



Thomas F. Jones

THOMAS FRANKLIN JONES

1916-1981

BY MILDRED S. DRESSELHAUS,
WALTER A. ROSENBLITH,
MYRON TRIBUS, AND HENRY ZIMMERMANN

THOMAS F. JONES, a brilliant leader in engineering education, died on July 14, 1981. At the time, he was a teacher and Vice-President for Research at Massachusetts Institute of Technology (MIT).

Tom Jones was born in Henderson, Tennessee, July 9, 1916. He earned his Bachelor of Science degree at Mississippi State University in 1939 and a master's degree in electrical engineering at MIT in 1940. From 1941 to 1947 he served as a research physicist at the Naval Research Laboratory. His outstanding contributions to the war effort, including design of harbor defense systems, were recognized by the Meritorious Civilian Award.

In 1947 he returned to MIT where he did research on computers, nuclear instrumentation, and missile systems prior to receiving his Sc.D. in 1952. He then joined the Electrical Engineering faculty and began a lifetime career in education. He continued to do research, to publish technical papers, to obtain patents, and to contribute to the burgeoning field of electronics. His interests expanded to encompass education, and it is as a leader in engineering education that he will be remembered best.

Tom Jones was a graduate teaching assistant in the Electrical Measurements Laboratory at MIT in 1940. That experience may have nurtured his innovative revitalization of the introductory laboratory in electronic circuits, for when he returned as a faculty member, he succeeded (where numerous others had failed) in devising a laboratory that students regarded as an enjoyable learning experi-

ence rather than a necessary requirement for graduation. His ideas and methods spread to the other undergraduate laboratory subjects in electrical engineering.

What made his approach to the lab appeal to students? He had each student design a meter to measure voltage and current. The student then built, calibrated, and used this meter. When the crude instrument was eventually replaced by a commercial instrument, the mystique surrounding the instrument was replaced by the confidence that comes from understanding.

In 1958, while he was still an Associate Professor at **MIT**, Purdue chose him to be the Head of its School of Electrical Engineering. As one of his faculty colleagues at Purdue recently wrote, "Dr. Jones came to Purdue at a time when the School of Electrical Engineering was in great need of a capable and understanding Head." In the brief span of four years he revised and updated the curriculum, he enlarged and upgraded the faculty, he enlisted the collaboration and cooperation of industry, and he initiated the development of an industrial park around Purdue, much like those existing near MIT and Stanford.

In 1962 when he was selected to be the twenty-third President of the University of South Carolina, his staff at Purdue felt a deep sense of loss. Again, quoting his colleague, "his training was deep-rooted and kept all of us on the path of excellence."

His appointment to the presidency of South Carolina's oldest university coincided with a period of social turmoil in the United States. Dr. Jones was faced with problems of explosive growth, social change, and unprecedented national student activism. Integration, Vietnam, Watergate—these were the words that then disturbed the sleep of college presidents across the United States.

Growth alone was a challenge of substantial proportions. In a period of about ten years the student population rose from about 5,000 to 27,000. During that period of rapid growth, Dr. Jones succeeded in markedly improving the quality of the education being provided and in improving the quality of life for the students. He established an Instructional Services Center, integrated technical and liberal education, and fostered interdisciplinary studies. His influence was felt at all levels, from undergraduate to graduate to

continuing education, and in all disciplines from library science to engineering to general studies. In 1974, when he decided to step down from the presidency, he was honored by expressions of appreciation and affection by the trustees and the faculty, who awarded him an honorary Doctor of Laws degree for "having brought the University into the mainstream of educational innovation and development." He was also appointed a Distinguished Professor at the university.

Dr. Jones decided to explore some of his innovative ideas at MIT where he accepted, in 1974, a visiting professorship of engineering and education. The fit between him and MIT was so natural that he was made Vice-President for Research upon the retirement of Vice-President Albert G. Hill.

He was active in national affairs and his profession of engineering. He never hesitated to give his time and energies for public service. He was elected to the National Academy of Engineering in 1969. He served as an Editor and a Director of the Institute of Electrical and Electronics Engineers, Inc., and as its Vice-President for Educational Activities. He served as an officer of the American Society for Engineering Education. He served on the National Science Board and on the Advisory Council of the National Science Foundation and on many of its committees and panels. He gave his talents to many causes. He served on the Council on Higher Education in the American Republics and made visits to Peru, Colombia, Argentina, Mexico, and Brazil to assist in the development of higher education in those countries.

These are the facts that appear on the written record. They show an effective engineering educator, respected and admired by many. But the written record does not reveal the messages Tom Jones left in the hearts and minds of all who knew him.

In the words of MIT President Paul Gray, who was one of his students,

Tom was the consummate teacher. He taught throughout his life, in all his activities, effortlessly, but oh so individually. . . . His teaching was the most effective and engaging I had seen anywhere. And it was evident that he was interested in each student as an individual, and that his insistence that we concentrate on "learning how to learn" rather than on the facts and theories was

a personalized prescription. It was education over the whole spectrum, for it was Tom who first urged me to read Herodotus, Whitehead and Tocqueville; it was he who told me where to look, just north of Scollay Square, for a used set of Harvard Classics. It was he who insisted that all relationships and all actions respect the humanity of those who were involved.

Tom Jones was a caring man. All who met him felt his interest and concern. It was genuine, and touched each and every one of us. And he taught to the end of his days. In the words of Paul Gray again, "Now he was teaching about organization and administration, about leadership and persuasion, but the lessons were couched in the same earthy and personal terms which had captured my interest and heart twenty years before." He made his points with humor: "Friends may come and friends may go, but enemies go on forever." "You must pat a person on the back ten times before you are permitted to swat him on the behind once."

His doctor told him, two years before he died, that he was terminally ill. He insisted on working up to the very last day. Those of us who were privileged to see him in this period will never forget his loving concern for others and for the future of MIT and its students. He taught us how to learn and how to teach. He taught us how to live. And in the end, he taught us how to die, with courage and dignity.

