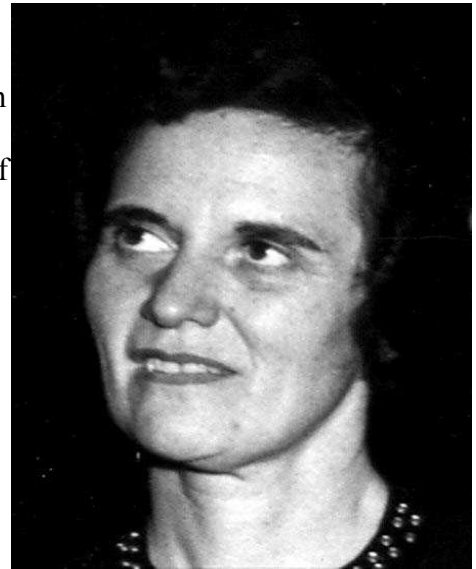


Mina Rees

Mina Spiegel Rees (August 2, 1902 – October 25, 1997) had a profound effect on mathematics and mathematical research through her work during World War II on the Applied Mathematics Panel of the Office of Scientific Research and Development, and following the conflict as head of the Mathematical Sciences Division and Deputy Director of the Office of Naval Research. When City University of New York (CUNY) was established in 1961, Rees was appointed professor and dean of graduate studies. Her leadership in establishing the Graduate School and University Center influenced graduate education throughout the United States.



Rees was born in Cleveland, Ohio, the fifth and youngest child of Moses Rees and Alice Louise Stackhouse. When Rees was two, the family moved to New York City where she attended Hunter College High School, established for the education of bright girls. She was valedictorian of her class and went on to Hunter College. At the end of her freshman year she was asked if she would like to teach a course called “transit,” dealing with surveying. She agreed and that summer took a course at Columbia University on the subject. For the remainder of her undergraduate years, she taught this trigonometric lab course, with half the salary of a regular instructor. In 1923, Rees made Phi Beta Kappa and graduated summa cum laude.

While working on a master’s degree in mathematics at Columbia University, Rees taught at her high school, and after receiving her M.A. from Teachers College, she was appointed mathematics instructor at Hunter College. Intent on pursuing a doctorate, she learned that the Columbia mathematics

department was not really interested in women Ph.D. candidates. She took a sabbatical leave to enroll at the University of Chicago. She was aware of Leonard Dickson's work on associative algebras and hoped to write a thesis in the field. Although Dickson was no longer working in this area he made an exception for Rees and supervised her dissertation "Division algebras associated with an equation whose group has four generators," for which she was awarded a Ph.D. in 1931.

After returning to Hunter College in 1932, Rees was promoted to assistant professor and to associate professor in 1940. When the Japanese attacked Pearl Harbor, she was eager to contribute to the war effort. She took a leave of absence when she was offered the dual post of technical aide to the federal government's Applied Mathematics Panel and executive assistant to Warren Weaver, who headed the panel. In addition to her military research, Rees oversaw contracts for naval projects and was responsible for directing millions of dollars of government money to scientific projects. She supported research in linear programming, operations research, computer development and applications, and numerical analysis. Her support for numerical analysis led to the establishment of the Institute of Numerical Analysis at UCLA.

Her groundbreaking work on rocket propulsion, hydrofoil design, and fluid flow during WWII earned her the President's Certificate of Merit and the British Medal of Service in the Defense of Freedom. Rees was presented the Public Welfare Medal by the National Academy of Sciences in 1983. The citation read, "For her contributions to the scientific enterprise, especially in mathematics, astronomy, and computer sciences, from wartime, through the transition from war to peace, and continuing today." She received the IEEE Computer Society Pioneer Award in 1989.

After the war the Navy invited Rees to head the mathematics branch of the Office of Naval Research (ONR) that coordinates, executes, and promotes the science and technology programs of the U.S. Navy

and Marine Corps through schools, universities, government laboratories, as well as nonprofit and for-profit organizations. Rees held the position until 1952, at which time she was appointed deputy director of the entire science division, where she shaped much of academic research in mathematics and computers. She left government service in 1953 and wrote that she was convinced that computers would become indispensable to large commercial firms. However, she often quoted Claude Shannon's warning: "a digital computer must be instructed in words of one microsyllable."

Rees returned to Hunter College as Dean of the Faculty and professor of mathematics. Eight years later she became the first Dean of Graduate Studies at CCNY. In 1968 she was appointed provost of the graduate division, and a year later, president of the Graduate School and University Center. Rees served in this capacity until her retirement in 1972. She served as a presidential appointee to the board of the National Science Foundation from 1964 to 1970, and in 1971 she became the first female President of the American Association for the Advancement of Science (AAAS), the world's largest organization of scientists, with a membership of 120,000.

CCNY dedicated the Mina Rees Library of its Graduate School and University Center in 1985. It is located on three floors of the Graduate Center and was designed to meet the special needs of the doctoral programs in the humanities, social sciences and mathematics. Rees authored some thirty mathematically related works including: "*The Mathematics Program of the Office of Naval Research*" (1948), *Digital Computers – Their Nature and Use* (1952), *The Impact of the Computer* (1958), *The Nature of Mathematics* (1962), and *The Mathematical Sciences and World War II* (1980). She was married to Dr. Leopold Brahdly, a physician and author of books on disease, injury and trauma from 1955 till his death in 1977. Rees died in 1997 at the age of 95. A memorial service was held for Rees at the CUNY Graduate School on December 8, 1997. In remembering Rees, Uta C. Merzbach spoke of her personal qualities, "Mina Rees was eminently rational.... Mina Rees was eminently intelligent....

Mina Rees was eminently civilized.... Above all, Mina Rees was a mathematician who loved mathematics and believed in supporting those who are capable of contributing to its growth and propagation.”

Quotation of the Day: “In dealing with academics, it is absolutely superb to be able to say you’re a mathematician! Nobody dares to say mathematics is not important or not significant. ... No discipline surpasses mathematics in purely academic prestige.” – Mina Rees