Award for Distinguished Public Service Presented to Kenneth M. Hoffman

Proper recognition for mathematicians who contribute valuable service to the profession is a matter of great importance to the Society. The continued growth and health of the discipline is greatly dependent on those individuals who contribute their time to public service activities in support of mathematics. To provide encouragement and recognition for such service, the Council of the American Mathematical Society, responding to a recommendation from the Society's Committee on Science Policy, established the Award for Distinguished Public Service. The amount of the Award is $2,500.

The Award is to be presented every two years to a research mathematician who has made a distinguished contribution to the mathematics profession through public service during the preceding five years. The first Award for Distinguished Public Service was presented to KENNETH M. HOFFMAN of the Massachusetts Institute of Technology and the Mathematical Sciences Education Board. The Award was made by the Council of the American Mathematical Society, acting through a selection committee consisting of Ronald G. Douglas, Robert M. Fossum (Chairman), John C. Polking, David P. Roselle, and David Sanchez.

The text below includes the Committee's citation, the recipient's response on presentation of the award, and a brief biographical sketch of the recipient.

Citation

The 1990 AMS Award for Distinguished Public Service is presented to Kenneth M. Hoffman for his outstanding leadership in establishing channels of communication between the mathematical community and makers of public policy as well as the general public.

After a distinguished career as a research mathematician, head of a major research department of mathematics, and other significant accomplishments in his university, Hoffman was instrumental in a host of major public policy achievements in the last decade. He was Executive Director of the Committee on Resources for the Mathematical Sciences (the David Committee) and was heavily involved in the formation of the Board on Mathematical Sciences (BMS) and the Mathematical Sciences Education Board (MSEB), both activities of the National Research Council. He served as chair of the AMS Committee on Science Policy and later created the "Washington Presence" as the first head of the Office of Governmental and Public Affairs of the Joint Policy Board for Mathematics of the AMS, MAA, and SIAM. Through his efforts, the awareness of the importance of mathematics and the support of mathematical research has been significantly heightened in the general public, among makers of science policy in the government, and among university administrators.

Kenneth M. Hoffman

Response

I am deeply honored to be the recipient of the Society's first Award for Distinguished Public Service. It has even greater meaning for me to have the Award presented

by Bill Browder, who was responsible for getting me involved with matters of public policy almost exactly 10 years ago. This involvement with the needs and responsibilities of our profession began when we were putting together Bill's brainchild, the first David Committee.

No working mathematician will be surprised if I say that when Bill asked me to become Executive Director of the David Committee I hadn't the slightest intention of staying in Washington for years, much less 10 years. But life has a way of choosing our careers for us. This career has turned out to be a fascinating and rewarding experience for me. In fact, I just signed on for another five year tour of duty to direct the Mathematical Sciences Education Board.

During the decade of the 80s, our relations with government and the public have changed in ways few of us even imagined in 1980. Our community has made its presence felt in policy circles as never before; we have begun to truly reach people through the media; and we have put in place lasting structures to better enable us to relate to our several publics—such structures as the Joint Policy Board, the Board on Mathematical Sciences, and the Mathematical Sciences Education Board. Out of these boards in 1989 and 1990 are flowing coordinated national game plans and strategies for revitalizing the mathematics research enterprise, the K-12 math education system, and the teaching of mathematics at the college-university level. It will be up to our broad community to implement these ambitious plans and strategies.

The growing group of colleagues who labor on your behalf in the vineyards of Washington has gotten the effort started. The fruits of their labors thus far include an increase in federal research funding for mathematics of 90% over the last six years, and placement of mathematics at the forefront of the national education reform effort now being led by the President and the governors.

If you're an analyst, as I am, you won't be surprised at the fact that you haven't felt the impact of the near doubling of research funding for our field. Any analyst knows that for all practical purposes, 2E behaves just like E—when E is very small. And we certainly started from a small research funding base. What we must keep firmly in mind over the next decade is the archimedean principle familiar to all mathematians: no matter how small E may be, eventually NE gets large. In plain English, we have to stay the course set during the 80s—use the game plans and the structures that have been devised; get more of our colleagues involved; stick at it for another decade or more.

The leadership group responsible for initiating a new cycle of change in our community is quite sizable—much too large to receive a single award; and that's why I am up here. I've been lucky to sit somewhere near the middle of the action over the last decade, carrying out general plans while serving as a combination catalytic coordinator and foot in the seat of the community's pants. This is not a role designed to make one popular, which is another reason this Award from the Society means a great deal to me.

