In step with the abounding vitality of the time, structural engineer Fazlur Rahman Khan (1929-1982) ushered in a renaissance in skyscraper construction during the second half of the 20th century. Fazlur Khan was a pragmatic visionary: the series of progressive ideas that he brought forth for efficient high-rise construction in the 1960s and '70s were validated in his own work, notably his designs for Chicago’s 100-story John Hancock Center and 110-story Sears Tower -- the tallest building in the United States since its completion in 1974. For more information on Fazlur Rahman Khan please visit: http://www.fazlurrkhan.com

David Billington

David Billington graduated from Princeton University in 1950 with a degree in basic engineering. He then won a Fulbright Fellowship and spent two years in Belgium to study post-war innovations in bridge and pre-stressed concrete structural design. He began in 1952 to work as a designer of structures for Roberts and Schaeffer Company, consulting engineers in New York City. In 1958 he began lecturing at Princeton University. He was a lecturer for two years before officially joining the faculty in 1960. He has remained on the Princeton faculty ever since.

David Billington has won many prestigious awards and honors, such as Dexter Prize for the best book in 1979 from the Society for the History of Technology; in 1986, he was elected to the National Academy of Engineering; in 1998, he was elected as Fellow of the American Academy of Arts and Sciences; and in 1999, he was elected Honorary Member of the ASCE. He holds an Honorary Doctorate in Humane Letters from Union College (1990), an Honorary Doctorate of Science from Grinnell College (1991), and an Honorary Doctorate of Engineering from Notre Dame University (1997). He was the 2003 recipient of the Director’s Award for Distinguished Teaching Scholars. The Director’s Award is the highest honor bestowed by the National Science Foundation for excellence in both teaching and research in science, mathematics, engineering, and technology.

In 1961 searching for a new structures appointment at Princeton, I phoned Chester Siess for his best student. He responded “Fazlur Khan” so I called him but he preferred design to teaching. In the late 1960’s two submitted papers of mine on aesthetics of structures were harshly critiqued and turned down. I later learned that the critic was Fazlur Khan (he was correct in his review). Finally in 1971 I met him and invited him to Princeton where he lectured on April 11, 1972. He told me of his deep interest in Robert Maillart’s structures and agreed to write a paper comparing Maillart’s bridges to his own buildings for our Maillart conference. Khan’s elegant presentation together with those of Christian Menn and Felix Candela convinced me of a tradition in structural art. Khan returned to Princeton several more times, one of those being only a few weeks before he died. This presentation will present such personal and professional recollections of Fazlur Khan: His research includes design and rehabilitation of bridges, thin shell concrete structures, tall buildings, and concrete dams; detailed studies of the major structural engineers such as Robert Maillart, Felix Candela, Eugene Freyssinet, Gustav Eiffel, Othmar Ammann, Anton Tedesko, Fazler Khan, Heinz Isler, and Christian Menn; and the history and aesthetics of structures and the transformation of American society by engineering. He has also been involved in curating exhibitions in the Princeton University Art Museum, and the study of Politics and Engineering of Large-Scale Dams.

Personal and Professional Recollections of Fazlur Khan:

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FAZLUR RAHMAN KHAN (1929 — 1982) One of the foremost structural engineers of the 20th century, Fazlur Khan epitomized both structural engineering achievement and creative collaborative effort between architect and engineer. Only when architectural design is grounded in structural realities, he believed — thus celebrating architecture’s nature as a constructive art, rooted in the earth — can “the resulting aesthetics … have a transcendental value and quality.” His ideas for these sky-scraping towers offered more than economic construction and iconic architectural images; they gave people the opportunity to work and live “in the sky.” Hancock Center residents thrive on the wide expanse of sky and lake before them, the stunning quiet in the heart of the city, and the intimacy with nature at such heights: the rising sun, the moon and stars, the migrating flocks of birds. Fazlur Khan was always clear about the purpose of architecture. His characteristic statement to an editor in 1971, having just been selected Construction’s Man of the Year by Engineering News-Record, is commemorated in a plaque inonterie Center (446 E. Ontario, Chicago): “The technical man must not be lost in his own technology. He must be able to appreciate life; and life is art, drama, music, and most importantly, people.” For more information on Fazlur Rahman Khan please visit: http://www.fazlurrkhan.com