



Charles H. Thornton

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 efficient 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.



Fazlur Rahman Khan

Lehigh endowed a chair in structural engineering and architecture and has established this lecture series in Khan's honor. It is organized by **Professor Dan M. Frangopol**, the university's first holder of the Fazlur Rahman Khan Endowed Chair of Structural Engineering and Architecture, and sponsored by the Departments of Civil & Environmental Engineering, and Art, Architecture & Design.



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Spring 2014 Khan Distinguished Lecture Series

The Fazlur Rahman Khan Distinguished Lecture Series honors Dr. Fazlur Rahman Khan's legacy of excellence in structural engineering and architecture Initiated and Organized by PROFESSOR DAN M. FRANGOPOL

The Fazlur Rahman Khan Endowed Chair of Structural Engineering and Architecture
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Charles H. Thornton

Chairman, Charles H. Thornton & Company LLC, New York, NY

"Renaissance, Rebirth and Disruptive Innovation"

Friday, April 11, 2014 – 4:30 pm

Location: Sinclair Lab Auditorium, Lehigh University, 7 Asa Drive, Bethlehem, PA

Dr. Charles H. Thornton is one of the most preeminent structural engineers and educators in the world. Serving as co-chairman of Thornton Tomasetti until 2005, he has been involved in the design, construction and analysis of projects worldwide, including two of the world's tallest buildings – the Taipei 101 in Taiwan and the Petronas Towers in Malaysia. In addition, he is recognized as an expert in collapse and structural failure analysis which included his participation in the FEMA Building Performance Assessment Team for the investigation of the bombing of the Alfred P. Murrah Building in Oklahoma City. Currently Chairman of Charles H. Thornton & Company, LLC, he is founder of the Architecture, Construction and Engineering (ACE) Mentor Program, a non-profit organization that offers guidance, scholarships and training in architecture, construction and engineering to more than 40,000 inner city high school students in 106 cities across the United States. Dr. Thornton is a member of the National Academy of Engineering and the National Academy of Construction. He is the recipient of the 2013 Outstanding Projects And Leaders (OPAL) award from the American Society of Civil Engineers (ASCE), received the ASCE Hoover Medal in recognition of the ACE Mentor Program, and the Award of Excellence from *Engineering News-Record*. He has taught structural engineering for many years as a visiting and adjunct professor, and held visiting faculty/lecturer positions at Catholic University in Washington, D.C., Princeton University, Manhattan College, Pratt Institute and The Cooper Union. He serves as an advisor to the Thornton Tomasetti, Inc. board of directors. He holds a bachelor's degree in civil engineering from Manhattan College and master's and Ph. D. degrees from New York University.

Renaissance, Rebirth and Disruptive Innovation: After 50 years with Thornton Tomasetti and its prior companies, Dr. Thornton reinvented himself by getting into new technologies, disruptive innovations and new challenges. Starting in 2005, when he stepped down as Chairman, stockholder and founding principal of Thornton Tomasetti, he formed four new companies – a management and engineering firm called, Charles H Thornton and Company LLC, a technology and structural health monitoring company called STRAAM LTD, and TTTG, an industrialized, prefabricated construction entity which can build mid- to high-rise buildings in one half the time with a savings of approximately 20 to 30% in cost, and finally AECOS LTD, a systems integration company which is presently working on many projects utilizing the TTTG system and an automated parking system. Dr. Thornton will present information about all four of these companies.

Furthermore he has written a memoir entitled "Charles H Thornton: a Life of Elegant Solutions." This book will be published in the fall of 2013 and will be available on April 11, 2014. All proceeds from book sales generally go to the Ace Mentor Program of America which was founded by Charles H Thornton. Any books sold on April 11 will be at a discounted price with the proceeds going 50% to ACE and 50% to the Fazlur R. Khan Endowment Fund.

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 in Onterie 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."**

Please contact the Khan Chair office at 610-758-6123 or Email: infrk@lehigh.edu with any questions.