

MEMORIAL RESOLUTION
DONALD ALLEN DUNN
(1925-2011)

Prof. Donald A. Dunn, a resident of Atherton, California for over 50 years, died peacefully at Stanford hospital on September 27, 2011 after a long illness. He was 85 years old.

Don was a passionate teacher and bold thinker, frequently engaged in multiple fields of study and work contemporaneously. In the 1960s, Don was involved in the formation of a new department at Stanford, the Department of Engineering – Economic Systems. EES was created to apply methods of systems and economic analysis to engineering problems involving policy and decision-making, both in government and industry. The area of policy analysis in EES was a primary interest for Don; he developed a course on that subject for the department. He served as a professor and associate chair of EES for many years, retiring in 1995.

Don's early publishing was in various fields of physics and electronics, including microwave electron tubes, microwave power systems, and computer simulations of plasmas. More recently he published in areas of systems engineering, satellite and computer communication, and telecommunications public policy.

Born and raised in southern California, Dunn attended South Pasadena-San Marino High, taking chemistry courses at Pasadena Junior College. In 1943, the Navy began enrolling officer candidates in its V-12 college training program, and Don was admitted to Cal Tech, where he studied chemistry with Linus Pauling and history with J.E. Wallace Sterling, graduating in three years. He completed his naval service aboard a light cruiser and then came to northern California to work for Eitel McCullough, where he eventually served as Director of Research.

Don attended graduate school at Stanford University, studying electrical engineering under Fred Terman; in addition he attended Stanford Law School, winning a Legal Writing Prize in 1950. Just before starting law school, Don met Jane Goodspeed, a graduate of the Stanford School of Education and a teacher at Palo Alto High School, and they were married in 1948. He completed his Engineering Masters degree thesis in 1950, and received his LL.B. degree from Stanford Law School in 1951. He was admitted to the bar of the state of California and was admitted to practice before the US patent office. He practiced patent law with the firm of Flehr and Swain in San Francisco and for Hughes Aircraft in Los Angeles. He received his PhD in Electrical Engineering in 1956.

While in law school, Don also worked in the Tube Lab at the Stanford Electronics Research Lab (ERL); he later became Director of the Electron Devices Laboratory at Stanford and Director of the Stanford Plasma Physics Laboratory. He was a pioneer in the field of microwave research, working with Dean Watkins, Hubert Heffner, Lester Field, Ed Ginzton, Carl Spangenberg, and Marvin Chodorow. As a microwave engineer, Don was a consultant on the ECM pods of the XB70 supersonic bomber. He was chair of the International Symposium on Microwave Power held at Stanford in 1967, and a member of

the board of governors of the International Microwave Power Institute from 1966 to 1968. In 1970 he co-authored a book on the future of satellite communications, and in 1972, he wrote *Models of Particles and Moving Media*. He was a senior member and former chair of the San Francisco section of the IEEE.

Don was also affiliated with the Stanford Research Institute, where he directed a study on the interdependence of computers and communications for the FCC. He was consultant to the National Academy of Engineering's Committee on Telecommunications and addressed the 91st Congress in 1969 on telecommunications policy.

In 1976, in an interview in Computerworld Magazine, Don predicted growth from 500,000 online terminal users to 50 million. In the late 70s, as a telecommunications policy specialist, he was an expert witness for the AT&T breakup case. In 1979, he co-authored a book on the importance of consumer information for the National Science Foundation.

Don was an enthusiastic and inspirational teacher in Stanford's EES department from its inception, under Bill Linvill as Chair. He could regularly be seen riding his bicycle through the Quad to and from classes. Teaching was a crucial aspect of his life from the 1960s until his retirement in the 1990s. He traveled widely, both as a professor and consultant in the field of telecommunications, often with his family, and he particularly enjoyed visiting his graduate students in their home countries, including China, Greece, Brazil, Italy, Korea, Norway, England, and Israel. He had a lifelong love of the opera, which he attended in San Francisco and around the world. Upon his retirement, he enjoyed spending time at the beach in Aptos, continued to write and to advise students, and continued his 40 years of neighborhood runs and daily swims at Stanford's DeGuerre Pool (now the Avery Aquatic Center).

We will remember Don as an engaging colleague and friend with a warm smile who was always helpful to his colleagues and his students. He radiated a great sense of humor that uplifted every encounter.

Don's family reports that he often spoke of the Engineering School, and the key role it plays in bringing together small teams of students and teachers who can challenge and inspire each other to create new ideas in engineering.

Several of Don's former PhD students have noted one aspect of his teaching that stood out: he always encouraged his students to tackle risky projects, and then gave them the support necessary to make sure they were successful.

Don is survived by his wife of 63 years, Elizabeth Jane Dunn, his children, William Goodspeed Dunn and Dr. Elizabeth Ross Dunn, his son-in-law, Dr. Richard Johansson, and two grandchildren, Liam and Willem Johansson.

Committee:
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