

George Trilling

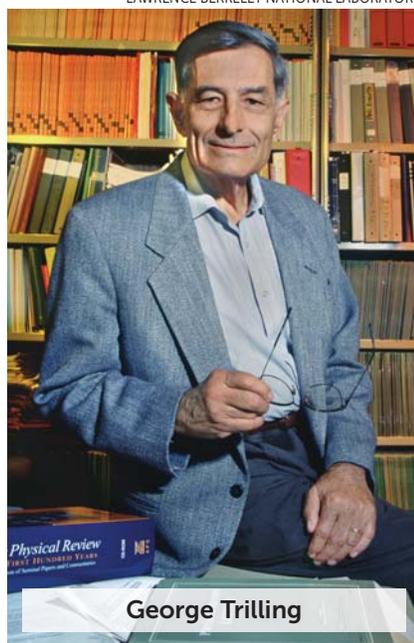
George Trilling, a professor emeritus at the University of California, Berkeley, died in Berkeley on 30 April 2020. His career spanned the development of modern particle physics, from cloud chambers to particle colliders.

George was born in Białystok, Poland, on 18 September 1930, and his family emigrated to France a few months later. They lived primarily in Nice until 1940, when World War II forced them to emigrate again. The family ultimately settled down near Pasadena, California.

As an undergraduate at Caltech, George became involved in cosmic-ray research and used cloud chambers as part of the group led by Carl Anderson, discoverer of the positron and the muon. After graduating from Caltech in 1951 with a degree in electrical engineering, George continued there under Anderson and studied strange particle decays in a cloud chamber for his thesis, completed in 1955.

After a one-year postdoctoral position at Caltech, George was appointed as an assistant professor at the University of Michigan, but before taking up the post, he spent a year in Paris on a Fulbright fellowship in the group of Louis Leprince-Ringuet. On returning to Ann Arbor in 1957, George worked with Donald Glaser, who had transformed particle physics with his invention of the bubble chamber. It was filled with liquid xenon, ideal for converting photons into electron-positron pairs and thus for observing neutral pi mesons. Glaser's group, which included John Kadyk, John Vander Velde, Daniel Sinclair, and John Brown, made extensive studies of various modes of K-meson decay.

Glaser moved to Berkeley in 1959, and a year later George was offered a tenured associate professorship there in the physics department. Kadyk and Brown joined them to continue with their K-meson decay studies. After Glaser's in-



terest switched to biophysics, George joined with Gerson Goldhaber and Sulamith Goldhaber as a coleader of the Trilling-Goldhaber group, which explored K-meson-induced reactions in bubble chambers at the Lawrence Berkeley Laboratory (LBL) Bevatron, at Brookhaven National Laboratory, and later, after Sulamith's tragic death in 1965, at SLAC.

Popular as a teacher, George quickly became a sought-after mentor. His intellectual abilities, judiciousness, and admirable personal qualities led to his appointment as chair of the Berkeley department of physics at age 38. George maintained an active research program while effectively leading the department from 1968 to 1972, through a period of great turmoil associated with student protests on campus.

In 1972 William Chinowsky and the Trilling-Goldhaber group joined Burton Richter's and Martin Perl's groups at SLAC to construct the SLAC-LBL Magnetic Detector for use at the SPEAR e^+e^- colliding-beam facility. Later called Mark I, it was the first detector designed to use full 4π angular detection at colliding-beam facilities. Its design concepts remain the basis for detectors at both e^+e^- and proton-proton colliders. George contributed critically to the success of the Mark I program; he was a wise and effective leader, a brilliant data analyst, and a

publication editor extraordinaire. He wrote the analysis code that transformed the tracking-chamber measurements into identified, quantified charged tracks emanating from the collision vertex. Given the novelty of the 4π environment, it was a groundbreaking contribution. It was critical to the discovery of the J/ψ , charm quark, and τ lepton.

The SLAC-LBL collaboration then constructed the Mark II detector, and the group operated it first at SPEAR, then at its higher-energy successor PEP, and after considerable upgrade, at the SLAC Linear Collider. George was spokesperson with Gary Feldman and one of us (Dorfan) for the Mark II upgrade.

From 1984 to 1987, George was the director of the physics division at LBL. He guided the development of semiconductor detectors for colliders, a theme that has continued to the present at LBL.

Following his work at SLAC, George turned to the emerging effort to build the Superconducting Super Collider (SSC) and became the spokesman for the Solenoidal Detector Collaboration (SDC), one of the two experiments planned for the SSC. He guided the SDC's development until the termination of the SSC in October 1993. George retired from active teaching in 1994, but he was instrumental in arranging US participation in the Large Hadron Collider at CERN.

George brought to data analysis exceptional standards of rigor. He was known for his deep understanding of physics and his ability to express it in clear prose. Widely respected as a leader in the physics community, he served as president of the American Physical Society in 2001.

In George, deep intellect and great integrity were coupled with an innate modesty. Always willing to listen, always ready to be there when needed, George had an indelible impact on those who had the great privilege and pleasure of knowing him.

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