

# FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM



## Visit to University of Nevada, Reno: April 26, 2024

This report provides an overview of the visit of **John Hooper**, who is currently a Visiting Researcher at the University of California, Berkeley, that took place at the University of Nevada, Reno on April 26, 2024.

### ITINERARY OR AGENDA

TIME:	ACTIVITY:	Location:
9:45 AM	Pick up from the hotel (Arsam Taslimi)	-
10:00 AM – 11:00 PM	Meeting with Dr. Buckle followed by a tour of the Earthquake Engineering labs.	EEL/LSSL
11:00 AM – 11:45 AM	Coffee break and open discussion with students	EEL hallway/auditorium
11:45 AM – 12:00 PM	Seminar preparation	
12:00 PM – 1:00 PM	Seminar	
1:00 PM – 2:30 PM	Lunch with CEE faculty	Laughing Planet
2:30 PM – 4:30 PM	Career advising meeting with CEE students	EEL 212

### STUDENT CHAPTER VISIT PLANNING COMMITTEE

#### LEAD ORGANIZER(S):

- Arsam Taslimi, President, rsamtaslimi@nevada.unr.edu
- Dr. Floriana Petrone, Faculty Advisor of the student chapter, florianapetrone@unr.edu
- Seyed Mahdi Kashizadeh, student chapter member, sm.kashizadeh@nevada.unr.edu
- Noah Neiman, student chapter member, noah.nieman@nevada.unr.edu

### VISITING PROFESSIONAL LECTURE OVERVIEW

Mr. Hooper delivered an excellent presentation on Performance-Based Seismic Design (PBSD), emphasizing Life Safety for Design Earthquake (DE) ground shaking and Collapse Prevention for Maximum Considered Earthquake (MCE) ground shaking in new building design. He also discussed recent updates in design codes to address functional recovery. The presentation was informative and based on practical experience.

#### Lecture Abstract

Today's Performance-Based Seismic Design (PBSD) approaches focus on providing Life Safety for Design Earthquake (DE) ground shaking and Collapse Prevention for Maximum Considered Earthquake (MCE) ground shaking for the design of new buildings. An overview of this process will be presented.

A FEMA-sponsored, Applied Technology Council-managed research effort has been underway for over 20 years developing a new approach to PBSD. The results of this effort have been published in FEMA P-58 Seismic Performance Assessment of Buildings. This portion of the presentation will focus on this new approach, which allows engineers to estimate the following loss information for their buildings:

- Repair costs
- Repair time
- Unsafe placards
- Embodied energy and carbon
- Casualties

Finally, the FEMA P-58 methodology has been extended to evaluate the time frame to achieve Functional Recovery, a new performance objective that is currently under development, which will also be discussed.

## Professional Bio

John Hooper is a Senior Principal and the Director of Earthquake Engineering at Magnusson Klemencic Associates, a consulting structural and civil engineering firm in Seattle, Washington. He received his Bachelor of Civil Engineering from Seattle University and a Master of Science from the University of California at Berkeley. John has over 40 years of engineering experience in the fields of renovation and earthquake engineering and has been involved in the majority of MKA's Performance-Based Seismic high-rise designs over the past 20 years. He is Past Chair of the American Society of Civil Engineer (ASCE 7's) Seismic Subcommittee, a member of ASCE 7's Main Committee, and Chair of the Building Seismic Safety Council (BSSC) NEHRP Provisions Update Committee.

## SUPPLEMENTAL ACTIVITIES

### Career advising meeting with CEE graduate students

During the career advising meeting a group of graduate students, including both Ph.D. students and Postdoctoral scholars, joined Mr. Hooper to discuss future opportunities and career paths. Each student had an opportunity to share their ideas or concerns about their post-graduation plans as either a researcher or practitioner. Mr. Hooper was extremely generous in spending time with students and sharing his thoughts and providing his advice.

## RESULTS, FEEDBACK AND LESSONS LEARNED

The event went really well. We leveraged the experience gained from the past visits organized within the Friedman Family Visiting Professionals Program to provide the guest speaker and attendees with a detailed plan of all the activities for the day and were able to fully follow it. However, for the future events we will try to involve more undergrad students in both the main presentation and the career advising meeting.

## ACKNOWLEDGEMENTS

The University of Nevada, Reno EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Mr. John Hooper through their Friedman Family Visiting Professional Program endowment.

We want to thank Dr. Floriana Petrone for her support and help. In addition, we thank the Department of Civil and Environmental Engineering at University of Nevada Reno and donors for their support.

## LIST OF ATTACHMENTS

A list of the attachments is included below:

- Item 1, flyer of the event
- Item 2, photos of Mr. Hooper's presentation
- Item 3, photos of the career advising meeting with the CEE graduate students





