

Presentations will be held  
 in Whitaker Lab 303 at  
 Lehigh University  
*Receptions to precede  
 events starting at 4:10 P.M.*

# 2020

## FAZLUR RAHMAN KHAN DISTINGUISHED LECTURE SERIES

*Honoring a legacy in structural engineering and architecture*

Friday, February 28, 2020  
 4:30 P.M.  
**Jon Pickard**  
 Principal  
 Pickard Chilton  
 New Haven, CT



### GRACING THE SKY, ENRICHING THE CITY

*“The city is more important than the building and the building is more important than the architect.”*  
 —Cesar Pelli

Tall buildings have the ability to define corporations, cities and even nations. As iconic as some towers may be perceived, their true success is in how they positively contribute to their cityscape and, perhaps most importantly, how they improve and enrich the lives of those who live and work every day in the community. As noted by Fazlur Rahman Khan, “Life is art, drama, music, and most importantly, people.” Using examples of tall buildings he has designed worldwide, Jon Pickard will speak to the responsibility architects of skyscrapers have in reimagining ground level experiences to serve as a benefit to both the public and the environment.

Friday, March 20, 2020  
 4:30 P.M.  
**Phillip L. Gould**  
 Senior Professor  
 Washington University  
 St. Louis, MO



### FROM SLIDE RULE TO FEA: SOME STOPS ALONG THE WAY

Brief comments on the author’s professional career, from an aspiring structural designer of buildings and bridges to further graduate study and then an academic and research career, are offered. In deference to the namesake of this lecture, based on recollections of a junior engineer working closely with Fazlur Khan, Dr. Gould offers some observations on Khan’s early career. Dr. Gould’s subsequent academic and professional activities initially focused on thin-shell analysis, especially the emerging field of hyperbolic cooling towers. The advanced capabilities of the SHORE family of computer programs that were developed in the course of the shell research provided an important tool in the design and explanation of some unique extreme loading situations for both cooling towers and chimneys. As his career progressed, he became very involved in earthquake engineering with a strong focus on education and mid-America issues.

Friday, April 17, 2020  
 4:30 P.M.  
**Gregory Deierlein**  
 John A. Blume Professor in the  
 School of Engineering  
 Stanford University  
 Stanford, CA



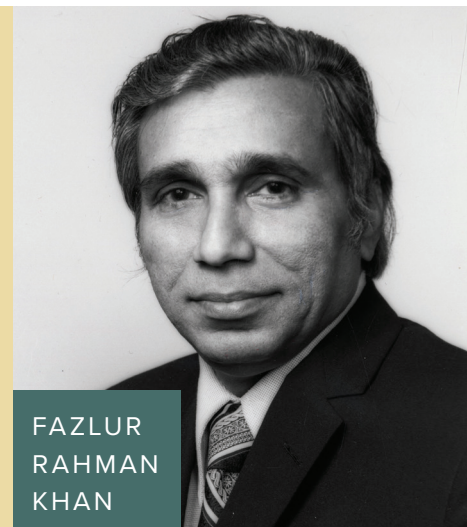
### FROM PERFORMANCE-BASED EARTHQUAKE ENGINEERING TO FUNCTIONAL RECOVERY AND RESILIENCE

Performance-based earthquake engineering has matured over the past twenty years from a conceptual framework into a formal methodology that can enable quantitative assessment of the seismic risks to buildings and infrastructure. Enabled by advanced computational technologies, performance-based methods provide for more transparent design and decision making that takes advantage of the latest research in characterizing earthquake ground motion hazards, simulating structural behavior, and assessing earthquake damage and its consequences. Performance-based approaches are facilitating the design of innovative structures and influencing building code requirements and public policies for earthquake safety. Continued developments to extend performance-based engineering to city-scale simulations provide emerging opportunities to engage urban planners, public officials, and other stakeholders in developing strategies to avoid and mitigate risks and improve resilience to earthquakes and other natural hazards. Examples include new technologies to enable high-resolution earthquake scenario studies and earthquake policy initiatives in San Francisco and Los Angeles.

## 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 Willis (formerly Sears) Tower — the tallest building in the United States since its completion in 1974.

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 inaugural 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.



FAZLUR  
 RAHMAN  
 KHAN

*This lecture series is sponsored by:*  
 Civil & Environmental Engineering  
 College of Engineering & Applied Science  
 Art, Architecture & Design  
 College of Arts & Sciences



**STRUCTURAL  
 ENGINEERING  
 INSTITUTE**  
 Lehigh Valley  
 Chapter

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

**Lehigh.edu/FRKSeries**