

Pioneering Women of MPS

In 1870, the nascent University of California admitted its first female students. Seventeen young women blazed the trail at Berkeley for equal access to education. To mark the 150th anniversary, we salute several faculty forerunners in the Division of Mathematical and Physical Sciences.



Pauline Sperry (1885–1967)

Joining UC Berkeley's Department of Mathematics as an instructor in 1917, Pauline Sperry became the department's first woman promoted to assistant professor in 1923 and associate professor in 1931. Not a prolific researcher, Sperry instead focused on teaching and authored two freshman textbooks. As a Quaker, Sperry adhered to ethical beliefs and refused to sign the University's loyalty oath in 1950 as an encroachment on political freedom. This led to her being among 31 faculty dismissed from Berkeley that year — a decision overturned in 1952 by the California Supreme Court.

Elizabeth (Betty) Scott (1917–1988)

Raised in Berkeley, Betty Scott excelled in high school math courses and came to UC Berkeley to study astronomy. Despite her passion for astronomy, in which she also earned a Ph.D., Scott encountered limited opportunities. In 1951, she was appointed to the mathematics faculty at Berkeley. Scott later became a founding faculty member of the Department of Statistics and served as its chair from 1968–1973. She applied her expertise to astronomy, meteorology, and cancer research. The Elizabeth Scott Fund at Berkeley honors a master's student pursuing statistical research.

Mary K. Gaillard

In contrast to the academic prejudice she encountered early in her career and as a visiting scientist at CERN, Mary K. Gaillard was received warmly and respectfully by Berkeley colleagues when she joined the Department of Physics faculty in 1981 as its first woman professor. Despite being told in graduate school that "Men do theory; women do experiments," Gaillard (shown above) was more comfortable solving equations than building instruments. Her research laid the groundwork for experiments that validated the Standard

Model of particle physics. She accurately predicted the existence and mass of the charm quark, a fundamental particle that was detected within two years. The Mary K Fest, a symposium honoring her scientific contributions and 80th birthday, was held this fall.

Imke de Pater

Raised and educated in The Netherlands, Imke de Pater joined Berkeley's faculty in 1983 after earning her Ph.D. from the University of Leiden and completing a postdoctoral fellowship at the University of Arizona Lunar and Planetary Laboratory. Her research included making optical, infrared, and radio wave telescope observations of moons (including Io, Titan, and Hippocamp) and giant planets (Jupiter, Uranus, and Neptune). Recently, she has studied the rings of Uranus, first observed in 1977, and led a team that tracked with various telescopes the effect of spreading storm clouds on Jupiter's conspicuous, colorful bands.

Barbara Romanowicz

Over four decades, Barbara Romanowicz has helped reveal Earth's innards with seismic waves. Beyond improving our structural knowledge of the core and mantle, her research enhanced understanding of Earth processes, including how plumes of mantle rock spawn volcanic islands. While a professor of geophysics from 1991–2016, she served for 20 years as director of the Berkeley Seismological Laboratory. An elected member to both the National Academy of Sciences and the Académie des Sciences (France), Romanowicz recently received the American Geosciences Institute's Marcus Milling Legendary Geoscientist Medal.