

FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM



Visit to North Carolina State University (NCSU):

June 3, 2022

This report summarizes the visit of **Dr. Jorge Meneses** from RMA Group – San Diego that took place at the North Carolina State University on June 3, 2022.

ITINERARY OR AGENDA

All events were held at NC State's Centennial Campus. The times below are in Eastern Standard Time:

Friday, June 3, 2022

TIME:	ACTIVITY:
9:00 am	Arrival to NC State to Fitts-Woolard Hall (FWH)
9:30 am-10:30 am	Earthquake Ground Motions for the Seismic Design of the World's Largest Football Stadium Lecture by Dr. Jorge Meneses in FWH 3301
10:30 am – 11:00 am	Q&A and informal meeting with NCSU EERI chapter in CCEE department (including undergrad student and graduate students) and faculty in FWH 3301
11:00 am – 1:00 pm	Lunch outside on Centennial Campus, catering by Carolina Café
1:00 pm – 2:00 pm	Student Meeting with short research presentations, FWH 3301
2:00 pm – 2:30 pm	Short Break
2:30 pm – 3:00 pm	Tour of FWH including soils lab and tour of Hunt Library
3:00 pm – 3:30 pm	Tour of Constructed Facilities Lab and meet with CFL students

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- Jessi Thangjitham, President, jsthangj@ncsu.edu
- Nancy Ingabire Abayo, Vice President, ningabi@ncsu.edu

The lecture was hosted both in person and on zoom, in person we had a total of 11 attendees in person attendees and 5 attendees online. This event gathered undergraduate research students, graduate students from both Geotechnical Engineering and Structural backgrounds, as well as faculty.



Lecture Abstract

The procedures employed to perform a site-specific seismic hazard analysis for a near-fault site and site response at different locations within the footprint of the structure will be presented. Probabilistic and

deterministic seismic hazard evaluations, selection of time histories, spectral matching, site response at different locations to evaluate differential movements of the supports of the structure will be discussed. This is an almost 5 billion dollar project that involved the largest excavation ever in the west coast of North America.

Professional Bio

Jorge Meneses is an expert in geotechnical and earthquake engineering. Areas of expertise include seismic hazard analysis, selection and modification of earthquake time histories, liquefaction and lateral spread evaluation and mitigation, deep and shallow foundations, seismic stability of earthworks, site response and characterization, numerical modeling and advanced geotechnical testing. Dr. Meneses specializes in seismic soil-structure interaction analysis, and analysis and design of pile foundations subjected to liquefaction and lateral spread. He has experience with seismic hazard evaluation and ground motions development in different earthquake environments. Dr. Meneses was the lead member of one of the GEER (Geotechnical Extreme Events Reconnaissance) missions to evaluate damage and seismic performance after the M9.0 Great East Japan Earthquake in April 2011. Dr. Meneses has research and working experience in the USA, Japan, Peru, Venezuela, India, and Mexico. He has been involved in numerous projects serving as a technical lead in earthquake geotechnical engineering and foundation engineering for various markets including nuclear, energy, transportation, high rise buildings, commercial and industrial. He is currently a part-time faculty in the graduate school of San Diego State University and part-time instructor at the University of California San Diego Extension. He is the President and Founder of the Earthquake Engineering Research Institute (EERI) San Diego Chapter, Honorary Chair of the ASCE Geo-Institute San Diego Chapter, and a Fellow of the American Society of Civil Engineers (ASCE). He is also a member of the California Seismic Safety Commission appointed by the state governor and confirmed by the state senate. (Bio is courtesy of EERI – FFVP website)

SUPPLEMENTAL ACTIVITIES

Research Discussion Meeting with EERI Officers

This meeting was hosted on June 3, 2022. After the lecture, 5 students from both whose research interests closely related to Dr. Meneses' expertise to present their research. Each student received valuable feedback and great discussions were sparked. We were also able to show off the exciting research we are doing at our structural and geotechnical laboratory at NCSU, which includes projects focusing on highly seismic areas such as California and Alaska in the US, New Zealand, Japan, etc.



Career Guidance Meeting

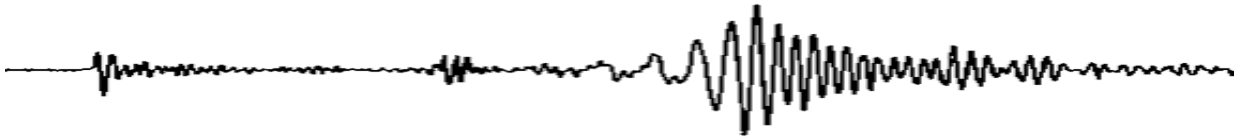
This meeting was hosted the same day (June 3, 2022) over lunch where at least 8 graduate students and postdocs were able to ask questions and learn from Dr. Meneses' experience. Along with being able to hear about Dr. Meneses's work experience and background, he was able to give career advice for the students who attended the scheduled events.

ACKNOWLEDGEMENTS

The North Carolina State University EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the visit of Dr. Jorge Meneses through their Friedman Family Visiting Professional Program endowment.

ATTACHMENTS

Included at the end of this report is the Flier for Dr. Jorge Meneses' Lecture to supplement the information included above.



EARTHQUAKE GROUND MOTIONS FOR THE SEISMIC DESIGN OF THE WORLD'S LARGEST FOOTBALL STADIUM

Friday, June 3rd, 2022

9:30 – 10:30AM, Fitts-Wollard Hall 3301

[Zoom Link](#) | Meeting ID: 934 6799 9175 | Password: 063145

The procedures employed to perform a site-specific seismic hazard analysis for a near-fault site and site response at different locations within the footprint of the structure will be presented. Probabilistic and deterministic seismic hazard evaluations, selection of time histories, spectral matching, site response at different locations to evaluate differential movements of the supports of the structure will be discussed. This is an almost 5 billion dollar project that involved the largest excavation ever in the west coast of North America.



Dr. Jorge Meneses
RMA Group, San Diego, CA



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