JOHN LAUFER
1921–1983

BY HANS W. LIEPMANN

JOHN LAUFER, Chairman of the Department of Aerospace Engineering at the University of Southern California (USC), died on July 9, 1983. He was sixty-one years old. John Laufer is internationally known for his work in fluid mechanics. In particular, several of his contributions to the literature of turbulence are classics in the field. He founded and led the Aerospace Engineering Department at USC to its present state of preeminence. This contribution today almost overshadows his technical work.

Janos Laufer was born in Szekesfehervar, Hungary, on September 22, 1921. In the ominous political atmosphere of the late 1930s, his parents chose to send him to live with relatives in Baton Rouge, where he obtained a B.S. degree in mechanical engineering at Louisiana State University in 1942. Subsequently he was accepted for graduate study in aeronautics at the California Institute of Technology (Caltech). He obtained M.S., A.E., and Ph.D. degrees at Caltech in 1943, 1944, and 1948, respectively.

John Laufer, as he was called in this country, arrived at Caltech at a time when intense research activity in turbulence, stimulated by Theodore von Karman, was just beginning. Dr. Laufer kept up his interest in this field to the end of his days. His thesis on turbulent channel flow and his early work on turbulent mixing layers and on isotropic turbulence are still read and used today. He remained at Caltech as a research fellow until 1949, when he joined the National Bureau of Standards (NBS). There, in the fluid physics group led by
Hugh Dryden and Galen Schubauer, Dr. Laufer had the opportunity to develop his experimental skills to an exceptional level. His research at NBS on turbulent pipe flow remains the definitive work on the subject, a true classic. In 1952 he moved to the Jet Propulsion Laboratory where he remained until 1964, first as a Senior Research Engineer and then as Chief of the Gas Dynamics Section. In 1964 he accepted a position as Professor and Chairman of the Aerospace Engineering Department at the University of Southern California, posts that he held until his death in 1983.

John Laufer served on a number of national and international committees. As a consultant for the Advisory Group for Aeronautical Research and Development (AGARD), he lectured on turbulence in France, Italy, Germany, and Holland in 1958-1959. He was a member of the National Aeronautics and Space Administration's Advisory Committee on Fluid Mechanics from 1960 to 1964. He was a member of the Board of Editors of the Physics of Fluids from 1965 to 1967 and again from 1970 to 1972. He served as Associate Editor of Applied Mechanics Reviews beginning in 1969. As a Fellow of the American Physical Society, Dr. Laufer was a member of the Executive Committee of the Division of Fluid Mechanics. As a Fellow of the American Institute of Aeronautics and Astronautics, he was a member of the Aeroacoustic Technical Committee. He was elected to the National Academy of Engineering in 1977 for his contributions to fluid mechanics and for leadership of his academic department.

The accomplishments, honors, and published papers of John Laufer fail to measure the total impact that he had on his co-workers, students, and the engineering community. His combination of ability and charming personality left a lasting impression on everyone who came in contact with him. This combination, together with a quiet tenacity of purpose, was the key to his success in developing his department at USC to its present state as one of the leading centers of turbulence research in the country.

John Laufer's tenacity of purpose became apparent early in 1945 while he was still a student in the last stages of his Ph.D. research. He managed to return to Europe and find and marry his childhood love, Susan Ullman, who had just been freed from a concentration
It was little short of miraculous for a student with few resources to succeed in such a nearly impossible task in war-torn Europe at that time. The marriage thus begun was a lasting and happy one.

In spite of his history and background—both of his parents died as victims of Hitler—John Laufer was able to live without prejudice or bitterness. He was at peace with himself, a gentle man. He died too young, but he died on the tennis court, painlessly, enjoying a game that he loved: a harmonious end to a full and happy life.