FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to University of California, Irvine: February 14, 2020

This report summarizes the visit of **Christine Beyzaei** from Exponent, Inc. that took place at the University of California, Irvine on February 14, 2020.

ITINERARY OR AGENDA

TIME:	ACTIVITY:
11:00 AM – 11:30 AM	Student Chapter President and Faculty Advisor meets & welcomes Visiting Professional to campus
11:30 AM – 1:00 PM	Lunch with Student Chapter President, Faculty Advisor, and faculty from the Civil and Environmental Engineering Department
1:00 PM – 1:30 PM	Meeting with the UCI Student Chapter to discuss involvement in EERI, annual Seismic Design Competition, and future career plans
1:30 PM – 2:30 PM	Guest lecture by Visiting Professional
2:30 PM – 3:00 PM	Light refreshments and informal question and answer session with graduate students and faculty who attended the lecture
3:00 PM – 4:00 PM	Tour of the department's labs and discussion with graduate students about the projects that are taking place at UCI
4:00 PM – 5:00 PM	Meeting with faculty members to discuss research projects currently taking place at UCI

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- **Sarah Balaian** President, sbalaian@uci.edu
- **Farzin Zareian** Faculty Advisor, zareian@uci.edu
- **Lorrie Aguirre** CEE Department Manager, lorrie.a@uci.edu
- **Bryan Orozco** Structural Design Co-Captain, bdorozco@uci.edu
- **Melisa Akkaya** Structural Design Co-Captain, makkaya@uci.edu
- **Irma Nazario** Architectural Captain, inazario@uci.edu
- **Austin Wang** Engineering Student Council Representative, austindw@uci.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Liquefaction damage from the 2010-2011 Canterbury earthquake sequence devastated over 30% of the built environment in Christchurch, New Zealand. State-of-practice liquefaction assessment procedures have been shown to work generally well across much of Christchurch, when compared with post-earthquake damage observations. However, there are important case history sites where the state-of-practice liquefaction assessment procedures indicate that significant liquefaction-induced ground failure would be expected to

occur, but no surface manifestations of liquefaction were observed during post-earthquake reconnaissance. These sites are located predominantly in the southwest part of the city, an area known among local engineers for its silty soil conditions. This presentation will explore investigations of the apparent discrepancy between state-of-practice liquefaction estimations and post-earthquake liquefaction observations at silty soil sites in southwest Christchurch. The issues highlighted in this presentation will demonstrate the need for a more holistic approach to liquefaction assessment and consideration of system response at silty soil sites, with a focus on liquefaction manifestations.

Christine Beyzaei's lecture was a part of the Civil and Environmental Engineering Seminar Series, which is a program that features weekly lectures and presentations by professionals and scientists in the field of civil engineering. Because of this, we had a tremendous turnout from our CEE graduate students and faculty. The lecture took place in the McDonnell Douglas Engineering Auditorium, which can be seen in Figure 2.

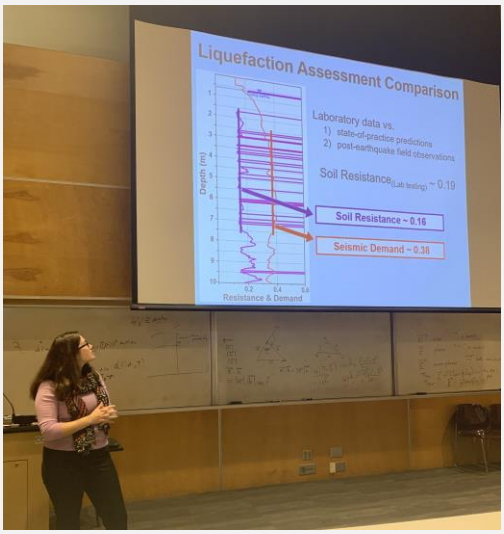


Figure 1: Christine Beyzaei's lecture

Figure 2: McDonnell Douglas Engineering Auditorium

Professional Bio

Christine Z. Beyzaei, Ph.D., P.E. is a Senior Engineer in the Civil Engineering Practice at Exponent, Inc. in Oakland, CA, USA. She received her B.S. degree from George Washington University and her M.S. and Ph.D. degrees from the University of California, Berkeley. Christine specializes in geotechnical earthquake engineering, performing research and post-earthquake reconnaissance in the U.S. and internationally. Christine is active in the Earthquake Engineering Research Institute (EERI), American Society of Civil Engineers (ASCE), and the Geotechnical Extreme Events Reconnaissance Association

SUPPLEMENTAL ACTIVITES

Meeting with EERI UCI Student Chapter Captains

Before Christine Beyzaei's presentation, our EERI UCI Student Chapter captains, who are currently in the process of preparing for the Seismic Design Competition, along with advancing in their classes and working in the industry, were able to meet with Christine and have a lively discussion. They spoke about all the benefits and opportunities that EERI have provided them, along with asking Christine questions about working in the industry.

