



January
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Prizes and Awards

4:25 PM, Thursday,
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YUEH-GIN GUNG AND DR. CHARLES Y. HU AWARD FOR DISTINGUISHED SERVICE TO MATHEMATICS

THE Gung and Hu Award for Distinguished Service to Mathematics, first presented in 1990, is the endowed successor to the Association's Award for Distinguished Service to Mathematics, first presented in 1962. This award is intended to be the most prestigious award for service offered by the Association. It honors distinguished contributions to mathematics and mathematical education—in one particular aspect or many, and in a short period or over a career. The initial endowment was contributed by husband and wife, Dr. Charles Y. Hu and Yueh-Gin Gung. It is worth noting that Dr. Hu and Yueh-Gin Gung were not mathematicians, but rather a professor of geography at the University of Maryland and a librarian at the University of Chicago, respectively. They contributed generously to our discipline, writing, "We always have high regard and great respect for the intellectual agility and high quality of mind of mathematicians and consider mathematics as the most vital field of study in the technological age we are living in."

CITATION

Gerald J. Porter

The Gung & Hu Award Committee recommends to the MAA Board of Directors Gerald J. Porter as the recipient of the Yueh-Gin Gung and Dr. Charles Y. Hu Award for Distinguished Service to Mathematics.

Jerry's service has been in teaching, teacher education, research, MAA administration, and, most importantly of all, in leading the profession, especially the MAA, to value racial and gender diversity in all activities. Those who have served on the MAA Board of Governors and/or Executive Committee with Jerry know that he is a strong advocate for diversity in all committee appointments. During Jerry's four years on the Committee on Committees and Councils, he led that group to completely rethink the committee appointment process and to insist on a diverse membership on all committees. The MAA considered a double-blind review system for many years but it is because of Jerry Porter's persistence that the Board agreed to implement such a system.

As chair of the Council on Prizes and Awards (2010–2014), Jerry served ex-officio on the Committee on Committees and Councils. His service in these positions illustrates how Jerry exercised his responsibilities in the Association. He did

not simply maintain the status quo but carefully examined every activity for which these committees were responsible, seeking improvements and, where appropriate, increasing diversity. In the case of prizes and awards, he led the Council to review every prize and award that MAA gives, the timing of appointments to committees, membership and terms for these committees, and the nomination process for all the awards. This multi-year process led us to a much improved, more inclusive, system.

Jerry served as Treasurer of MAA from 1992 to 2001. During those years he maintained a complete set of the MAA financial records so that he could understand the MAA finances without relying on the staff. This was necessary because there was a high turnover of staff during that period. Jerry not only understood the Board-approved operating budget, but also knew the details of the MAA funds that supported prizes, awards, lectures, and specific programs. When the Executive Committee sought funds to increase an award or for some specific need not covered in the budget, it was Jerry who provided information about donor restrictions and the amount in the fund not being spent. Even after his time as Treasurer and Chair of the Investment Committee (1986–2001), Jerry, as a Governor, would remind staff of various funds. Jerry's considerable financial expertise served the MAA well.

Since first serving on the Executive Board of the Eastern Pennsylvania and Delaware Section in 1975 (it was then called the Philadelphia section), Jerry Porter has spent decades in service to the MAA. His service in terms of years and variety at the national level is extensive but his service and care for the organization goes far beyond the lengthy list of committees on which he served and positions he has held. His is the service that, while not appearing on any list, has made the difference in the MAA and our profession. He pursued this service while providing strong support to Executive Directors, learning and sharing his great expertise, and being a change agent in the areas in which he was involved. He has been a mentor to many young mathematicians and has nominated them for awards and committees, welcomed them at both section and national meetings, and shown by example the importance of inclusivity. For many years he was the only male member of the Joint Committee on Women; as always, Jerry strengthened MAA's role on this committee. Jerry welcomed the women and minorities who attend our meetings and encouraged them to take an active role in the Association.

Jerry has been a faculty member at the University of Pennsylvania since 1965. In 1968 he began using computing in his introductory calculus course to enhance student learning. Following the introduction of desktop computers, Jerry was asked to serve as Associate Dean for Computing Services and Facilities for the School of Arts and Sciences at Penn with the goal of introducing instructional computing throughout the curriculum. He served in this position for ten years

(1980–1990). In the MAA, Jerry was the first chair of the MAA Committee on Computers in Mathematics Education.

The Interactive Mathematics Text Project (IMTP) was funded by IBM and NSF and was directed by Jerry and Jim White. IMTP funded the creation of six computer laboratories that were used to host workshops to encourage the creation of computer-based algebra materials in teaching. This was an early exploration of what today is called “active learning.” Two of the laboratories were located in two-year colleges and one was in an HBCU. A second NSF grant funded similar workshops for high school math teachers. Participants from the workshops made presentations of the materials they developed at national meetings of the MAA, NCTM, and AMATYC. Jerry “ate his own cooking” and joined with David Hill to author: *Interactive Linear Algebra: A Laboratory Course Using MathCAD*, one of the first laboratory-based math courses.