I cannot take the time to thank individually the 100 or more key leaders from our community who should be standing here with me. This list includes a succession of Presidents and Executive Directors of AMS, MAA and SIAM; strings of division directors in federal agencies; and a battery of individual mathematicians who need no official position to provide leadership. To prune the list is to risk offending someone. Nevertheless, I feel compelled to express my personal thanks to several people with whom I have worked very closely and who have made all the difference for me at critical transition points: Bill Browder, Iz Singer, Jim Infante, David Fox, Hirsh Cohen, Bill LeVeque, Lynn Steen, Shirley Hill, Marcia Sward, Jennifer Vance, Kathleen Holmay, and my Washington mentor Ed David.

In addition, I want to thank my friend and colleague, Paul E. Gray, President of M.I.T., who has supported and continues to support my Washington involvement, using the principle that such involvement is part of my duties as a faculty member and part of the responsibilities of M.I.T. He has supplied more than half a million dollars to give practical meaning to that principle.

Finally, my thanks to the Selection Committee and the Executive Committee. Their task cannot have been an easy one, and I am pleased to have been selected.

Biographical Sketch

Born in 1930 in Long Beach, California, Kenneth Myron Hoffman received the A.B. in mathematics from Occidental College in Los Angeles in 1952. He was awarded the M.A. and Ph.D., both in mathematics, from the University of California at Los Angeles, in 1954 and 1956. He joined the staff of M.I.T. in 1956 as an instructor and in 1957 was appointed C.L.E. Moore Instructor. He was promoted to assistant professor in 1959 and to full professor in 1963. He became chairman of the Committee on Pure Mathematics in 1968 and in 1971 was appointed department head, a position he held for eight years.

Professor Hoffman has been a member of the M.I.T. faculty since 1959. Since 1981, he has been active at the interface of mathematics and public policy. From 1981 to 1984, he served as Executive Director of the Committee on Resources for the Mathematical Sciences of the National Research Council. This panel's 1984 report, "Renewing U.S. Mathematics: Critical Resource for the Future," is commonly known as "The David Report." It received nationwide press coverage and documented a serious imbalance between federal support for the math-

ematical sciences and support for related fields of science and engineering. Hoffman was subsequently instrumental in the formation of two boards at the National Research Council, the Board on Mathematical Sciences and the Mathematical Sciences Education Board, of which he was a member from 1985 to 1988. He became Executive Director of the Mathematical Sciences Education Board on September 1, 1989, a position he holds concurrently with his M.I.T. professorship.

From 1981 to 1984, Hoffman was chairman of the Committee on Science Policy of the American Mathematical Society, and in 1984-1985 chairman of the Advisory Committee for Science and Engineering Education at the National Science Foundation. From 1984 to 1989 he headed the Office of Governmental and Public Affairs of the Joint Policy Board for Mathematics, which develops policy analyses on behalf of the national mathematics community and presents them to the executive and legislative branches of the government as well as to the public. This office led the effort to implement the recommendations of the 1984 David Report and is credited with the remarkable increase in media coverage of mathematics which has occurred in the United States in the past 5 years. In August, 1986, Hoffman was awarded the Public Service Award of the Joint Policy Board for Mathematics "for his far-sighted and effective initiation... of a national mathematical sciences policy."

In his eight years as a department head, Professor Hoffman further strengthened the mathematics faculty at M.I.T. He also created the position of Undergraduate Chairman, brought a strong statistics program into the department, and developed an affirmative action plan which became the national model for departmental plans.

Hoffman's main area of mathematical interest is function algebras, a subject which was discovered in the mid 1930's but lay dormant until the 1950's, when it was revived by Richard Arens, I.M. Singer, and their student, Kenneth Hoffman. They recognized the close relationship between Banach algebras and newly developing approaches to complex analysis. The work of Hoffman at this interface represents a fundamental contribution to both complex and abstract analysis, two major branches of mathematics. Much subsequent research in this area has been based on the work in Hoffman's numerous research publications.

Professor Hoffman has taught mathematics courses from freshman calculus through advanced graduate courses and has written texts at all levels. He is co-author, with Ray Kunze, of the basic undergraduate text, *Linear Algebra* (Prentice-Hall, 1961), which has been used widely throughout the world for nearly 30 years. Other books include *Fundamentals of Banach Algebras* (Instituto da Universidado do Parana, Curitiba, Brazil, 1962), *Analysis in Euclidean Space* (Prentice-Hall, 1975), and *Banach Spaces of Analytic Functions* (Prentice-Hall, 1967). For several years he also taught a special M.I.T. course on *Writing In and About Mathematics.*

Professor Hoffman was a Sloan Foundation Fellow, 1964-1966. He is a member and former Council member of both the American Mathematical Society and the American Association for the Advancement of Science. He is also a member of the Mathematical Association of America, the Society for Industrial and Applied Mathematics, the National Council of Teachers of Mathematics, the Association for Women in Mathematics, the American Statistical Association, the Institute of Mathematical Statistics, and the Operations Research Society of America.