

FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM



2014-2015 ACADEMIC YEAR ACTIVITIES REPORT

OBJECTIVES:

The Friedman Family Visiting Professional Program aims to bridge the gaps between the academic and professional worlds of earthquake engineering and earthquake risk reduction by:

- Improving the understanding of students and faculty of the active professional earthquake engineering and risk reduction community;
- enhancing the students' understanding of the multi-disciplinary nature of earthquake engineering;
- Increasing the professional's understanding of the educational process;
- Utilizing the unique intellectual resources of EERI to broker useful relationships; and
- Using the resources of EERI to help students understand and consider professional careers associated with earthquake engineering and earthquake risk reduction.

With generous funding from the Friedman Family endowment, the program sends professionals to universities to provide a lecture and meet with students to discuss the options available to them upon graduation. These meetings also benefit the visiting professionals by increasing their understanding of the educational process experienced by young professionals now entering the field.

2014-2015 PROGRAM OVERVIEW:

The Friedman Family Visiting Professionals program launched in November for the 2014-2015 academic year. The process has led to a refreshed list of visiting professionals, great interest from student chapters, and 13 scheduled visits by ten professionals from February to May 2015.

In early November 2014, EERI staff and the FFVP chair reviewed the budget and clarified the program's operational procedure for the academic year. In this process, the list of visiting professionals was updated and five new professionals were invited to join the program.

In late November 2014, the program was advertised to EERI student chapters and an application form required student chapters to select their top 3 professionals and describe the reasons for their choices. Twenty-three EERI student chapters applied to the program, and 13 were selected to participate. Selections were made based on the following criteria:

- Budget limitations
- Diversity in professionals selected
- Diversity in universities selected
- Providing opportunities to new chapters or chapters who have not had recent visits.
- Quality of description and reasoning for professionals in application form

Before the first visit in February, EERI staff launched the participating cohort of professionals by hosting a conference call to summarize the procedures and by providing updated EERI introduction slides, which better reflect EERI's mission, disciplines, and the benefits to students of being involved.

Upon the conclusion of the spring visits, student chapters were required to complete a report summarizing the visit and submit it via a questionnaire designed to solicit their feedback on the success of the program and areas for improvement. EERI staff developed a new template to streamline the reporting process and help achieve some consistency. The new template includes the following sections:

- Itinerary or Agenda
- Student Chapter Planning Committee
- Visiting Professional Lecture Overview
- Supplemental Activities
- Results, Feedback and Lessons Learned
- Acknowledgements
- List of Attachments

With this new template, it is expected that future student chapter reporting will occur within two weeks of the visit.

Visiting professionals were also asked to complete an evaluation that would help EERI staff improve the program. Generally, feedback from the professionals and students was very good and will help improve our program in the coming academic year. More details about the results of these evaluations are included later in this report.

LIST OF VISITING PROFESSIONALS:

Below are the names of the visiting professionals participating in the program during the 2014-2015 academic year.

- Ramin Golesorkhi, Langan Treadwell Rollo, Geotechnical Engineers
- Faiz Makdasi, SAGE Engineers, Geotechnical Engineers
- Janiele Maffei, California Earthquake Authority, Structural Engineers
- Ronald Eguchi, ImageCat Inc., Risk Analysis, Lifelines, and Industrial Facilities
- Annie Kammerer, Bechtel Corporation, Risk Analysis, Lifelines, and Industrial Facilities
- David Cocke, Structural Focus, Structural Engineers
- David Friedman, Forell/Elsesser, Structural Engineers
- Nathan Gould, ABS Consulting, Structural Engineers
- Patrick Otellini, City & County of San Francisco, Emergency Management & Public Policy
- Jim Malley, Degenkolb Engineers, Structural Engineers
- Richard Eisner, FAIA, Emergency Management & Public Policy (*no visit scheduled for 2014-2015*)
- John Hooper, Magnusson Klemencic Associates, Structural Engineers (*no visit scheduled for 2014-2015*)
- Farzad Naeim, Farzad Naeim Inc., Structural Engineers (*no visit scheduled for 2014-2015*)
- Maryann Phipps, Estructure, Structural Engineers (*no visit scheduled for 2014-2015*)
- Jorge Meneses, Group Delta Consultants Inc., Geotechnical Engineers (*no visit scheduled for 2014-2015*)
- Ivan Wong, URS Corporation, Seismologist (*no visit scheduled for 2014-2015*)

SELECTED UNIVERSITIES:

Thirteen universities were selected to participate in the 2014-2015 program. Complete reports summarizing each visit have been submitted by the participating universities and can be found in PDF format on EERI's website at:

<https://www.eeri.org/projects/friedman-family-visiting-professionals-program/reports/>

University of California, Irvine:

David Cocke visited on February 26, 2015. He was hosted by:

- President Camilla Favaritti
- Vice President George Yap
- Dr. Anne Lemnitzer, Seminar Host
- Design Captain: Strength, John Sanchez
- Faculty Advisor Dr. Farzin Zareian

David Cocke’s lecture aimed to give students a sense of what the professional world was like. As engineers, he suggested that the critical skills for a successful career include calculation, analysis, vision, communication, and a strong network. As an engineer, the “feasibility” question doesn’t always have a clear “yes” or “no” answer—that’s the client’s final call. Mr. Cocke encouraged the students to understand their role as engineers in terms of the big picture, and to keep that goal in mind every step of the way.

