



T.Y. Liu

TUNG-YEN LIN

1911–2003

Elected in 1967

“For theory and use of prestressed concrete.”

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AND EDWARD L. WILSON

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TUNG-YEN LIN, a visionary structural engineer whose pioneering work was internationally acclaimed, died at his home in El Cerrito, California, on November 15, 2003, one day after his 92nd birthday.

Born in Foochow [Fuzhou], China, on November 14, 1911, Lin was the fourth of 11 children of Supreme Court Judge Ting Chang Lin and Feng-Yi Kuo Link. Soon after Lin's birth, the family moved to Beijing, where he was home-schooled until he was 12. He completed his precollege education at Hwei Wen American Methodist School and earned his bachelor's degree in civil engineering from the Jiao Tong University Tang Shan Engineering College in 1931. That same year he began graduate studies in civil engineering at the University of California (UC), Berkeley, where he received his master's degree in 1933. His thesis on direct moment distribution, an important contribution to structural analysis, was the first student thesis published by the American Society of Civil Engineers.

Lin then returned to China and began working for the Chinese Ministry of Railways. He quickly moved up the ranks, and by the age of 25, he was chief bridge engineer of the Chongqing-Chengdu Railway, responsible for the survey, design, and construction of more than a thousand bridges throughout China. In 1941, he married Margaret Kao, whom he had known for a decade.

Five years later, UC-Berkeley offered Lin an appointment as assistant professor of civil engineering, signaling the beginning of his memorable career of academic and professional accomplishment. Professor Lin was an extraordinary man who had a deep love for UC Berkeley. During his tenure, he was chair of the Division of Structural Engineering and Structural Mechanics and director of the Structural Engineering Laboratory from 1960 to 1963. For the 1968–1969 academic year, he was appointed campus-wide Professor of Arts and Science, an honorary appointment to advance interdisciplinary teaching. From 1969 to 1970, a turbulent time on campus, Lin chaired UC Berkeley's Board of Educational Development.

From his earliest days at Berkeley, Lin was willing to teach students at all levels. He initiated new, innovative courses, including courses on the design of long-span bridges and large arenas. An exuberant teacher, his enthusiasm for his subject and his energetic ideas captured the interest of both engineering and architecture students. Even after his retirement, he continued to lecture at the university, fascinating and inspiring students into the twenty-first century.

In 1957, Professor Lin conceived the idea of a holding a world congress on prestressed concrete in San Francisco. An advisory committee was formed, but some of the members were apprehensive about the undertaking; they were finally swayed by Lin's boundless enthusiasm. Leading figures in this new technology from Europe and Asia were invited, and, in a bold move at the time, since the cold war was at crisis level, the committee also invited a delegation from Russia. The week-long congress at the Fairmont Hotel atop Nob Hill was attended by about 1,200 people, many more than the 500 who were expected. The congress was a great success!

In Lin's address welcoming the participants, he presented his now-famous parody contrasting Shakespeare's seven ages of man with the seven ages of prestressed concrete. He stated we were then in its youth with a long and brilliant future ahead. In this, Lin was truly prophetic, and he, himself, was a key figure in making his prophecy come true.

The next, year, the advisory committee was invited to visit Russia, a year before the first cultural exchanges began. The

Russian premier at the time, who was determined to rebuild housing and infrastructure, especially in Moscow and Leningrad, had selected precast, prestressed concrete as the principal building material. During the visit, close professional and personal relationships were established with our Russian colleagues.

Lin's perception that technology could be a means of diplomacy led him to undertake an even more ambitious project—establishing friendly relations between China and the United States. Lin suggested to his former comrades in China that they invite him to visit, the first such technical exchange. Up to that time, the only exchanges had been of ping-pong players. Lin's wife, Margaret, and his daughter were invited to accompany him. Although Lin had been asked to give only five lectures, he actually delivered more than 20 during his month-long trip to Beijing, Shanghai, Hangzhou, Guilin, and Guangzhou. The Lin's homecoming was celebrated by a gathering of their widespread families from many parts of China.

Lin's experience in China reinforced his belief that technology could transform political relations. He then conceived his boldest project yet, his now-famous International Peace Bridge across the Bering Strait, bringing together the Soviet Union and Alaska and the rest of the United States. The bridge captured the imagination and fired the hopes of people around the world. Although the bridge was technically feasible, it was economically impractical and was never built. Nevertheless, it was a huge symbolic success.

Lin conceived of a number of brilliant structures—cantilevered and hyperbolic roof spans extending out over space, tall buildings, and unique bridges—many of them beyond the state of the art at the time. He often sketched his initial ideas on the back of an envelope while flying home from a technical meeting; he would then present them to his colleagues and suggest how analysis and design could proceed. His most remarkable idea was the Ruck-a-Chucky Bridge in California, a curved, cable-stayed bridge hung from two mountainsides. Unfortunately, it has not yet been built, although, like the International Peace Bridge, it fired the

imaginations of bridge architects and engineers worldwide. In his many lectures to engineering groups around the world, Lin always conveyed his positive outlook and enthusiasm, inspiring his audience to work creatively with new materials and to approach engineering, a visionary art, in a spirit of creativity.

Beyond his professional career, Lin was an ardent supporter of UC Berkeley. The Lin family and the T. Y. Lin Foundation endowed the T. Y. and Margaret Lin Chair in Engineering, assisted in the establishment of a structural engineering lecture-demonstration laboratory, and endowed fellowships in both structural engineering and architecture.

Among the many honors and awards celebrating Lin's professional achievements are election to the National Academy of Engineering, the 1986 National Medal of Science, Institute Honor Award of the American Institute of Architects, and the Fressinet Medal of the Fédération Internationale de la Précontrainte. Professor Lin also held the distinction of Honorary Member of the American Society of Civil Engineers, the American Concrete Institute, and the Prestressed Concrete Institute.

T. Y. Lin is survived by his wife Margaret, son Paul, daughter Verna, and five grandchildren—Deanna, Katie, and Erik Lin and William and Maxim Lin-Yee.

