

FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM



Visit to University of Minnesota: April 25, 2021

This report summarizes the visit of **Sissy Nikolaou** from National Institute of Standards and Technology (NIST) that took place at the University of Minnesota on April 25, 2021.

ITINERARY OR AGENDA

Provide the itinerary of the visit.

TIME: (CT)	ACTIVITY:
10:10 AM – 11:30 AM	Guest lecture by Visiting Professional

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S): Thao Truong, president, truon228@umn.edu

- Anu Tripathi, former president, tripa052@umn.edu
- Catherine French, faculty advisor, cfrench@umn.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Lecture Title

Functional Recovery, The New Frontier in Earthquake Design

Professional Bio

Dr. Sissy Nikolaou is the Earthquake Engineering Group Leader of the National Institute of Standards and Technology (NIST). Prior to joining NIST, she served as Assistant Vice President and Principal in the Technical Excellence Center of WSP's Geotechnical & Tunneling with almost 25 years of experience, and capabilities of geotechnical & structural engineering, with emphasis on performance-based design, soil-structure interaction, seismic hazard analysis, liquefaction evaluation and mitigation, and risk assessment of critical facilities. She oversaw WSP's geotechnical earthquake engineering practice and led the firm's multi-hazard resilience TEC initiative.

Dr. Nikolaou holds a civil engineering Diploma from NTUA, and Master's & PhD degrees from the U. Buffalo. She has held board positions in EERI and ATC, and she is a Governor and the Treasurer of the Geo-Institute of ASCE and an advisory member of GEER. She has co-led reconnaissance missions after disasters including Hurricane Sandy in NYC, and Mineral-VA, Cephalonia-Greece, Muisne-Ecuador and Puebla-Morelos Mexico earthquakes. She is active in codes development and has been the chair for the seismic committee for the NYC Building Code since 2014. A dedicated EERI member, she has been instrumental in creating the Study Program for younger professionals offered by the Learning from Earthquakes (LFE) program.

Her consulting experience includes tall building developments using performance-based criteria in dense urban environments such as in Mexico and New York Cities, major infrastructure and transportation design and retrofit projects, and emergency and action preparedness planning for communities globally. Dr. Nikolaou is recognized as ASCE Fellow, Board-Certified Geotechnical Engineer by the Academy of Geo-Professionals, WSP Fellow of Earthquake Engineering, NYC ACEC Principal of the Year, Prakash Prize recipient for Excellence in Geotechnical Earthquake Engineering Practice.

SUPPLEMENTAL ACTIVITIES

Guest lecture by Visiting Professional

The lecture was attended by the faculty, undergraduate, and graduate students from the Department of Civil, Environment, and Geo- Engineering.

The lecture started with a brief introduction of EERI and the opportunities for graduate students and young professionals through their involvement with EERI. Then the speaker discussed the topic of functional recovery and how the new methodology addressed the challenges in earthquake design. There was a Q and A session at the end.

RESULTS, FEEDBACK AND LESSONS LEARNED

Brief description of challenges during the process, general reception of the program and Visiting Professional. Also, a description of other topics or disciplines the Student Chapter would like to cover in future visits, and related goals.

- Lessons learned: general knowledge about the current directions of earthquake engineering; opportunities with EERI.
- Challenges during the process: the number of audiences are less than previous years. The number of graduate students interested in EERI is smaller due to former members of the student chapter have been graduating and the lack of newcomers during the pandemic.
- Other future topics of interest: advanced computing and data analysis in earthquake engineering, earthquake retrofit, emergency response planning.

ACKNOWLEDGEMENTS

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