved with great human rights work in academia worldwide accomplished by the Committee of Concerned Scientists and by Scholars-at-Risk. Unfortunately, the need for such dedicated academic human rights efforts is not yet diminishing.

About the Award

The Award for Distinguished Public Service is made by the AMS Council, acting on the recommendation of the selection committee. For the 2018 award, the members of the selection committee were:

- John H. Ewing
- Richard M. Hain
- William McCallum (Chair)
- Ronald John Stern
- David A. Vogan Jr.

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.

A list of previous recipients of the Distinguished Public Service Award may be found on the AMS website at www.ams.org/profession/prizes-awards/pabrowse?url=public-service-award.

Photo Credit

Photo of Sylvain Cappell courtesy of Sylvain Cappell.

