FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to University of California, Irvine: February 18, 2016

This report summarizes the visit of **Mr. Ron Eguchi** from ImageCAT that took place at the University of California, Irvine on February 18, 2016.

ITINERARY OR AGENDA

Provide the itinerary of the visit. For example:

TIME:	ACTIVITY:
11:30 AM – 12:00 PM	Student Chapter President and Advisor meet & welcome Visiting Professional to campus
12:00 PM – 1:30 PM	Lunch at a local restaurant with Student Chapter Advisor, President, Vice-President and faculty members from the Structural and Geotechnical Department
2:00 PM – 3:00 PM	Guest lecture by Visiting Professional
3:15 PM – 3:45 PM	Informal meeting with Prof. Sanders, department chair
3:45 PM – 4:30 PM	Informal meeting with department graduate and undergraduate students for carrier advice, EERI Seismic Design Competition team
4:30 PM – 5:00 PM	Informal meeting with Prof. Zareian, student chapter advisor

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S): {enter name of student members who lead the visit, chapter role, email}

- Dr. Farzin Zareian, Faculty Advisor and Seminar host, zareian@uci.edu
- Camilla Favaretti, President, favaretc@uci.edu
- Pablo Torres Rodas, Vice President, ptorresr@uci.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Briefly describe the Visiting Professional's presentation, and attendee response. Include photos if applicable.

Lecture Abstract

This NSF-sponsored RAPID grant study sought to understand the relationship between urban development patterns and the extent of physical damage caused by widespread tsunami run-up. The 11 March 2011 Tohoku, Japan earthquake caused significant damage all along the northeastern coast of Japan, with almost all of it resulting from tsunami waves that reached heights in excess of 20 meters. In order to understand how the built environment can affect the performance of communities in a tsunami, we studied twelve communities in the Miyagi/Chiba/Ibaraki Prefectures – areas ranging from minor to moderate damage to complete devastation. Our central research question was: Can the *urban topology* of a community mitigate the effects of a tsunami by isolating the more damaging surge effects to a few well-designed and well-placed buildings, thus limiting damage to "protected" buildings to just rising water effects?

Professional Bio

Mr. Eguchi is President and CEO of ImageCat, Inc., a risk management company specializing in the development and use of advanced technologies for risk assessment and reduction. Mr. Eguchi has over 30 years of experience in risk analysis and risk management studies. He has directed major research and application studies in these areas for government agencies and private industry. He has authored over 300 publications, many of them dealing with the seismic risk of utility lifeline systems and the use of remote sensing technologies for disaster response. He currently serves or has served on several Editorial Boards including the *Natural Hazards Review* published by the American Society of Civil Engineers and the Natural Hazards Research and Applications Information Center, University of Colorado; the *Journal on Uncertainties in Engineering Mechanics* published by Resonance Publications, Inc.; and the Earthquake Engineering Research Institute's Journal *SPECTRA.*

SUPPLEMENTAL ACTIVITES

Welcoming the speaker

The president (Camilla Favaretti) and vice president (Pablo Torres) of UCI EERI Student Chapter meet the speaker at Engineering Gateway 4141 at 11:30 AM. They talked about the structural and geotechnical program at UCI and the UCI EERI student chapter on the way to lunch in a local restaurant.

Lunch

The president (Camilla Favaretti) and vice president (Pablo Torres) of UCI EERI Student Chapter as well as faculty advisors, Prof. Farzin Zareian, and other department faculty members joined the lunch in a local restaurant off-campus.

Seminar

The lecture was given at Structure Seminar Series hosted by Dr. Zareian. It started after a round of appalls and a brief introduction of Mr. Eguchi from Dr. Zareian. Mr. Eguchi prepared a very interesting presentation without being too technical. One of the best of the Seminar Series hosted by our department.

Meeting with Department Chair, Prof. Sanders

Mr Eguchi had the chance to meet the Civil and Enviromental Engineering Department Chair, Prof. Sanders to follow up with questions about his presentations.

Meeting with UCI EERI Student Chapter

After the lecture, Mr. Eguchi was surrounded by many students who had questions about the presentation or needed a career advice. They had the chance to keep on discussion with him during the social hour organized by the UCI EERI Student Chapter. We talked about the research in progress and our future plans after graduation. The SDC team members were able to discuss the current modeling phase of the structure. Mr. Eguchi gave his opinions and constructive suggestions on the structure and basil wood as construction material.

Meeting with UCI EERI Student Chapter's Faculty Advisor, Prof. Zareian

Mr Eguchi had the chance to meet the chapter faculty advisor, Prof. Zareian to further discuss the chapter activities.

RESULTS, FEEDBACK AND LESSONS LEARNED

Based on the feedback received from the seminar attendees, the program with Mr Eguchi was very rewarding for the EERI Chapter members and the students that attended the seminar. We would like to host more professionals like Mr. Eguchi, who was able to inspire undergraduate and graduate students with his enthusiasm and knowledge.

In particular a future goal of the chapter is the increasing of graduate students involvement by hosting more outstanding professionals in the field of earthquake engineering

ACKNOWLEDGEMENTS

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

The UCI EERI Student Chapter also gratefully thankful for the help of Civil Department and Dr. Zareian for combining the seminar section.

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:

- Flyer and Picture

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

Presented By:
Ronald T. Eguchi
Chief Executive Officer
ImageCat, Inc.
Long Beach, CA

Civil Engineering *Seminar Series*

Thursday, February 18th, 2016
MDEA
2:00PM - 3:00PM

The Role Of Urban Development Patterns In Mitigating The Effects Of Tsunami Run-Up

This NSF-sponsored RAPID grant study sought to understand the relationship between urban development patterns and the extent of physical damage caused by widespread tsunami run-up. The 11 March 2011 Tohoku, Japan earthquake caused significant damage all along the northeastern coast of Japan, with almost all of it resulting from tsunami waves that reached heights in excess of 20 meters. In order to understand how the built environment can affect the performance of communities in a tsunami, we studied twelve communities in the Miyagi/Chiba/Ibaraki Prefectures – areas ranging from minor to moderate damage to complete devastation. Our central research question was: Can the *urban topology* of a community mitigate the effects of a tsunami by isolating the more damaging surge effects to a few well-designed and well-placed buildings, thus limiting damage to "protected" buildings to just rising water effects?

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Questions? - cee@uci.edu - (949) 824-7548