University of Minnesota

Jim Malley visited on March 6, 2015. He was hosted by:

- President Davide Giannuzzi
- Vice President Catherine Johnson
- Secretary Eric Hauser
- Faculty Advisor Catherine French
- Faculty (tour of MAST Lab), Carol Shield

The University of Minnesota hosted a welcome dinner and a tour of the Theodore V. Galambos Structure Laboratory. They also hosted a lunch with the student chapter membership, where they were able to seek professional advice from James Malley as well as discuss the future challenges and trends in the Civil Engineer profession.

San Jose State University:

Janiele Maffei visited on March 20, 2015. She was hosted by:

- President Mary Tong Nguyen
- Vice President Daniel Boyett
- Treasurer Angelica Cabal
- Member Kelvin Munar
- Faculty Advisor Kurt McMullin

Janiele Maffei’s visit with SJSU included two lectures. The first was presented as a “Lunch and Learn” for EERI student members and Civil Engineering students interested in EERI. The second was presented for Professor McMullin’s undergraduate Steel Design class, with an open invitation to all engineering students.

McMaster University

David Friedman visited on March 30, 2015. He was hosted by:

- President Niel Van Engelen
- Vice President Farzad Nikfar
- Treasurer Taylor Steele
- Undergraduate Liaison Adrian Crowder
- Member, Ashkan Ezazi, Member
- Member, Changxuan Zhang
- Member, Daniel Stevens
- Undergraduate Liason Mike Kovacs

- Member, Mustafa Siyam
- Member, Saman Rastgoo Moghadam
- Member, Yasser Al-Anany
- Faculty Advisor Dr. D. Konstantinidis
- Faculty Advisor Dr. L. Wiebe

McMaster University prepared an eventful two-day schedule for David Friedman, including meet and greets with EERI members, and dinner with the faculty. The Monday evening presentation was be a technical presentation, and the Tuesday morning presentation was held in conjunction with a fourth year undergraduate course. Mr. Friedman mentioned that this chapter was extremely well-prepared, and orchestrated one of the best visits he had experienced over the course of the program.

Georgia Institute of Technology

Annie Kammerer visited April 1, 2015. She was hosted by:

- President Sujith Mangalathu
- Vice President Jiquing Jiang
- Secretary Farahnaz Soleimani
- Secretary Parsa Banihashemi
- Treasurer Ajay Saini
- Faculty Advisor Reginald DesRoches

Annie Kammerer gave a lecture on nuclear plant design concepts, how they work, what can go wrong, and the unique challenges of their construction—including the impact of the Fukushima Daiichi accident. The students were very engaged, asking questions that ranged from public policy and technical challenges to environmental issues. The seminar was well received by all in attendance with many of the faculty and students saying that it was one of the best seminars that they had attended.

University of Kansas

Ronald T. Eguchi visited on April 15, 2015. He was hosted by:

- President Donald J Spradling
- Vice President Rouzbeh Khajedehi
- Michael Becker, EIT
- Faculty Advisor Dr. Jian Li

The University of Kansas invited Ron Eguchi to tour five of their labs, and this turned into a golden opportunity for the students to meet and talk with him during his visit. He also made mention of EERI's value as a resource to professionals.

"During his lecture, "Earthquakes, Hurricanes and other Disasters: a View from Space," Mr. Eguchi credited EERI for promoting central repository for imagery data which could then be used by various responding professionals who could benefit from the remote sensing data. Mr. Eguchi demonstrated the use of imagery processing software applied to visual imagery data in order to assist with change detection and identify areas which have been exposed to damage. The process was applied to imagery from disasters in Iran, as well as the aftermath of Hurricane Katrina in New Orleans. Mr. Eguchi expanded the discussion to include the method by which crowdsourcing could be used to gather valuable data which would otherwise be difficult to obtain during a crisis event."

Purdue University (joint request with UIUC)

David Cocke visited on April 16, 2015. He was hosted by:

- President Ben Taylor
- Secretary Rachel Chicchi
- Faculty Advisor Ayhan Irfanoglu

David Cocke's presentation focused on the intersection of engineering and business: communication. Through his experience starting his own firm, Structural Focus, Mr. Cocke emphasized the ways in which engineers can change their communities for the better in terms of sustainability, public safety, community resilience and disaster recovery.

University of Illinois at Urbana-Champaign (joint request with Purdue)

David Cocke visited on April 17, 2015. He was hosted by:

- President Carol Chen
- Vice President Mitch Knapp
- Secretary Fangyu Wu
- Graduate Advisor Hong Kim
- Faculty Advisor Youssef Hashash

Around 40-50 students attended the midday lecture where Mr. Cocke shared his insight of what a structural engineer does in professional practice. The lecture combined his technical and personal experiences in such a way that engaged attendees and left them excited. The attending students were able to ask Mr. Cocke questions on both project-specific technical matters, as well as questions regarding the development of business relationships and partnerships. For his part, Mr. Cocke enjoyed the tour of the university's Hydrosystems Lab, which included a large Wavemaker and the oscillatory tunnel.

