



IN MEMORIAM

Lung- Wen Tsai
Professor of Mechanical Engineering
UC Riverside
1945 – 2002

Lung- Wen Tsai, professor of mechanical engineering at the University of California, Riverside, died peacefully Friday, November 29th at his home in Riverside. His loving wife Lung- Chu, daughter Jule Ann, and son David survive him.

Dr. Tsai was born in Taipei, Taiwan on February 20, 1945 and was the youngest of 10 siblings. A hard worker, Dr. Tsai helped cultivate his family's farm until he finished his undergraduate studies at the National Taiwan University in 1967. He then received his MS from the State University of New York at Buffalo in 1970 and his PhD in mechanical engineering from Stanford University in 1973. He was the only sibling in his family to leave Taiwan and study in the United States. Before joining the Bourns College of Engineering faculty at UC Riverside in 2000, Dr. Tsai was a professor at the University of Maryland in College Park for over fourteen years where he established world- renowned research and education programs in robotics and mechanisms, and had been a research engineer with the General Motors Corporation and Hewlett- Packard Company.

Dr. Tsai's research interests were in robotics, mechanisms and machine theory, design methodology, automotive engineering, and micro- electromechanical systems. He was a fellow of American Society of Mechanical Engineers and a member of the Society of Automotive Engineers. He held numerous U.S. patents and was the author of two textbooks, 68 archival journal papers, and 95 conference papers. His honors include the Melville Medal (1985 ASME Congress and Exposition), Best Paper Awards (1984 ASME Mechanisms Conference, 1989 and 1991 Applied Mechanisms and Robotics Conference), Arch Colwell Merit Award (1988 SAE International Congress & Exposition), South Pointing Chariot (1993 Applied Mechanisms & Robotics Conference), Presidential Chair Professor at UCR (2000-2002), and numerous international invited professorships and lectureships. He was the Editor- in- Chief of the ASME Journal of Mechanical Design, since 1998.

In February 2002, Dr. Tsai was elected as an honorary professor at National Chiao- Tung University, one of the top five universities in Taiwan. In September 2002, Dr. Tsai was elected as a fellow of the American Association for the Advancement of Science (AAAS), which publishes the peer- reviewed journal Science.

Dr. Tsai was a dedicated teacher, respected by his students and fellow educators. He was very successful in utilizing his industrial experience to keep students motivated while dealing with advanced theoretical concepts in the classroom. His well- known textbook Robot Analysis: the mechanics of serial and parallel manipulators, is a model of his pedagogical approach. Drawing from his vast experience in the field, Professor Lung- Wen Tsai provided with this book fundamental knowledge while presenting fresh and authoritative material not available in any other resource. He offered in- depth treatment of essential topics such as position analysis, statics and stiffness analysis, and dynamical analysis making them accessible to both the specialist and the student. Typical of Professor Tsai's approach, the textbook includes clear discussion of industrial and research applications, numerous worked examples and problems to reinforce learning, and an extensive bibliography offering resources for more advanced study. Robot Analysis is a first-

rate text which will be used by many undergraduate and graduate students as well as researchers for many years to come. It is one of the many legacies left to us by a most dedicated teacher and scholar.

As a teacher, Professor Tsai was always well organized, patient, and had the unique ability to elucidate complicated technical material in simple terms. As a teacher and as a family man, he was a person of faithful consistency. Dr. Tsai was devoted to his family, friends, academia, and the earth. There was nothing Dr. Tsai loved more than to work on his writings, his students' papers and his garden.

Professor Tsai died peacefully Friday, November 29th at his home in Riverside, and during the last moments of his life, Dr. Tasi was editing a research article for the ASME Journal of Mechanical Design, to which he was the editor- in- chief. His loving wife Lung- Chu, daughter Jule Ann, and son David survive him.

G. Beni

Q. Jiang

G. Xu