



IN MEMORIAM

William C. Meecham
Professor of Engineering and Applied Science
Los Angeles
1926–2003

William C. Meecham, UCLA professor of mechanical and aerospace engineering and an outspoken authority on the health effects of airport noise, died peacefully on March 11, 2003 from heart failure. He was 77 and still teaching on a daily basis. He was born in Detroit and educated at the University of Michigan, where he earned his B.S. and M.S. degrees in 1948, and his Ph.D. in mathematical physics in 1954. Bill joined the faculty at UCLA in 1967, and was soon appointed chair of what is now known as the Mechanical and Aerospace Engineering (MAE) Department. He served in that capacity from 1969 to 1970. Bill was an ever-ready supporter of social issues and a feisty, opinionated, irreverent defender of the poor and downtrodden. The many solutions to social issues developed at the doorway to his office and in front of the mailboxes over a cup of coffee, although not implemented, will not be forgotten. Bill Meecham was a champion of liberal causes, large and small, as well as being a noted scientist and scholar.

Bill served in the U.S. Army from 1944 to 1946. Before joining the faculty at UCLA's engineering school in 1967, he was an assistant professor at the University of Michigan; a visiting scientist at the Scripps Institute of Oceanography, University of California; professor at the University of Minnesota; and a senior research scientist at Lockheed Research Laboratories. He and his wife Della were married in 1964 and bought a home in the Palisades following his arrival at UCLA where they raised two children, Janice, who is now a graduate student in Alameda, and William Jr., a doctor of ophthalmology living in Novato.

Bill's early publications demonstrated both his mathematical abilities and the scientific content of his work. Bill was recognized for the monumental contributions made by his use of Fourier Transformations and Wiener- Hermite expansions to describe the wave reflection process from a random surface. One of his seminal papers [Jeng, Meecham, Foerster and Haaland, *Physics of Fluids*, 1966] was included in a collection of 13 classic papers on Applied Mathematics selected by the Physical Society of Japan. In 1993, his paper on Diffraction Gratings [Meecham and Peters, *Journal of Applied Physics*, 1957] was selected as a milestone paper by the French Society of Photo- optical Instrumentation Engineering.

Beginning in the early 1970s, he frequently acted as an expert legal witness on the effects of jet noise on mortality rates, mental hospital admissions and other adverse community health effects. In 1972 he became a founding member of the Institute of Noise Control Engineering. He was also a member of Tau Beta Pi (the honorary engineering society); Phi Kappa Phi (the honorary journalism society); Sigma Xi; and the American Physical Society. He was a fellow of the Acoustical Society of America, associate fellow of the American Institute of Aeronautics and Astronautics and a member of the New York Academy of Science.

During the late 1970s, Bill conducted studies showing that people living near Los Angeles International Airport suffered increased mortality from suicides, homicides, heart disease and strokes because of greater tension, anxiety and fear among the 200,000 people who lived in a flight- path corridor near the Los Angeles International Airport than in the rest of the city, which was partly attributable to the effects of prolonged exposure to loud noise. He also linked the constant noise exposure to hearing loss, increased mental illness and cirrhosis of the liver from excess drinking of alcohol. "All of us have been under incoming flights. It's exciting the first few times," he told the media in 1983, "but if you don't anticipate it, it elicits a mixed reaction of fear and anger, a kind of animal reaction, to noise so deafening over and over again day and

night." Bill's testimony in court and in administrative hearings over noise complaints helped lead to reforms at LAX – such as relocating schools out of flight paths and reversing landing patterns at night so that planes flew in from the ocean.

Bill consulted at the RAND Corporation from 1964 to 1974 and numerous other companies and government agencies including TRW, General Electric, Boeing, Lockheed- Martin and NASA. He was author or co-author of more than 150 publications on fluid mechanics and acoustics during his 40 plus years of research. Since 1987, he was an active member of the West Los Angeles chapter of the No- Noise Committee, part of the Acoustical Society of America. From 1990 to 1992 he was a member of the Citizens Advisory Committee to the Los Angeles Airport Commission.

"We were saddened to learn of the death of our friend and colleague," noted Vijay Dhir, dean of the UCLA Henry Samueli School of Engineering and Applied Science. "Bill was an extremely collegial man known worldwide for his knowledge of acoustics, fluid mechanics and turbulence theory. It is a tremendous loss for his family and for the school." "Bill was a very public- spirited individual," said Professor and Dean Emeritus Russell O'Neill, "especially in the area of airport noise. He was always in the middle of the fray." He was a respected researcher and teacher, according to colleagues. "Bill was a brilliant analyst with a sense of humor and love of peace, and we are going to miss him dearly," said H. Thomas Hahn, professor and chair of the Mechanical and Aerospace Engineering Department at UCLA. "He was friendly, easygoing and full of energy. A number of his former students owe him their successful professional careers." Bill, known to some of us as "Big Bill", has had a lasting impact on many of us in areas ranging from student welfare to appreciation of a need to watchdog the industrial forces.

We will miss Big Bill Meecham. We have lost our social conscience and will have to fend for ourselves.

Ivan Catton
John Kim