

Richard Magruder Phelan

September 20, 1921 – June 1, 2010

Remembering a Teacher's Teacher and an Engineer's Engineer.

Richard M. Phelan, 88, Professor Emeritus of Mechanical and Aerospace Engineering, died June 1, 2010 in Ithaca, New York. Surviving are his wife of 58 years, Olive; his son, William and family of Ithaca; and his daughter, Susan and family of Rochester, New York.

Professor Phelan was born on September 20, 1921 in Moberly, Missouri, the son of Frederick William and Ethel Ray Phelan. After earning his Bachelor of Mechanical Engineering degree from the University of Missouri in 1943, Dick joined the U.S. Navy, working there until becoming an instructor at Cornell in 1947. He earned the Master of Mechanical Engineering in 1950, ultimately becoming Professor of Mechanical Engineering in 1962 and Emeritus Professor in 1988.

At the end of World War II, the large influx of graduate students resulted in a serious housing shortage, and many were housed in the Watkins Glen Hotel --- bused to and from Cornell. Thus Dick began his Cornell experience surrounded by the U.S. Navy's monotone "battleship gray" everywhere and on everything before he was able to move to a small basement apartment in Collegetown.

Dick published three widely-used textbooks: Fundamentals of Mechanical Design, 1956, 1962, and 1970; Dynamics of Machinery, 1967; and Automatic Control Systems, 1977. The first two were dedicated to his wife, Olive, typist and editor for all.

He was a longstanding member of the American Society of Mechanical Engineers, American Society for Engineering Education, Society for Experimental Stress Analysis, American

Gear Manufacturers Association, American Association of University Professors, New York Academy of Sciences, American Association for the Advancement of Science, Sigma Xi, Phi Kappa Phi, Pi Tau Sigma, and Tau Beta Pi.

Sabbatical leaves were spent at the University of Michigan; Lawrence Radiation Laboratory; traveling and lecturing in the U.S., Yugoslavia (as a Fulbright Scholar), and China.

Dick's own thesis involved design and development of a laboratory rig to simulate dynamically loaded journal bearings. Experimental results from the ingeniously designed rig became the inspiration for later theoretical studies by students and colleagues.

Much later in his career Dick collaborated with president emeritus and former dean of engineering, Dale Corson, to create the intricate mechanism hidden in the base of the sundial installed on the Engineering Quadrangle in 1980 to commemorate Dale's earlier retirement.

As suggested by the successive titles of his textbooks, Dick's central interests gradually moved from mechanical design to feedback control systems, where he became a passionate advocate for a control strategy he called "pseudo-derivative control" (PDF).

Dick's enduring hobby was playing the trumpet, first in a swing band and later as a charter member of the Ithaca Concert Band. He also had an interest in trains dating back to his childhood when his father was a railroader. His HO-gauge model train collection/layout was helpful in his control system course when students were promised they could "play trains" when they came to his home for dinner.

After his retirement in 1988, Dick and Olive travelled widely, covering all seven continents. Whether ballooning over the savannah of Africa or schmoozing with the penguins in Antarctica, it was a rewarding and magical time for both.

When he wasn't traveling, Dick could reliably be found in the Statler Club at 11:30 having lunch and spirited conversation, and sharing his travel photos with other mostly emeritus faculty members.

Dick's dual legacies of students and textbooks still reflect on Cornell. Administrators note that he ranked at the top of student-administered teaching evaluations, and alumni routinely asked about him more than any other. Following his death, former students wrote to describe him as a model teacher, outstanding researcher, and effective motivator. Others who knew him well noted his high integrity, complete honesty, and consistent fairness. Bill Nye ("The Science Guy" and former student) published an extensive appreciation, saying, "He was a good man, who lived a good life. His ideas will, one day, change the world. He certainly changed me and for that, I will be forever grateful".

John Booker, Chairperson; Donald Bartel, Peter Harriott