IN MEMORIAM

WILLIAM JUNIUS CARTER

William Junius "Bill" Carter was born October 5, 1914, near Childress, Texas, the son of W. C. "Willie" and Ora Melton Carter. He attended Childress High School and Abilene Christian College and then went on to earn degrees at Texas Tech University, The University of Texas at Austin, and Stanford University. Bill was a diligent reader of a wide range of material. He never lost his passion for more theology, aircraft design, and sailboat design. Because of his scholarship, he was elected to membership in Tau Beta Pi and Pi Tau Sigma, Honorary Engineering Fraternities.

Although he was known around UT as an expert in engineering mechanics and machine design, he worked under Professor Byron E. Short for his Master's degree in Mechanical Engineering, which was awarded in 1939. His thesis was entitled, "A Preliminary Study of the Problems of Cooling Tower Design."

After receiving his Master's degree, he worked part-time teaching night school at The University of Houston while working as an engineer at Hughes Tool Company in Houston, Texas. In 1941 he joined the Mechanical Engineering faculty at UT as an Instructor, where he also taught C.A.A. pilot training and flight theory at the behest of the War Department. He flew mostly civilian planes, and one of his most interesting duties was teaching forced landings. He became an Assistant Professor in 1944. During the next six years he taught a variety of M.E. courses including Dynamics, Thermodynamics, and Machine Design. In the fall of 1949, he went to Stanford University where he completed his Ph.D. degree in Engineering Mechanics with a dissertation entitled, "Torsion and Flexure of Solid Sections," in 1952 under Professor J. M. Goodier. He was promoted to Associate Professor in 1951 and to Professor in 1958. For a time he was an avid golfer and baseball enthusiast and studied ball trajectory as influenced by its surface and the impact loading it received.

Professor Carter's experience as a member and president of the national debate team, Centaurs, along with an excellent background in mathematics and dynamics and many years of industrial and research experience, enabled him to lecture with ease. One of his chairmen, W. R. Upthegrove, noted that the student comments on his class performance were too good; therefore, there must be something wrong. This record was further documented when he received the Teaching Excellence Award from The Students' Association in 1961. During his 37 years at UT,

he served on numerous committees, was Graduate Advisor (1963-1965) for the M.E. department and was elected to the Faculty Council (1958-1959). Many of the graduate students consulted with Professor Carter even though they were not his students because of his unusual ability to simplify nonlinear analytical and vibration theory. During his teaching career he attended many meetings both local and national where he was often seen writing or sketching with such intent that the speaker thought he was taking very complete notes. In reality, many of these sketches and notes were new sailboat designs which were much more interesting to him. Professor Carter retired from teaching in 1977, at which time he received the rank of Professor Emeritus upon the recommendation of UT President Lorene L. Rogers and approval by the UT Board of Regents.

One should not dwell solely on his academic career because he also had very extensive professional experience outside the University. He worked for Hughes Tool Company in Houston, Consolidated Aircraft Corporation in Fort Worth, Sandia Corporation in Albuquerque, UT Defense Laboratory in Austin, Boeing Aircraft Company in Seattle, and Chance Vought Company in Fort Worth. As a registered engineer in the state of Texas, he also served as a paid consultant for Textran Corporation, The Southwest Research Institute, Tracor, Inc., Glastron Corporation, and Dow Chemical Company.

Airplane and boat designs were both a hobby and a profession. Several of his sailboat designs were put into production by Glastron. He was a charter member and First Commodore of the Austin Yacht Club. Sailboating became his favorite sport, probably because he won numerous races, the most memorable of which was the Turnback Canyon race in his T-33 sailboat in 1967. In his later years he turned his talent toward radio-controlled airplanes, which culminated in a plane called Butterfly II in 1977 which is still marketed internationally as a trainer kit in hobby stores.

Bill was an avid reader of a broad spectrum of material throughout the technical literature, but he never quit reading about theology and genealogy. As a member of the Austin Genealogical Society, he lectured on the settlement of religious groups on the frontier, which established migration trends as a means of tracking family ancestry.

Publication of his work was easy for him since he reviewed countless articles for *Applied Mechanics Reviews* and read practically every technical article printed relative to engineering mechanics and design. His 16 major technical publications represented unusual contributions to his chosen field. He did not consider as very important his numerous publications such as the

continuous analysis and review of technical material for *Applied Mechanics Reviews*. His textbook, *Analytical Methods of Design*, published by Hemphill's Book Store, was probably used by more mechanical engineering students than any other single textbook.

Perhaps the best thing one could say about Bill Carter is that he had an ability to interact with students in all phases of his activity by using his outstanding intellect and reasoning power to the extent that no technical problem was beyond a "Bill Carter" solution. His graduate students all loved him and would continue to stay in contact long after their graduation. Several were pallbearers at his funeral.

He married and had one son, Michael Sean, was divorced, and finally shared 21 years of a happy marriage with Arlene. Professor Carter died on December 1, 1994.

Robert M. Berdahl, President
The University of Texas at Austin

H. Paul Kelley, Secretary
The General Faculty

This Memorial Resolution was prepared by a special committee consisting of Professors H. Grady Rylander (Chair), Billy H. Amstead, and Eugene A. Ripperger.