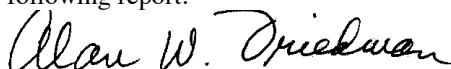


DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR
FREDERICK F. LING**

The special committee of the General Faculty to prepare a memorial resolution for Professor Emeritus Frederick F. Ling, Department of Mechanical Engineering, has filed with the secretary of the General Faculty the following report.



Alan W. Friedman, Secretary
General Faculty and Faculty Council
The University of Texas at Austin
Arthur J. Thaman and Wilhelmina Doré Thaman Professor of English and Comparative Literature

**IN MEMORIAM
FREDERICK F. LING**

Frederick Fongsun Ling was born January 2, 1927, in Qingdao, China, the third son of Frank F.C. Ling and Helen C.Y. Wong. In 1947, Professor Ling received a B.S. in Civil Engineering from St. John's University in Shanghai, China. Via a Ford International Scholarship, he earned a B.S. in Mechanical Engineering from Bucknell University in Lewisburg, Pennsylvania, in 1949. In 1951 and 1954 respectively, he earned an M.S. and a D.Sc. in Mechanical Engineering from Carnegie Mellon University. He was a registered professional engineer in the state of New York.

After completing his education, Professor Ling was appointed Assistant Professor of Mathematics at the Carnegie Institute of Technology in 1954. In 1956, Dr. Ling moved to Rensselaer Polytechnic Institute's Department of Mechanics and served as Chairman 1967-74. In 1974-86, he chaired the Department of Mechanical Engineering, Aeronautical Engineering, and Mechanics at Rensselaer Polytechnic Institute, the oldest engineering program in the U.S. During 1973-88, he was the William Howard Hart Professor of Rational and Technical Mechanics, and in 1990 Dr. Ling was named William Howard Hart Professor Emeritus. He taught mechanical engineering at Columbia University 1990-94 and served as the Director of the Columbia Engineering Productivity Center. Also, in 1990-92, Dr. Ling was President of the Institute of Productivity Research in New York.

Professor Ling was then recruited to the Department of Mechanical Engineering at the University of Texas at Austin. During 1992-2002, Professor Ling held the Earnest F. Gloyne Regents Chair in Engineering and was Associate Director of the Engineering Manufacturing Systems Center. Here, Professor Ling initiated a national thrust for diagnostics and maintenance science research, which has benefitted multiple universities in the United States. Professor Ling served on many public policy committees, including a city of San Antonio committee to recommission Kelly Air Force Base as a civilian manufacturing center after its closure as a military base. In addition to teaching, scholarship, and spearheading research projects, Professor Ling actively mentored and advised numerous undergraduates, graduate students, and faculty. After he retired from The University of Texas at Austin, Fred was awarded the title of Professor Emeritus.

Professor Ling's areas of teaching and research included tribology, the study of friction, wear, and lubrication, mechanics, biomechanics, machinery durability, and manufacturing machinery effectiveness. Professor Ling did sponsored research for many industries and government agencies, including the Departments of Defense, Transportation, and Energy; the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF). He served such agencies as the National Research Council's Committee to Assess the U.S.-Japan Industry and Technology Management Training Programs, the Organization for European Cooperative Development, and NATO's Advisory Group for Aerospace Research and Development.

Professor Ling was a Fellow of the American Society of Mechanical Engineers, the American Academy of Mechanics, the Society of Tribologists and Lubrication Engineers, the American Association for the

Advancement of Science, and the Society of Manufacturing Engineers. His memberships in other professional and scientific societies included the Society of Engineering Science, the New York Academy of Science, the American Physical Society, the National Space Society, and the Machinery Failure Prevention Technology Society. Professor Ling served as Chair of the Research Committee on Tribology (1968-70); Chair of the Tribology Division (1975-76); Vice President and Chair of the Board on Research (1977-81) and the Board of Governors (1981-83); and Chair of the American Society of Mechanical Engineers (ASME)/National Institute of Standards and Technology Interaction Committee (1988-90).

After being elected at age fifty in 1977, Professor Ling was a member of the U.S. National Academy of Engineering for thirty-seven years. He received numerous professional awards including: the Senior Postdoctoral Fellow Award from the National Science Foundation (1970); the Centennial Medallion (1980); the Mayo D. Hersey Award from ASME (1984); the Charles Russ Richards Memorial Award (1991); the Alfred E. Hunt Award from the Society of Tribologists and Lubrication Engineers (1991); the Joseph Marie Jacquard Medal from France; and honorary membership in *Academia Romana* from Romania. In 1998, the American Society of Mechanical Engineers made Professor Ling an Honorary Lifetime Member for “advancing the field of tribology through engineering research and applications in machine systems,” the highest award ASME can bestow. In addition, Professor Ling served as advisor and expert to Congress and several U.S. government agencies. He directed numerous national panels and committees. He authored over 100 articles and eleven books, many of seminal importance, and he served as editor for a series of engineering specialty books for Springer-Verlag.

Professor Ling actively mentored and advised numerous undergraduates, graduate students, and faculty. He tirelessly mentored thousands of younger colleagues, often at the expense of his own career, leading quietly and without pretention. He would coax his junior colleagues into new areas of teaching and research in which they were uncomfortable, moves that inevitably resulted in long-term benefits. Fred had uncanny foresight, seeing science and engineering research opportunities decades before others, and he guided research-funding agencies to these opportunities. Always generous with his time and money, Fred would invariably pounce on lunch or dinner checks. Fred was a true gentleman and scholar, a man of utmost integrity and wisdom, a founder of modern tribology, and a joy to know and work with.

Professor Ling passed away at age eighty-seven on Saturday, November 8, 2014. He had been living in New York City since his retirement from UT Austin in 2003. Surviving Professor Ling are his wife of sixty years, Linda Kwok Ling; three children: Erica (Stephen Mink) of Washington, DC, Alfred (Molly) of Brooklyn, and Arthur (Olivia Wang) of Manhattan; four grandchildren: Frank Ling, Timothy Ling, Edward Ling, and Thea Mink; his brother Wilfred (Celia) of Lake Bluff, Illinois; and his sister Lena of Des Plaines, Illinois.

This memorial resolution was prepared by a special committee consisting of Professors Michael D. Bryant (Chair), Joseph J. Beaman, and Mark F. Hamilton.

Distributed to the Dean of the Cockrell School of Engineering on September 21, 2018, and posted under “Memorial Resolutions” at <https://wikis.utexas.edu/display/facultycouncil/Wiki+Home>.