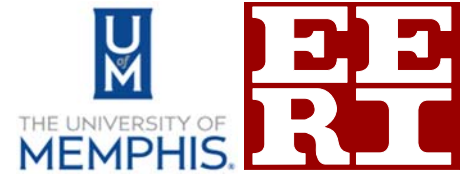


FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to University of Memphis: May 2019



This report summarizes the visit of **Dr. Sissy Nikolaou** from WSP that took place at the University of Memphis on May 2019,

ITINERARY OR AGENDA

Provide the itinerary of the visit. For example:

TIME:	ACTIVITY:
10:00 AM – 11:15 AM	A quick tour in the campus and labs
11:30 AM – 12:00 AM	Lunch
12:00 AM – 12:15 AM	SDC team Recognition
12:15 PM – 2:00 PM	Dr. Nikolaou's lecture + Q&A
2:00 PM – 3:00 PM	Short Break
3:00 PM – 4:00 PM	Informal meeting with graduate students where they present, share, and discuss research projects to get insight and feedback from visiting professional.
4:00 PM – 6:30 PM	Break time
6:30 PM	Dinner with student chapter and faculty at local restaurants and visiting Downtown Memphis.

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- Dr. Shahram Pezeshk, Professor and department chair, chapter's advisor. (spezeshk@memphis.edu)
- Nima Nazemi, Student Chapter President and SLC representative. (nnazemi@memphis.edu)
- Ali Farhadi, Student Chapter Vice-president. (afarhadi@memphis.edu)
- Mehdi Rostamian, Student Chapter Treasurer. (mrstmian@memphis.edu)
- Christine Moore, SDC graduate Coordinator. (cmmore11@memphis.edu)

VISITING PROFESSIONAL LECTURE OVERVIEW

Dr. Nikolaou's lecture drew a broad picture of the term Resilience for us. She defined the term with examples and figures and knitted everything to a civil engineer's knowledge. She tried to bring resilience in light as a growing necessity and a school of thought that needs to be engineered to address the post disaster functionality of structures and infrastructures.



Lecture Abstract

Abstract: Our built environment is exposed to extreme natural events, with direct quality of life impacts to the affected communities. In recent years, earthquake engineers and agency officials are discussing resilience as the ability to anticipate and prepare for changing conditions and withstand and rapidly recover from disastrous events. Big-picture challenges in the path to earthquake resilience will be discussed, including: (i) incorporating novel technologies for risk evaluation in a multi-disciplinary framework; (ii) using this framework to improve asset utilization; (iii) integration of life-long monitoring to re-assess risk with real-time data. Emphasis will be given on the factor of human and life quality as integral component and “missing link” in this emerging engineering frontier

Professional Bio

Sissy Nikolaou is Assistant Vice President and Principal of WSP with 20+ years of global engineering experience. She oversees the WSP’s geotechnical earthquake engineering practice and leads the multi-hazard resilience initiative of the firm’s Geotechnical & Tunneling Technical Excellence Center. Her consulting approach emphasizes performance-and resilience-based design, soil-structure interaction, and geo-risk assessment and mitigation. Her experience involves numerous critical infrastructure projects, high-rise structures in New York and Mexico cities. Driven by a desire to find innovative solutions that protect populations and help them emerge stronger from natural disasters, Sissy has been part of reconnaissance and studies after major earthquakes. A dedicated EERI member, Dr. Nikolaou serves on the Board of Directors. Her recognitions include the Prakash Prize for Excellence in Geotechnical Earthquake Engineering, the 2017 ACECNY Principal of the Year, and leadership Board positions in the Applied Technology Council (ATC) and the Geo-Institute of ASCE.

SUPPLEMENTAL ACTIVITIES

SDC team recognition

Our school ranked 3rd in 2019 SDC competition and broke a record in our SDC team’s achievements history. Before the lecture began, we decided to recognize their achievement and day-and-night work. Dr. Nikolaou’s presence in our school made it official. We are looking forward to maintaining our status as a growing and successful student chapter.



Mentorship session with graduate students

We asked Dr. Nikolaou to have a mentorship session with graduate students to discuss resumes and job opportunities. In this one-hour friendly meeting, graduate student discussed their projects, their CVs, experiences in applying for jobs and internships. It was a meaningful discussion since students were able to hear a professional’s experience and ideas.



RESULTS, FEEDBACK AND LESSONS LEARNED

The challenge was setting a date for Dr. Nikolaou's travel. We had to match our and her schedule. As a result, we the event was held one day after the last day of classes. However, we had a good turnover including faculty, graduate, and undergraduate students.

Regarding the lecture, we found the subject very informing. It attracted our attention towards a great research/industrial opportunity.

Regarding the ongoing research in our school, for the next visits we would consider the following subjects important:

- Seismic Hazard and its challenges
- Machine learning in civil engineering
- Soil-Structure interaction

ACKNOWLEDGEMENTS

We would like to offer our appreciation to Friedman Family for supporting Dr. Nikolaou's travel to Memphis through their Friedman Family Visiting Professional Program endowment.

LIST OF ATTACHMENTS

- Flyer of the event is attached.

EERI Talk Series

The Big Picture and the Missing Link of Earthquake Resilience

By Dr. Sissy Nikolaou



Dr. Sissy Nikolaou,

P.E., D.GE, F.ASCE | WSP



Dr. Nikolaou is responsible for WSP's multi-hazard resilience engineering practice while applying her expertise in the fields of geotechnical and earthquake engineering in the WSP Technical Excellence Center of Geotechnical & Tunneling. Working closely with the Buildings and Infrastructure sectors of the organization, Dr. Nikolaou provides one-stop creative lasting solutions to address the big picture of resilience in quantifiable terms of life safety, structural risk, service interruption and interdependency of systems using innovative tools of science and technology.

She will have a lecture on “**The Big Picture and the Missing Link of Earthquake Resilience**” at the university of Memphis. Our built environment is exposed to extreme natural events, with direct quality of life impacts to the affected communities. In recent years, earthquake engineers and agency officials are discussing resilience as the ability to anticipate and prepare for changing conditions, and withstand and rapidly recover from disastrous events. Big-picture challenges in the path to earthquake resilience will be discussed, including: (i) incorporating novel technologies for risk evaluation in a multi-disciplinary framework; (ii) using this framework to improve asset utilization; (iii) integration of life-long monitoring to re-assess risk with real-time data. Emphasis will be given on the factor of human and life quality as integral component and “missing link” in this emerging engineering frontier.

Friday, May 3rd 11:30am–1:45pm

Location: University of Memphis,
Engineering Admin building, Room 102

To RSVP, Contact Nima Nazemi

nnazemi@memphis.edu

1:00 PDH certificate will be
offered to attendees

Sponsored by the EERI Friedman Family Visiting Professionals Program