FRIEDMAN FAMILY VISITING PROFESSIONAL PROGRAM

Visit to the University of Nevada, Reno: April 25, 2025

This report summarizes the visit of **Ivan Wong** from Lettis Consultants International, which took place at the University of Nevada, Reno on April 25th.

ITINERARY OR AGENDA

Provide the itinerary of the visit. For example:

TIME:	ACTIVITY:
9:00 AM – 9:15 AM	Picked up speaker from hotel
9:15 AM – 10:30 AM	Tour of Earthquake Engineering Lab (EEL) with lab manager Patrick Laplace. Then, we toured the Harry Reed Engineering Laboratory (HREL) and the geotechnical labs with Sheriff Elfass.
10:30 AM – 10:50 AM	Meeting with Dr. Keri Ryan, head of Civil Engineering Department
10:50 AM – 11:50 AM	Coffee and donuts with Graduate Assistants and visiting professionals
12:00 PM – 1:30 PM	Guest lecture by Ivan Wong, followed by questions
1:30 PM – 2:30 PM	Lunch with Speaker, EERI president, CEE department head, EERI club advisor
2:30 PM – 3:15 PM	Informal meeting with department graduate students (soon to be graduating) for career guidance and research advice
3:15 PM – 3:30 PM	Drove speaker to airport

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- Noah Nieman, EERI President, nnieman@unr.edu
- Alejandro Huaman Ruiz, EERI Vice President, ahuaman@unr.edu
- Garett Boullion, EERI Treasurer, gbouillon@unr.edu
- Mehdi Kashizadh, EERI Member, skashizadeh@unr.edu
- Mostafa Taleshi, EERI member, mostafam@unr.edu
- Dr. Floriana Petrone, EERI student chapter advisor and professor, florianapetrone@unr.edu
- Dr. Patrick Laplace, EEL Lab manager and tour lead, plaplace@unr.edu
- Dr. Sheriff Elfass, Researcher and tour lead, elfass@unr.edu
- Dr. Keri Ryan, professor and head of Civil and Environmental Engineering Department, klryan@unr.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Mr. Wong gave an overview of the recent history of earthquake hazards and what engineers learned from each significant event. Historically, the largest advancements in seismic understanding have been after major tragedies, each event has contributed to improving seismic safety for future generations. Following the seminar, Mr. Wong answered questions from the audience regarding the presentation. Questions came from a variety of attendees, which included graduate students, professors in civil engineering and seismology, and invited industry professionals.

Lecture Abstract

The advancement in our understanding of earthquake hazards has been, in a large sense, a stepwise process with each step being a significant large earthquake. In the past three to four decades, the steps have been growing because of improved technologies in computers and instrumentation i.e., GPS and LiDAR. Beginning with the 1989 moment magnitude (M) 6.9 Loma Prieta, California, earthquake there have been a string of notable events worldwide from which much has been learned. These events have provided us lessons in earthquake fault rupture behavior, strong ground shaking, surface fault rupture, liquefaction, and tsunami inundation and they have been significant in advancing our understanding and ability to predict the impacts of these earthquake hazards. In addition, significant scientific research in the western U.S. has been performed that has advanced our knowledge and impacted earthquake engineering and seismic design. Projects involving the seismic design and seismic safety assessments of critical and important infrastructure such as Yucca Mountain have also been instrumental in improving our ability to design and build earthquake-resistant structures that will safeguard human life but remain fully functional after strong earthquakes.

Professional Bio

Ivan Wong, Senior Principal Seismologist at Lettis Consultants International, is an internationally recognized expert in seismic hazard analysis with nearly 50 years of experience. He has directed the evaluations of more than 700 critical and important facilities worldwide including some of the largest ever performed in the U.S. such as the Yucca Mountain Project. For FEMA, Ivan has been involved in the education and implementation of the seismic risk assessment software HAZUS. He has been the recipient of 20 USGS NEHRP external research grants that have supported the development of urban probabilistic and scenario hazard maps and other earthquake hazard-related studies. A major focus in Ivan's career has been earthquake hazards reduction and awareness and public outreach. He has spoken, taught, and lectured at hundreds of events for schools, universities, and professional organizations, and for the general public including the California Academy of Sciences.

