

NEWS RELEASE

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Gerhard E. Fischer, one of SLAC's pioneers, dead at 64

STANFORD -- Gerhard Emil Fischer, a senior scientist and one of the leading innovators of the Stanford Linear Accelerator Center (SLAC), died Sunday, Feb. 7 of a heart attack. He was 64.

Fischer came to SLAC in 1965 for the design and construction of the SPEAR electron-positron storage ring and had a major role in the development of the Stanford Linear Collider.

Fischer, called "Gerry" by his colleagues, was born in Berlin March 1, 1928, the son of a biochemist and the grandson of Emil Fischer, who won the Nobel Prize in chemistry in 1902. His family fled Nazi Germany in the late 1930s, settling in Canada.

He received his undergraduate degree from the University of Toronto in 1949 and went to the Radiation Laboratory (now the Lawrence Berkeley Laboratory) at the University of California, earning his doctorate in physics in 1954, with a dissertation on proton scattering. At Berkeley he began his life-long interest in accelerator physics.

Fischer taught at Columbia University for five years and continued his research at Columbia's cyclotrons. In 1959, he moved to the Cambridge Electron Accelerator at Harvard, for a time the highest-energy electron accelerator in the world. Fischer believed the future of high-energy physics was with electron-positron colliders and worked with a group to have one constructed in Cambridge, Mass.

When the Atomic Energy Commission (now the Department of Energy) voted to build such a device at Stanford rather than Harvard, Fischer moved west to work on the SPEAR ring with Burton Richter, now director of SLAC.

Fischer was a key member of the storage ring research and development team, and while the ring was being built, he participated in a notable series of fixed-target experiments. He was responsible for the injection system into the SPEAR ring, and designed the large solenoidal magnet for the MARK I particle detector used to carry out the experiments. He also was among the authors of the papers that announced the discovery of several particles and was a ranking authority on understanding beam motion and instabilities in storage rings.

He was one of the first to recognize the significance of SPEAR as a source of synchrotron radiation, and with his colleague, Ed Garwin, arranged to have a suitable exit port installed on the ring. This was the beginning of what is now the Stanford Synchrotron Radiation Laboratory.

He also was key to the development of Stanford's vastly more powerful PEP (positron-electron) project, a joint program between SLAC and the Lawrence Berkeley Laboratory.

In the 1980s, Fischer moved to the linear collider project, in which electrons and positrons could be accelerated simultaneously, separated and then crashed together, an innovative tool for particle physics. Fischer was project manager for the first damping ring and the magnet system. He designed the unique alternating-gradient magnets that make up the curving arcs of the collider.

He was working on the next generation machine at his death.

Fischer is survived by his wife, Monica, and by the children of his previous marriage to Vera Kistiakowsky, Marc and Karen.

His sister is Agnes Peterson, curator of the Western European collection at the Hoover Institution.

A private funeral was held earlier this month. Memorial services will be scheduled at SLAC.

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