



2015

### FAZLUR RAHMAN KHAN DISTINGUISHED LECTURE SERIES

*Honoring a legacy in structural engineering and architecture*

Presentations will be held in the Sinclair  
Laboratory Auditorium at Lehigh University

Receptions to precede events starting at 4:10 P.M.

<http://www.lehigh.edu/frkseries>

Friday, February 20<sup>th</sup>, 2015

4:30 P.M.

“Balancing”

Friday, March 20<sup>th</sup>, 2015

4:30 P.M.

“Structural Engineering at Mid-21st Century:  
Reengineering Our Roles”

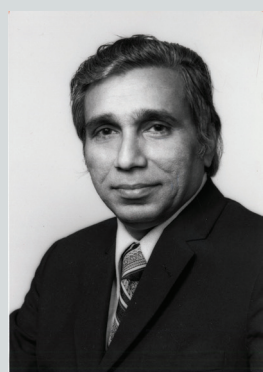
Friday, April 17<sup>th</sup>, 2015

4:30 P.M.

“Science and Art of Structural Engineering”

#### ABOUT THE KHAN SERIES

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.



William Pedersen  
Founding Design Partner,  
Kohn Pedersen Fox Associates,  
New York, NY

#### BALANCING

Much of what I do as an architect involves resolving the conflicting objectives of seemingly opposing conditions. My talk takes one through the journey I have had in architecture beginning with my earliest days as a student at the University of Minnesota and MIT. However, my career really begins with the formation of a partnership with Gene Kohn and Sheldon Fox. The three of us each had very different personalities, came from very different backgrounds and held different aspirations for our careers in architecture. Together we were like the three parts of a sailboat; the keel, the hull, and the sails. From the beginning of our practice together, circumstances brought us several opportunities to design the high rise urban office building. My greatest contribution to architecture has been my systematic exploration of various strategies which are aimed at making this building type a responsive participant within the city. I have often called the work I am doing for the related Company in Hudson Yards my final exam.

Mies van Der Rohe was famous for saying that a chair is more difficult than a tall building. The end of my talk will discuss my development of my Loop de Loop chairs along with showing examples of my hobby; the balancing of rocks.



Glenn R. Bell  
Chief Executive Officer,  
Simpson Gumpertz & Heger,  
Waltham, MA

#### STRUCTURAL ENGINEERING AT MID-21ST CENTURY: REENGINEERING OUR ROLES:

Tectonic developments, such as globalization, energy and sustainability imperatives, advances in automation and technology, economic pressures, changes in natural hazards due to climate change, and the dizzying pace of information dissemination are changing the profession of structural engineering as we know it. The continuation of such developments over the next several decades will create challenges and opportunities that will require that we reengineer our roles if we are to maintain a vibrant profession, to continue to attract the best and brightest practitioners, and to remain relevant in serving society as we have in the past. The successful structural engineer of the future will be a global practitioner, able to collaborate with team members around the globe and with strongly transportable technical skills. She will be very creative and inventive and a continuous learner, aligned with academia, research, and code development. She will be adaptable, able to manage uncertainty and to help others make sound decisions in the face of it. This inspiring, reengineered role for structural engineers will result in ever more elegant and higher performing structures.

In this lecture, Glenn Bell will explore this reengineered role for the structural engineering profession, illustrated with examples of projects, strategies, and new capabilities his firm and others are employing to meet this future vision.



Peter Marti  
Professor of Structural  
Engineering, ETH Zurich,  
Zurich, Switzerland

#### SCIENCE AND ART OF STRUCTURAL ENGINEERING

The talk reviews the historical background and current practice of structural engineering. Key developments in material and construction technology are highlighted and the related evolution of scientific knowledge is illustrated. Future challenges and implications for code development and education are addressed.



STRUCTURAL  
ENGINEERING  
INSTITUTE  
Lehigh Valley  
Chapter

1 PDH will be awarded to  
eligible attendees  
for each lecture.