

FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM

Visit to University of Wisconsin-Madison: April 25th, 2023



This report summarizes the visit of Rafael Sabelli from Walter P Moore that took place at the University of Wisconsin-Madison on April 25th, 2023.

ITINERARY OR AGENDA

Provide the itinerary of the visit. For example:

TIME:	ACTIVITY:
8:00 AM – 9:00 AM	Breakfast at Aldo's café with the student chapter faculty advisor
9:00 AM – 9:30 AM	Tour of Jun and Sandy Lee Structures and Materials Testing Laboratory
9:45 AM – 10:00 AM	Meeting with Bill Likos, chair of the Civil and Environmental Engineering (CEE) department
10:00 AM – 10:30 AM	Meeting with Hanna Blum, CEE faculty member
11:00 AM – 11:30 AM	Meeting with Pavana Prabhakar, CEE faculty member
11:30 AM – 12:30 PM	Lunch meeting with the EERI student chapter officers, members, and graduate students
1:00 PM – 2:00 PM	Guest lecture: Divide and Conquer: How a Multi-Billion-Dollar Challenge was Met through Careful and Creative Division into Manageable Components
2:30 PM – 3:00 PM	Meeting with Jose Pincheira, CEE faculty member

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZERS:

- Gustavo Parra-Montesinos, chapter Faculty advisor, gustavo.parra@wisc.edu
- Mohamed Altameemi, Chapter President, altameemi@wisc.edu
- Osman Carrillo, Chapter Vice President, carrillosoto@wisc.edu
- Muhammad Bajwa, Chapter Secretary, mbajwa2@wisc.edu
- German Natera, Chapter Treasurer, najeramata@wisc.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

The presentation started with an introduction to the EERI and the Friedman Family Visiting Professionals Program and its goals. Followed by a presentation of the challenges in designing and constructing SoFi stadium. The presentation took approximately 50 minutes, followed by several questions from the audience. About 20 attendees attended the presentation. The attendees were faculty members from civil and geotechnical engineering departments. Also, EERI student chapter officers and graduate and undergraduate students attended the presentation.

Lecture Abstract

The multi-billion-dollar SoFi Stadium was showcased in the 2022 Superbowl, a fitting conclusion to several years of design and construction work. This project posed a tremendous structural and geotechnical challenge, including deep excavation, dramatic soil retention, high seismicity, and long spans. To meet this challenge, the design team divided the project to create a small set of large, but manageable, component projects. This presentation will discuss in detail the specialty design and construction management of all of these systems, the difficulties in having four separate geotechnical consultants/designers on a project, the challenges of formulating an independent peer review panel and obtaining their review consensus on a complex series of designs, managing interaction between the City of Inglewood plan check process and the peer review panel, and constructing nearly \$600M of geotechnical and structural work separate from the rest of the stadium bowl, all on the critical path.

Professional Bio

Rafael Sabelli is a Senior Principle at Walter P Moore. He serves as the firm's Managing Director for the San Francisco office as well as the Director of Seismic Design. Rafael is an award-winning, recognized industry leader in the development of seismic design solutions and seismic design regulations. Rafael is widely published on various technical topics related to the seismic design of important buildings and has been invited to make numerous presentations to his industry peers. Rafael earned his Master of Architecture and Master of Civil Engineering from the University of California in Berkeley.

SUPPLEMENTAL ACTIVITIES

Tour of the Jun and Sandy Lee Structures and Materials Testing Laboratory

This activity was led by Gustavo Parra-Montesinos. The tour included a brief presentation of the recently added space to the laboratory, as well as a discussion regarding the test specimens related to an ongoing research program. The tour also included a presentation on the different hydraulic actuators and testing frames.

Lunch meeting with the EERI student chapter officers, members, and graduate students

Rafael met with the student chapter officers and graduate students during lunchtime. The discussion was focused on the different projects that Rafael worked throughout his career. He also described the type of projects that Walter P Moore typically do. Finally, he gave advice and encouragement to the graduating students.

RESULTS, FEEDBACK AND LESSONS LEARNED

Our student chapter did not face any noteworthy challenges during the professional's visit. The biggest challenge for us as a chapter is recruiting students interested in earthquake engineering in a region of the U.S.A. that is not threatened by earthquakes regularly. Some of the topics that are of interest and would be good for future visits are:

- Repair and retrofit of reinforced concrete and vulnerable structures.
- Lessons learned from recent earthquakes and engineer's role in earthquake reconnaissance work.
- Efficient use of viscous dampers and base isolation techniques.
- Mitigation of the effects of soil liquefaction on our built environment.

ACKNOWLEDGEMENTS

The University of Wisconsin-Madison EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Rafael Sabelli through their Friedman Family Visiting Professional Program endowment.

LIST OF ATTACHMENTS

Attachment 1 – Lecture Flyer



Friedman Family Visiting Professionals Program

Rafael Sabelli, PE, SE



Senior Principal/
Director of Seismic Design
Walter P Moore

TOPIC

Divide and Conquer: How a MultiBillion-Dollar Challenge was Met through Careful and Creative Division into Manageable Components

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Tuesday, May 25th, 1:00 pm
3418 Engineering Hall

Attachment 2 – Event Photos



