STANFORD UNIVERSITY
STANFORD, CALIFORNIA 94305-2060

OFFICE OF THE PRESIDENT

MEMORIAL RESOLUTION

HUGH HILDRETH SKILLING

(1905 - 1990)

Hugh Hildreth Skilling, who was associated with Stanford as student, teacher, administrator, and emeritus professor for 68 years, and who led the Department of Electrical Engineering during its dramatic postwar expansion, died on October 23, 1990, at his campus home after a long illness. He is survived by his wife of 58 years, Hazel Dillon Skilling, his daughter Ann Skilling Andrews, and two grandsons.

Hugh Skilling was born September 2, 1905 in San Diego, California. He entered Stanford University in 1922 and graduated with distinction in 1926. He received the degree of Engineer in 1927. He earned the Master of Science degree at the Massachusetts Institute of Technology in 1930 and then returned to Stanford for his Ph.D., granted in 1931.

After a year of professional experience with the Southern California Edison Company, he had joined the Stanford faculty as Instructor in 1929. In 1944, after having served as acting department head for three war years, he was appointed Executive Head of the Department of Electrical Engineering. During his 23 years of leadership, the department grew from a faculty of six with a handful of graduate students to a faculty of 45 with 560 graduate students. At the time of his retirement in 1971, Stanford was granting more doctorates in electrical engineering per year than any other school in the country.

The breadth of Hugh Skilling's influence is indicated by his lectureships at M.I.T., Cambridge University, and the University of Chile. Respect for his wisdom is evidenced in his appointments as consultant to engineering schools on the east coast and in Alaska, Washington, and the Philippines. He also served as Scientific Observer at "Operation Crossroads," the 1946 atomic bomb tests at Bikini Atoll in the Pacific. Upon his return he gave illustrated lectures to campus and community

audiences, predicting, correctly, the peacetime applications of atomic power that began to appear in the next decade.

His primary interest was engineering education—teachers and their methods, students and their books. New faculty members learned from him that teaching was an essential and important function at Stanford and his own classes set high standards for his colleagues. Students became his personal friends; Hazel and Hugh were a team of friendly, interested persons whose home provided the warm hospitality that meant so much to new members of the Stanford community.

For many years Hugh conducted a seminar in which graduate students considering academic careers were brought into contact with the insights and philosophies of noted teachers from all parts of the campus. He wrote two books—*Do You Teach?* (1969) and *Teaching – Engineering, Science, Mathematics* (1977)—that preserved the wisdom of those seminar leaders. His great interest in teaching inspired an unusual number of Stanford graduates to seek university positions and even after retirement, he maintained a network of information about teachers and teaching opportunities. In 1969, three of his appreciative former students expressed their respect and admiration by providing funds that made possible the advanced teaching facility known as the Hugh Hildreth Skilling Building.

Despite the multitude of administrative duties accompanying a rapid expansion of faculty and facilities, Hugh always found time to teach an undergraduate course. He had the ability to identify the key concept in a complex engineering situation and then explain it clearly in elegantly simple language, using mathematics only as a helpful tool, so that students truly came to understand. If, for one of his courses, the best available textbook did not reflect his philosophy, he wrote a new one. Five of his textbooks, *Transient Electric Currents* (1937), *Fundamentals of Electric Waves* (1942), *Electric Transmission Lines* (1951), *Electrical Engineering Circuits* (1957), and *Electromechanics* (1962), came into being in this way; they were used across the country and, in Spanish, Russian, Polish, Vietnamese, and Thai translations, around the world. In 1965, he received the prestigious Education Medal of the Institute of Electrical and Electronic Engineers for "leadership in undergraduate education and for innovation and lucid exposition of complex ideas in his textbooks."

Hugh Skilling's contemporaries recall him as a pleasant companion for a hike in the hills behind the campus or on a picnic outing to the observatory on Mt. Hamilton. His skillful teaching endeared him to generations of Stanford students.

His colleagues remember him for his outstanding ability as a writer, the high standards he set for his faculty, and his unfailing courtesy, warmth, and tact in dealing with faculty, staff, and students.

Ralph J. Smith, Chairman
William R. Rambo
Oswald G. Villard, Jr.