



IN MEMORIAM

Burton D. Fried
Professor of Physics, Emeritus
Los Angeles
1926–2002

Burton David Fried, an internationally renowned physicist and pioneering computer researcher in the aerospace industry before becoming a professor at UCLA, died Oct. 12, 2002.

Fried, 76, who retired from UCLA in 1991, died in Palm Desert after complications from a surgical procedure.

Fried made many fundamental contributions to the study of the behavior of the fourth state of matter known as plasmas. One of his more influential works was the analysis of a mathematical function that is widely used to describe the behavior of plasma, ranging from phenomena in space plasmas to the design of fusion reactors.

Fried's original work contributed to the theoretical understanding of linear and nonlinear waves in plasmas, including the discovery of the Fried- Weibel instability and ion acoustic waves.

Fried was an outspoken champion of fusion as the ultimate energy source for mankind. He participated and chaired numerous national panels and committees that chartered the early development of this field, which is presently poised to undergo major development. He was the founding editor of the journal "Comments on Plasma and Controlled Fusion" and oversaw its publication for nearly two decades. Fried's activities and influence crossed international boundaries and over the years he developed close relationships with scientists in Japan and in the former Soviet Union.

Warmly known by colleagues abroad as "Burt," Fried's many travels and contacts helped bring together plasma scientists during the difficult years of the cold war. He was one of the first American plasma physicists to travel to Japan and was instrumental in bringing young Japanese scientists to this country. His efforts resulted in the development of close ties between young Japanese scientists and U.S. plasma researchers that have evolved into major long- term collaborations.

Fried was born in 1926 and grew up in Chicago. During World War II he enlisted in the Navy and was trained as a radio technician, a title that he often repeated with pride to his distinguished academic colleagues. He went on to complete a Ph.D. in 1952 at the University of Chicago under the guidance of Prof. Wentzel, a pioneering theoretical physicist.

Fried briefly held a postdoctoral appointment with Robert Oppenheimer at the Lawrence laboratory in Berkeley, and in 1954 joined the fledging company now known as TRW. He was one of the early young Ph.D.s hired by Simon Ramo at what Burt always referred to as the "barber shop," the original headquarters for this company. While at TRW, Fried became the director of its computer division. In this capacity he teamed with Glen Culler to develop a pioneering on- line computational platform, known as the Culler- Fried system, which predated the modern- day PC- based computational software used extensively by scientists and engineers.

After a successful career at TRW, in 1965 Fried joined the faculty of the Department of Physics at UCLA as a full professor. While at UCLA, Fried coupled his experience as an industrial manager to his innate ability to identify technical talent to assemble one of the world's leading plasma research groups.

Burt's efforts brought distinction to UCLA in this field and made UCLA a center for the development and training of plasma scientists in the United States. For nearly 30 years, Burt nourished the development of this talent, and watched with satisfaction while his protégées grew into accomplished leaders of the field.

Burt was a most exacting but fair individual who always allowed true talent to shine and to pass along the credits to those who deserved them. Over time, his reputation for high standards made many a seminar speaker tremble under his incisive scrutiny. However, for those who seriously paid attention to his deep technical remarks, he was a warm, fair and encouraging mentor, a characteristic that made him beloved of his students.

Fried was an individual with broad interests who read widely and had a great appreciation for music. Fried's hobby was magic, a craft that he practiced in his spare time and displayed to close friends.

Fried is survived by his wife, Sally, and their sons Joel, and Jeremy.

George Morales