FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to University of Memphis: May 06, 2022.

This report summarizes the visit of **Ramin Golesorkhi** from Langan that took place at the University of Memphis on May 6, 2022

ITINERARY OR AGENDA

Provide the itinerary of the visit. For example:

TIME:	ACTIVITY:
07:00 AM – 09:00 AM	Breakfast with EERI student chapter members and socializing
09:00 AM – 10:00 AM	Student Chapter President meets & welcomes Visiting Professional to campus
10:00 AM – 11:00 AM	Set up the conference room for presentation
11:00 AM – 1:00 PM	Guest lecture by Visiting Professional
1:00 PM – 2:00 PM	Lunch
2:00 PM – 3:00 PM	Informal meeting with graduate students for career guidance. In addition, the students present, share and discuss research projects to get insight and feedback from visiting professional.
4:00 PM – 8:00 PM	A tour with students around Memphis. Along with dinner at local restaurant

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S): Mohsen Akhani, President & SLC representative, mkhnsnjn@memphis.edu

- Dr. Shahram Pezeshk, Advisor, spezeshk@memphis.edu
- Melish Kayastha, Vice-President, mkyastha@memphis.edu
- Abdurahman Ibrahim Abdulhadi, Treasurer & SLC representative, bdulhadi@memphis.edu
- Christie Assadollahi, Secretary and SDC coordinator, cmmore11@memphis.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

The lecture started with an introduction about EERI. Then, Dr. Golesorkhi had a technical lecture on "Development of Site-Specific Time Series for Performance-Based Design – Art or Science?". He shared his experience and knowledge with the participants. At the end there were some discussions and questions about the lecture. Many graduate and undergraduate students, faculty, and engineers from Civil Department, the Center for Earthquake Research and Information (CERI) at the University of Memphis, and many consulting engineers from Memphis. participated this event. Photos are attached.

Lecture Abstract

Topic: "Development of Site-Specific Time Series for Performance-Based Design – Art or Science?".
Recent seismic design codes are Performance-Based Design (PBD). PBD is a methodology that allows for design flexibility and opportunities for enhanced structural performance and innovation. Nonlinear time series evaluations and analyses are an integral part of PBD. As such, development of site-specific time series for PBD is an important part of PBD. This talk discusses the selection, methods of development, advantages and disadvantages of different methods, and some of the issues with the development of site-specific time series.

Professional Bio

Dr. Golesorkhi is a registered civil (California and New York) and geotechnical engineer (California) and a Fellow of ASCE. He is a principal/vice president and director of earthquake engineering services at Langan, an over 1,050- person geotechnical, environmental, and civil design engineering firm, with more than 30 years of experience in seismic analysis and foundation engineering. He received his Bachelor of Science and Master of Science degrees from Tufts University and his PhD from the University of California, Berkeley. Dr. Golesorkhi directs the development of seismic and geotechnical design criteria appropriate for industrial, residential, private and government office buildings, hospitals and healthcare facilities, bridges, elevated freeways and viaducts, base isolated structures, tunnels, and seismic strengthening of existing structures. He has developed seismic design criteria for performance-based design of structures since early 2,000's and has been active in the development of seismic design criteria in building codes. He is one of the primary authors of Council of Tall Buildings and Urban Habitat (CTBUH) Technical Guide on Performance-Based Seismic Design for Tall Buildings (2017). Some of his projects include: the new Asian Art Museum, numerous high-rise towers, a major refinery in Peru, AT&T Park, Levi's Stadium, and the State office building in San Francisco. His experience stretches throughout the United States, Central and South America, Southeast Asia, India and the Middle East.

SUPPLEMENTAL ACTIVITES

Breakfast with the advisor and graduate students at local restaurant, sponsored by the department of Civil Engineering at the University of Memphis.

At this activity, students had this opportunity to discuss some of their activities at the University of Memphis. The faculty and graduate students discussed their research.

A tour with students around Memphis

Dr. Golesorkhi and students went on a tour around Memphis mid-town and down-town area. They enjoyed friendly conversations and having a meal with Dr. Golesorkhi at some of the local restaurants. They visited several Memphis attractions and had a memorable time.

RESULTS, FEEDBACK AND LESSONS LEARNED

The visit was very successful. All students and Faculty enjoyed the event. We got wonderful feedback from engineers and students about the main lecture. Everything went smoothly and according to the plan.

ACKNOWLEDGEMENTS

EERI Student Chapter at the University of Memphis gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Dr. Ramin Golesorkhi through their Friedman Family Visiting Professional Program endowment. Special thanks to Herff College of Engineering for supporting for allowing us to use the seminar room for presentation. Also, thanks to the Department of Civil Engineering for supporting the event and dinner.


Sprectral Scaling
LGPC – 1.01
PS-10 – 0.79
Yermo – 2.04
Joshua Tree – 2.37
Coolwater – 2.50
Gebze – 2.08
Duzce – 1.64
Average – 1.77
LGPC – 0.92
PS-10 – 0.72
Yermo – 1.87
Joshua Tree – 2.17
Duzce Duzce – 1.08
Gebze – 1.90
Duzce – 1.50
Average – 1.45
EERI
Friedman Family Visiting Professionals Program • Earthquake Engineering Research Institute


Original and New Modified (Target) Spectra


Original and New Modified (Target) Spectra
Original and New Modified

Earthquake Engineering Research Institute

The University of Memphis EERI Student Chapter and the Friedman Family Visiting Professionals Program present the 2022 seminar:

Development of Site-Specific Time Series for Performance-Based Design – Art or Science?

Lecture by Dr. Ramin Golesorkhi, PhD, PE, GE, F. ASCE

Friday May 6th: 10:00AM-11:30AM
Engineering Administration Building; Room 102D
3795 Central Avenue
Memphis, TN 38111

We offer 1.5 Professional Development Hours (PDHs) for attendees

Abstract:
Recent seismic design codes are Performance-Based Design (PBD). PBD is a methodology that allows for design flexibility and opportunities for enhanced structural performance and innovation. Nonlinear time series evaluations and analyses are an integral part of PBD. As such, development of site-specific time series for PBD is an important part of PBD. This talk discusses the selection, methods of development, advantages and disadvantages of different methods, and some of the issues with the development of site-specific time series.

About the Speaker:

Dr. Golesorkhi is a registered civil (California and New York) and geotechnical engineer (California) and a Fellow of ASCE. He is a principal/vice president and director of earthquake engineering services at Langan, an over 1,050- person geotechnical, environmental, and civil design engineering firm, with more than 30 years of experience in seismic analysis and foundation engineering. He received his Bachelor of Science and Master of Science degrees from Tufts University and his PhD from the University of California, Berkeley. Dr. Golesorkhi directs the development of seismic and geotechnical design criteria appropriate for industrial, residential, private and government office buildings, hospitals and healthcare facilities, bridges, elevated freeways and viaducts, base isolated structures, tunnels, and seismic strengthening of existing structures. He has developed seismic design criteria for performance-based design of structures since early 2,000's and has been active in the development of seismic design criteria in building codes. He is one of the primary authors of Council of Tall Buildings and Urban Habitat (CTBUH) Technical Guide on Performance-Based Seismic Design for Tall Buildings (2017). Some of his projects include: the new Asian Art Museum, numerous high-rise towers, a major refinery in Peru, AT&T Park, Levi's Stadium, and the State office building in San Francisco. His experience stretches throughout the United States, Central and South America, Southeast Asia, India and the Middle East.

Pizza will be provided
Please send RSVP to cmmore11@memphis.edu