Figure 3: UCI Student Team with Christine Beyzaei

Tour of department labs

After her lecture, Christine Beyzaei was given a tour of the Civil and Environmental Engineering labs on campus by Sarah Balaian (the UCI Student Chapter President), Sergio Carnalla (the lab manager), and Rabie (CEE PhD student). We mainly visited the Structural Engineering Testing Hall (SETH Lab) where most of the student lab sessions and technical testing takes place. The outdoor section of the lab features a large testing pit which is currently being used to run different experiments by our faculty and graduate students.

Figure 4: Christine, Sarah, and Rabie in the SETH lab

RESULTS, FEEDBACK AND LESSONS LEARNED

Overall, we as the UC Irvine Student Chapter felt that this visit by Christine Beyzaei went great and received positive reception from the department faculty and students. Because we were able to co-program this visit with the CEE Graduate Seminar Series, we had a great turnout of students who would not have otherwise been exposed to the topic of the lecture, or the EERI organization in general.

ACKNOWLEDGEMENTS

The University of California, Irvine EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Christine Beyzaei through their Friedman Family Visiting Professional Program endowment.

LIST OF ATTACHMENTS

Included at the end of this report are various attachments to supplement the information included above. A list of the attachments is included below:

- Item 1, flier for event

UCI Samueli School of Engineering | Department of Civil and Environmental Engineering

SEMINAR SERIES

MDEA | FRIDAYS
1:30 - 2:50pm

Silty Soil Liquefaction Effects in Christchurch, New Zealand

This lecture is part of the EERI Friedman Family Visiting Professionals Program

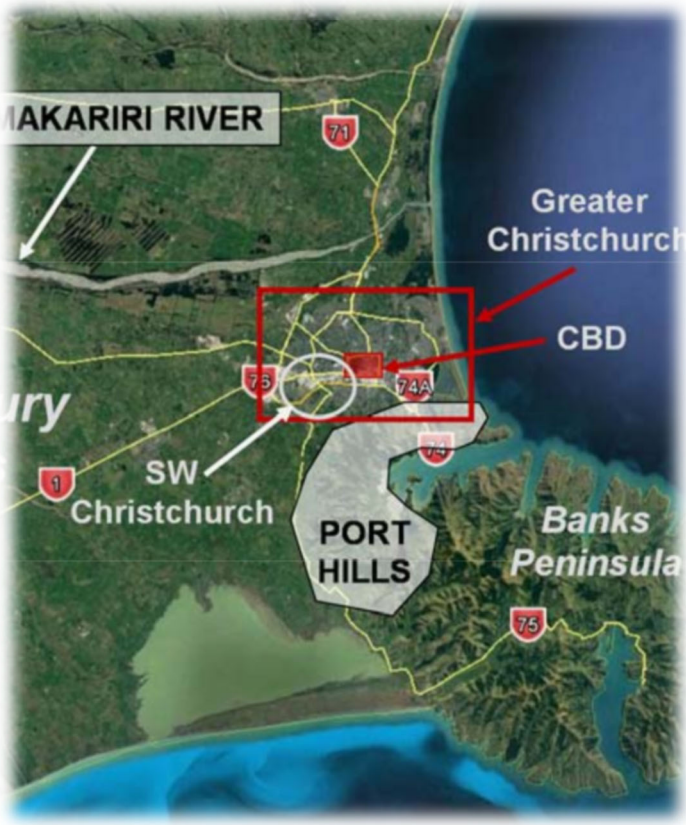
Presented by:

Christine Z. Beyzaei, Ph.D., P.E.
Senior Engineer in the Civil Engineering Practice at Exponent, Inc.

Feb 2020
14

Light Refreshments to Follow

Liquefaction damage from the 2010-2011 Canterbury earthquake sequence devastated over 30% of the built environment in Christchurch, New Zealand. State-of-practice liquefaction assessment procedures have been shown to work generally well across much of Christchurch, when compared with post-earthquake damage observations. However, there are important case history sites where the state-of-practice liquefaction assessment procedures indicate that significant liquefaction-induced ground failure would be expected to occur, but no surface manifestations of liquefaction were observed during post-earthquake reconnaissance. These sites are located predominantly in the southwest part of the city, an area known among local engineers for its silty soil conditions. This presentation will explore investigations of the apparent discrepancy between state-of-practice liquefaction estimations and post-earthquake liquefaction observations at silty soil sites in southwest Christchurch. The issues highlighted in this presentation will demonstrate the need for a more holistic approach to liquefaction assessment and consideration of system response at silty soil sites, with a focus on liquefaction manifestations.



Christine Z. Beyzaei, Ph.D., P.E. is a Senior Engineer in the Civil Engineering Practice at Exponent, Inc. in Oakland, CA, USA. She received her B.S. degree from George Washington University and her M.S. and Ph.D. degrees from the University of California, Berkeley. Christine specializes in geotechnical earthquake engineering, performing research and post-earthquake reconnaissance in the U.S. and internationally. Christine is active in the Earthquake Engineering Research Institute (EERI), American Society of Civil Engineers (ASCE), and the Geotechnical Extreme Events Reconnaissance Association