

Awards and Prizes

MAA Certificate of Merit

The MAA Certificate of Merit is awarded at irregular intervals by the Mathematical Association of America for special work or service to mathematics or the broader mathematics community.

In 1983, the Committee for the Award for Distinguished Service proposed that the 1984 MAA Award for Distinguished Service “be presented jointly to Mary W. Gray and Alice T. Schafer.” This award was intended, in part, to recognize their work on AWM and its accomplishments. MAA leadership demurred, however, and decided not to give the award to Gray and Schafer. Fourteen years later, Schafer was awarded the Yueh-Gin Gung and Dr. Charles Y. Hu Award for Distinguished Service. Recently, while reviewing documents in the MAA archive, the details of the 1983 incident came to light. In response, MAA would like to recognize the accomplishments of Mary Gray and rectify this omission.

In addition, MAA is contributing \$5000 to the fund that supports the AWM Mary and Alfie Gray Award for Social Justice, established as part of the celebration of AWM’s fiftieth anniversary.

Mary Lee Wheat Gray

American University

“I’m always for action.” With these four words as her guide, Mary Lee Wheat Gray has amassed a substantial body of work during her lifetime that significantly improved the mathematical community. The MAA is honored to recognize and celebrate Gray’s contributions with a Certificate of Merit for sustained application of mathematics to challenge injustice, promote equity, and elevate humanity. Her extraordinary accomplishments, especially her advocacy for women and members of underrepresented groups in mathematics, helped colleagues envision and work towards a more expansive and equitable profession. In particular, she played a critical role in the founding of the Association for Women in Mathematics in 1971, serving as its first president from 1971–1973. With her willingness to challenge authority, her ability to see beyond the status quo to what was fair and equitable, and her persistent commitment to justice, she has used her mathematical and statistical acumen, combined with her subsequent degree in law, to advance the cause of social justice throughout her life.

A member of the mathematics faculty at American University since 1968, it did not take long for Gray to effect change. In her first year, she established a program, funded by the Alfred P. Sloan Foundation, that would help women and minorities earn PhDs in math. Throughout her career at American, she has directed 34 PhDs, many of whom are women or members of underrepresented groups, and mentored countless undergraduates.

In the late 1960s, very few mathematics departments included women on their faculties. It was rarer still for a woman to chair a department of mathematics in America. Neither the MAA nor the AMS had ever elected a woman president. *The American Mathematical Monthly* was still more than a half century away from its first woman editor. But this scarcity of women was not just limited to mathematics. It was reflective of broader society as a whole. Women in America were focused on equity issues that would become formalized in the Equal Rights Amendment movement in 1972.

In 1971, the idea of forming a group of women in mathematics was first introduced at the end of a Mathematics Action Group meeting at the Joint Math Meetings (JMM) in Atlantic City. At Joanne Durken’s urging, six women remained after the session, Gray among them, and discussed forming a caucus for women. The next month, Gray posted a small announcement for a new organization, the Association

of Women in Mathematics [later changed to “for Women”] in the *Notices*, and, three months later, she authored the first issue of the *AWM Newsletter*. Throughout the 1970s, the AWM became the unofficial hub for correspondence from women documenting discrimination and seeking assistance or advice. Gray, who was the most qualified to respond, handled many of these concerns.

The 1971 Atlantic City JMM served as another important milestone for change for women in mathematics. And Gray was at the center of it. Gray had observed the absence of women invited to deliver addresses at AMS meetings and/or serve on AMS committees. In an attempt to redress this issue, she made a point to attend the AMS Council meeting. The President of the AMS, Nathan Jacobson, asked Gray to leave. In response, Gray noted that the AMS bylaws did not state that the Council meetings were closed to outside attendees, and she intended to stay. Jacobson apparently informed Gray that the meetings were understood to be closed by a “gentlemen’s agreement.” Gray replied, “Well, obviously, I’m no gentleman.” Sometimes it takes a small act of defiance—a woman staying seated when she is asked to move—to be a catalyst for change. With her (literal) seat at the table, she asked members of the Council to urge all professional math societies to encourage women and minorities to study mathematics and support them in their pursuits.

Following Gray’s bold move, the AMS Council opened their meetings to observers. Even more, just a few months later, in April 1971, the AMS formed a Committee on Women in Mathematics to identify the disadvantages that women mathematicians experience and to make recommendations to address them. Later, Gray was elected to the Council and, in 1976, she was nominated by petition and elected as the second female vice president (the first was Charlotte Scott seventy years earlier).

During the 1970s, Gray’s work on human rights cases for Amnesty International inspired her to move beyond pure mathematics and study statistics. She soon used this knowledge to work for equitable pensions when she learned TIAA-CREF paid 15% more to men than to women. In that process, one of the attorneys for the opposing side told Gray that “maybe you understand statistics, but you just don’t understand the law.” This comment spurred her to attend and earn her Juris Doctorate from Washington College of Law and subsequently write the brief for the case when it appeared before the Supreme Court. Her pivot to statistics and her law degree combined to make her even more effective in her fight for equality and women’s rights. Florence Fasanelli captured the extent of Gray’s influence when she observed that “... she might easily be found in Bosnia, Chile, Israel or Rwanda. She might be found testifying before congressional committees on Capitol Hill or appearing as an expert witness in California courtrooms. Through her knowledge of law and statistics, and her attention to social justice, she has found many ways to use her professional training to help people around the world...”

Gray has received a host of professional accolades for her work. The AWM honored her at their twentieth anniversary celebration in 1991. In 1993, she was appointed Chair of the USA Board of Directors of Amnesty International. In 1994, she received the Mentor Award for Lifetime Achievement from the American Association for the Advancement of Science. In 2001, President George W. Bush awarded Gray the Presidential Award for Excellence in Science, Engineering, and Mathematics Mentoring. In 2012, she received the Elizabeth L. Scott Award from the Committee of Presidents of Statistical Societies.

These awards celebrate Gray’s accomplishments on a grand scale. At the same time, each of them points to her influence on the lives of thousands of individuals. She not only envisions a just world, but she also remains committed to goals and creates structures to achieve it. Along the way, she used mathematics to challenge injustice, promote equity, and elevate humanity.

Response

Trained as a mathematician and converted to a statistician and lawyer, early in my career I asked myself how I could use my skills and knowledge in the broad arena of social justice. Through organizing with oth-

ers and seeking opportunities to apply the methods of the mathematical sciences I have tried to broaden the outreach of the profession and to work for equity for my colleagues and potential colleagues and well as for broaden society. It is gratifying to know that my efforts have been appreciated by the professional society of which I have been a member for the longest time.

Biographical Sketch

Distinguished professor of mathematics and statistics at American University, Mary W. Gray studies the applications of statistical methods to research and teaching, focusing on legal and ethical issues. She was a founder of the Association for Women in Mathematics (AWM) and is a fellow of the American Mathematical Society, the American Statistical Association, the American Association for the Advancement of Science, AWM, and the Association for Women in Science. Professor Gray has served as International Treasurer of Amnesty International and chair of the Board of Directors of the American Middle East Education Foundation. Her PhD in mathematics is from the University of Kansas and her JD from American University's Washington College of Law. Her more than thirty PhD students have served at universities, government agencies and industry throughout the US and abroad.