Jerry has contributed to mathematics and the mathematical community for many years by publishing substantive papers, being on the forefront of teaching calculus with computing, and writing a pioneering book using active learning. His research papers in algebraic topology explored the topology of spaces now known as “polyhedral products.” His foundational research was built upon by others to include applications such as toric varieties in algebraic geometry, Stanley-Reisner rings in combinatorics, and right-angled Artin groups in geometric group theory.

He has published papers and made presentations on using computers in undergraduate mathematics instruction with a focus on teaching calculus and linear algebra. He collaborated with Doris Schattschneider to create computer materials to accompany the show on Periodic Ornamental Designs that she curated at the Allentown (PA) Museum of Art. At Penn, Jerry assumed responsibility for a multi-school consortium to encourage mathematics and its applications throughout the curriculum. To disseminate the products of this consortium he created an online journal, *Journal of Mathematics and its Applications* (JOMA). The MAA agreed to assume responsibility for JOMA when the grant funding the consortium was over. JOMA became a component of MathDL and was eventually integrated into Loci.

Jerry has been a member of AMS and MAA since 1959. He is a life member of MAA, AMS, and NAM and has also been a member of SIAM, AWM, and AMATYC. He and his wife, Judy, are members of the MAA Icosahedron Society and have endowed the AMS-MAA-SIAM Gerald and Judith Porter Public Lecture, given annually at the Joint Mathematics Meetings since 2010. Their support of MAA includes the tiled entrance at the MAA headquarters in Washington, DC, a pentagonal tiling designed by Marjorie Rice. Nominated by the Eastern Pennsylvania and Delaware Section, Jerry was recognized with a Certificate of Meritorious Service in 2011.

Jerry's deep feelings of social justice are reflected in his work and play; his website www.math.upenn.edu/~gjporter/ reflects this. As an Association, MAA is stronger and a model for others because Jerry Porter's insistence that we be fair, inclusive, and welcoming has expanded our community with mathematicians who respect and include all. This is distinguished service from which MAA and the profession will long benefit.

Biographical Note

Gerald J. Porter grew up in Rahway, New Jersey. His parents could not afford to attend college themselves and were very proud of the education they were able to provide for their sons.

Jerry was an undergraduate at Princeton where he was a math major and had the opportunity to learn from Emil Artin, William Feller, Norman Steenrod, and other legendary mathematicians. He first studied algebraic topology in a course taught by Lee Sonneborn.

During a summer job in 1955 he was introduced to digital computing. The next summer he worked for IBM writing programs for the IBM 360 library. His senior thesis involved a comparison of two computation methods for solving the transportation problem. One was proposed by his advisor, Harold Kuhn, and one proposed by Ford and Fulkerson. The comparison was done using the von Neumann computer at the Institute for Advanced Study. This was, perhaps, the first Princeton senior thesis written using a digital computer and Jerry was, most likely, the first person to program the Ford-Fulkerson algorithm on a digital computer.

He attended graduate school at Cornell University and chose to specialize in algebraic topology because of the strong group of faculty in that field including Paul Olum, Peter Hilton, Israel Berstein, and his thesis advisor, Bill Browder. His thesis involved the study of higher order Whitehead products. Following Cornell, he spent two years at MIT as an instructor and an additional year as an ONR postdoc at Brandeis. During these years he continued his study of the topology of spaces now known as "polyhedral products."

Jerry arrived at Penn in 1966 and has been a member of that faculty since then. He retired from teaching in 2006 but is still involved in advising students. During the period from 1958 to 1968, Jerry had no involvement with computing. In 1968, following a chance conversation with Herb Wilf, Jerry and Herb began using digital computing in their undergraduate courses. Jerry's subsequent work using digital computers to improve undergraduate learning in mathematics has been a major focus of his academic career. At Penn, in addition to serving as Associate Dean for Computing in the School of Arts and Sciences, he has also chaired the Faculty Senate and has served as President of the Penn Emeritus Association.

Jerry's long career of service in the MAA began in the mid-1970's following an invitation from David Rosen to teach a topology course at Swarthmore. Rosen, who was the Governor of the (then called) Philadelphia Section nominated Jerry to serve on the Executive Committee of the Section. A few years later he was elected to the MAA Board of Governors representing his section. He was elected Treasurer of the MAA in 1992 and served in that position until 2001.

Response from Gerald J. Porter

During my years in the MAA I have served with many of the previous award recipients: Lynn Steen, Ken Ross, Jerry Alexanderson, Len Gillman, Lida Barrett, and Martha Siegel to name a few. It is an incredible honor to join them as a recipient of this award. Those of us who serve mathematics and the mathematics profession do so because we think that it is important work that needs to be done. As Emerson wrote, "The reward of a thing well done is having done it." External recognition is not expected but when it is received, it is warmly appreciated. I have had four or five different academic careers, I am appreciative of the support I have received at the University of Pennsylvania that enabled me to change jobs without changing employer. My wife, Judy, had a long career as Professor of Sociology at Bryn Mawr College. As an "academic couple" we realized many years ago that it was important to support each other. Without her support and love I would not be receiving this award today. Finally, as I noted in my biographical statement, there are numerous seemingly random events that change the course of one's life. Take to heart the words of the American philosopher, Yogi Berra, who said: "When you come to a fork in the road, take it."