Supplemental Activities

Tour of Structural, Earthquake, and Geotechnical Labs

Dr. Patrick Laplace, a research professor at UNR who has conducted experiments in the Earthquake Engineering Lab (EEL) for over twenty years, led the speaker and EERI president on a tour through the EEL. The group moved to the Harry Reid Engineering Laboratory (HREL) and was joined by Dr. Sherriff Elfass, another research faculty with over twenty years of experience, to examine the large-scale soil box and geotechnical labs.

Coffee and Donuts with Graduate Students

Before the seminar, a casual coffee and donuts session provided an opportunity for students and professionals to connect with the speaker in an informal setting. Graduate students were able to ask questions about the upcoming presentation, discuss research interests, and learn from Mr. Wong's professional experience. Several industry professionals also joined the conversation, offering their perspectives and enriching the dialogue. This

relaxed atmosphere helped introduce the attendees to the speaker and made participants feel more comfortable engaging during the seminar that followed.

Graduate Student Career Advice Session

After lunch, the speaker again spoke to the graduate assistants who are graduating soon about career advice. The students specifically enjoyed the feedback on what employers and experienced professionals look for in new hires. It was also helpful for international students to hear that most employers, including the speaker, do not see the sponsoring process as detrimental.

RESULTS, FEEDBACK AND LESSONS LEARNED

Ivan Wong was very well received with over 40 attendees from different Departments during the seminar, and high rates of attendance at the other events as well. Feedback from attendees was overwhelmingly positive, with many highlighting the accessibility and insight of Mr. Wong's presentation.

In future visits, the chapter would like to plan more flexibility into the schedule, as some events extended past their intended times, causing some events to be shortened.

- Maintain a high level of student and industry attendance.
- Design the schedule with more flexibility to accommodate events that take longer than anticipated.

ACKNOWLEDGEMENTS

The UNR EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Ivan Wong 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:

- Photo of coffee and donuts session with graduate students
- Photo taken during seminar
- Second photo taken during seminar
- Flyer distributed to students


EXIT


EXIT

Earthquake Engineering Research Institute

EERI@UNR Student Chapter Seminar

THE LATEST AND GREATEST IN EARTHQUAKE SCIENCE AND THE IMPLICATIONS TO SEISMIC DESIGN AND SEISMIC SAFETY IN THE WESTERN U.S.

Ivan Wong

Friday, April 25, 2025 12:00 p.m. – 12:50 p.m. Pacific Time (US and Canada)

Location: EEL Auditorium, University of Nevada, Reno
Simulcast on Zoom
Meeting ID: 828 0972 7094
Passcode: 112820

The advancement in our understanding of earthquake hazards has been, in a large sense, a step-wise process with each step being a significant large earthquake. In the past three to four decades, the steps have been high because of improved technologies in computers and instrumentation i.e., GPS and LiDAR and simply because the earth has been willing to divulge its secrets at places most convenient for us to make visual observations, i.e., the earth's surface. Beginning with the 1989 moment magnitude (M) 6.9 Loma Prieta, California, earthquake there have been a string of notable events worldwide from which much has been learned. These events have provided us lessons in earthquake fault rupture behavior, strong ground shaking, surface fault rupture, liquefaction, and tsunami inundation and they have been significant in advancing our understanding and ability to predict the impacts of these earthquake hazards. In addition, significant scientific research in the western U.S. has been performed that has advanced our knowledge and impacted earthquake engineering and seismic design. Projects involving the seismic design and seismic safety assessments of critical and important infrastructure such as Yucca Mountain have also been instrumental in improving our ability to design and build earthquake-resistant structures that will safeguard human life but remain fully functional after strong earthquakes.

About the keynote speaker:

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