

## MEMORIAL



FRITZ MATTHIESEN (1926-1981)

R. B. "Fritz" Matthiesen died on 26 October 1981, at the age of 54, a victim of cancer, and his untimely death was a sad loss to his colleagues in earthquake engineering and seismology. We all miss his technical abilities, his sharp wit, and his irreverent ways of dealing with bureaucracy. Fritz had long been active in the affairs of the Seismological Society of America and was on the Board of Directors at the time of his death. His special technical interests were in the measurement and interpretation of strong ground motion and in the full-scale testing of structures such as buildings, dams, and nuclear reactors, and he was one of the world leaders in these fields. Until recently, he was Chief of the Seismic Engineering Branch of the U.S. Geological Survey, where he worked the past eight years of his career.

In addition to his work in research and administration, Fritz was very active and influential in professional affairs. At the time of his death, he was chairman of the EERI (Earthquake Engineering Research Institute) Steering Committee for the Eighth World Conference on Earthquake Engineering and also vice-president of the

International Association for Earthquake Engineering. These positions meant that he was the principal organizer for the conference, which is held every 4 years and is the world's premier earthquake engineering meeting. The conference, scheduled for 1984, will be held in the United States for the first time since 1956. Fritz was also chairing a subcommittee of the Structural Engineers Association of California's state-wide Seismology Committee. This is the committee that has the responsibility for publishing and revising SEAOC's well-known "Blue Book" of recommended seismic design criteria. As chairman of the special subcommittee, Fritz was directing efforts for a major revision of SEAOC's recommendations. In addition, he was a member of the Board of Directors of EERI.

Fritz was born in Oakland, California, on December 6, 1926. In 1951, he earned a B.S. degree in civil engineering and a B.A. degree in mathematics from the University of Washington, Seattle. He received his M.S. in structural engineering from the University of Illinois in 1953. Later, in 1963, he received a Ph.D. in structural mechanics from the University of California, Berkeley. His interests in earthquake engineering began when he was on the faculty of UCLA, where he served for 10 years as Assistant and Associate Professor in the School of Engineering. While at UCLA, he and his students and colleagues developed many of the modern methods of resonant testing of full-scale structures. They applied these techniques to buildings, including UCLA's own Mathematical Sciences Building, the San Onofre Nuclear Power Plant, and other structures. It was during this period that I first met Fritz; I was fortunate to work together with him on tests of the San Diego Gas and Electric Company's 22-story headquarters building in San Diego and to cooperate informally in several other tests. His interest in the response of structures widened to include their earthquake response, and during his years at UCLA, he became increasingly interested in the measurement of strong ground motion and structural response. He also was convinced that the results of the measurement programs should be interpreted and applied in engineering practice, and he devoted significant amounts of his time to working on this part of the earthquake problem.

In 1972, Fritz became Director of the Seismological Field Survey, National Oceanic and Atmospheric Administration; his predecessors in this position having been William K. Cloud and Franklin P. Ulrich. This organization had the responsibility for the United States' strong ground motion program at that time. When this function was transferred to the U.S. Geological Survey in 1973, he became Chief of the Seismic Engineering Branch in the Office of Earthquake Studies, a position he held until 1978, at which time he assumed the position of Research Civil Engineer. During his career with the Seismological Field Survey and the Seismic Engineering Branch of the U.S. Geological Survey, he directed the development and operation of the national strong-motion program. This work included all phases of the program, including testing and deployment of instruments, network operation and maintenance, digitizing and processing of accelerograms, dissemination and archival storage of data, and use of strong-motion records in engineering practice as well as research in earthquake engineering and seismology. He was internationally recognized for his knowledge and abilities in this area.

Fritz was very effective in his professional activities, both because of his wide knowledge of earthquake engineering matters and his habit of expressing his opinion strongly and clearly. On one committee, he wrote such a strong and incisive letter that I accused him of trying to start World War III, and from that time forward, his "World War III" letters and memos were a standing joke between us. He was almost as famous for not wearing a necktie as he was for his professional abilities. At one

banquet, he was even given one as a joke; his reply, I recall, was that he would wear it on a suitably distinguished occasion, if one should ever arise.

Fritz is survived by his wife, Jacqui, of Redwood City, California, and by his three children, Karl, Karen, and Jollie, all of Clearwater, Florida.

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