MEMORIAL RESOLUTION OF THE FACULTY OF THE UNIVERSITY OF WISCONSIN-MADISON

ON THE DEATH OF PROFESSOR EMERITUS SHUN CHENG

Shun Cheng, retired professor of engineering mechanics, died on July 13, 2000, in California. He was 81 years of age and was preceded in death by his wife, Ruby Ya-Yu Cheng. Professor Cheng was born in China and received his undergraduate education there, being awarded a Bachelor of Science degree in mechanical engineering from the Northwestern Engineering College of China in 1942. He immigrated to the United States in 1945. He was employed in the aircraft industry in China and, after immigrating, in the United States. After receiving a Masters Degree in engineering mechanics from the University of Michigan in 1951, he was employed by the Ford Motor Company followed by appointment as assistant professor at the University of Dayton, Ohio. He received a Ph.D. in engineering mechanics from the University of Wisconsin, Madison, in 1959. The remainder of his career was spent in The Engineering Mechanics Department at Madison. He served as an instructor from 1956 to 1960, was appointed assistant professor in 1960, associate professor in 1963 and professor in 1966.

Professor Cheng’s area of research interest was theoretical elasticity. He was concerned with modeling the elastic behavior of materials such as steel, concrete and wood. He made important contributions to the theory of this elastic plates and shells, structures which have applications in many fields including building construction, aerospace vehicles and ship building. One of his most important contributions was the development of a methodology for the derivation of the equations for thin bodies from three dimensional theory using an expansion of operators in a power series. Cheng used this method to derive equations for the deformation of plates and cylindrical shells. It has been used by others to study more general shell shapes.

Other original work include a study of the stability of cylindrical shells made of composite material, structures which have aerospace applications. Because of this work he was cited by the U.S. Army in 1984 for scientific contributions to the Army missile program. Professor Cheng has also made advances in understanding the stress distribution in adhesive-bonded joints in such materials as wood.

Fifteen Ph.D. engineering mechanics students received their degrees under Professor Cheng’s supervision. His students fondly remember him for both his love of elegant mechanics solutions and his positive leadership style. A former student commented that he could attribute his life long research interest in solid mechanics to Professor Cheng’s infectious enthusiasm and excellence in this research area. Professor Cheng inspired this student to solve key solid mechanics problems for the paper and wood industries using approaches fully consistent with classic mechanics fundamentals.

He was a member of the University of Wisconsin Mathematics Research Center, served on several college committees and served as the department representative to the Faculty Senate from 1991-1994. He was active in the professional societies of Sigma Xi, American Society of Aeronautics and Astronautics and the American Society of Mechanical Engineers where he served as chairman of the Membership Committee of the Applied Mechanics Division from 1977-1980. Professor Cheng also was a reviewer for leading journals in his field such as The Journal of Applied Mechanics, Journal of The American Institute of Aeronautics and Astronautics and The Journal of Solids and Structures.

Professor Cheng loved research and took it very seriously. He was unfailingly pleasant and always ready to answer questions about his specialty from less knowledgeable colleagues. He felt that the Theory of Elasticity was a beautiful and elegant subject, and he conveyed this perspective to his colleagues and students. He had very high standards of academic scholarship and strove to publish his work in the best...
journals in his field. In addition to being a talented researcher and a gifted applied mathematician, Professor Cheng was a warm and humble person with a quick laugh and an excellent sense of humor. Senior faculty remember with great pleasure the parties given by Shun and Ruby where Ruby served her authentic Chinese dishes.

MEMORIAL COMMITTEE
Millard W. Johnson, Chair
Robert D. Cook
Walter Drugan
Terry Gerhards