Rice University

David Friedman visited on April 20, 2015. He was hosted by:

- President Mihaela Nistor
- Vice President Kameshwar Sebarethinam
- Faculty Advisor Jamie Padgett
- Civil and Environmental Engineering staff, Jennifer Mashburn

David Friedman's lecture highlighted unique structural engineering projects he's had over the course of his career. Mr. Friedman explained that the practicing structural engineer must not only have a broad understanding of not just structural engineering, but must be knowledgeable about architecture, M/E/P systems, construction delivery methodologies, and the construction process; and all the other interconnected disciplines that come together and translate to a design. The students found the talk motivating, and it gave them an idea of what to expect from a career in the industry. As a special bonus of timing, Mr. Friedman met with the seismic design team members post-competition, where he also served as a judge.

Virginia Tech

Faiz Makdisi visited on May 1, 2015. He was hosted by:

- President Ashly Cabas
- Vice President Marcus Freeman
- Secretary Trevor Walker
- Treasurer Adam Phillips
- Faculty Advisor Ioannis Koutromanos

Dr. Makdisi's visit aided the Chapter's goal of becoming more diverse. His presentation covered an array of subtopics that related to various fields, including geotechnical engineering, structural engineering, and geology. Dr. Makdisi was very excited to be back at Virginia Tech for the second time in his career and offered a wealth of knowledge. Much of his time went to meeting with faculty and touring the geotechnical and structural engineering labs. During his presentation Dr. Makdisi was very clear and concise while covering a large range of material. Following the presentation, the audience took advantage of the opportunity to ask questions.

University of California, Davis

Ramin Golesorkhi visited on May 14, 2015. He was hosted by:

- President Vincent Pericoli
- Co-President Diane Moug
- Faculty Advisor Sashi Kunnath

After his lecture on Soil-Foundation-Structure Interaction (SSI) was finished and questions were answered, Dr. Golesorkhi had time to chat with students and faculty—especially Professor Ross Boulanger, who knew him from his days at UC Berkeley. Similarly, many other students and faculty know Dr. Golesorkhi from his previous visits to UC Davis, so they were able to touch base and catch up with him. Dr. Golesorkhi was presented with a bottle of the famous UC Davis olive oil, as a token of appreciation for coming to Davis.

University of Colorado, Boulder

Patrick Otellini visited on April 7-8, 2015. He was hosted by:

- President Sarah Welsh-Huggins
- Vice President Cody Harrington
- Secretary Kristen Hess
- Outreach Coordinator Greg Rulifson
- Faculty Advisor Abbie Liel

In addition to Mr. Otellini's seminar, a central objective of his visit was to connect him with different faculty members and research groups who conduct work relevant to his job as Chief Resilience Officer. UCB has several interdisciplinary research teams on campus related to earthquake risk and mitigation, post-disaster informatics, flood recovery, and adaptation of road infrastructure to the stress of climate change. The members also coordinated with Chief Resilience Officer (CRO) of Boulder, Greg Guibert, who was scheduling his own meeting with Mr. Otellini during his time in Boulder. In all, Mr. Otellini met with nine different faculty members, including two larger groups meetings with different research teams. The students described Mr. Otellini as charismatic and easy-going, and found him extremely accessible when discussing his work and possibilities for their own careers at the student leadership dinner.

North Carolina State University

Nathan C. Gould visited on April 24, 2015. He was hosted by:

- President Diego Aguirre
- Vice-President Emrah Tasdemir
- Treasurer David Overby
- Secretary Ana Gabriela Haro
- Secretary Nihar Gogoi
- Secretary Cuiyan Kong
- Faculty Advisor Dr. Mervyn Kowalsky

Nathan Gould's presentation highlighted the seismic mitigation program that was undertaken by the Anheuser-Busch Companies at their Los Angeles and St. Louis Breweries. Details of the seismic retrofit of key buildings were examined, as well as the considerations that led to the implementation of the overall seismic program for the breweries. The EERI officers then took him on a tour of the structural laboratory, where Mr. Gould got to see the ongoing research projects and meet with the students.

2014-2015 OUTCOMES AND ACCOMPLISHMENTS:

The 2014-2015 program achieved great success, as shown in the evaluation forms submitted by both professionals and students.

On a scale of 1-5 (with 1 being poor and 5 being excellent), 12 of the student chapters rated the "quality of content and interaction you had with your Visiting Professional" as excellent, and one as good. Twelve of the Chapters would both "recommend their Visiting Professional to other schools" and "invite their professional to return." The following quotes qualitatively demonstrate the program's value to the student chapters:

Since many non-members were invited to the event, this served as an excellent recruiting tool for the student chapter.

– University of California, Davis EERI Student Chapter

Our Student Chapter Treasurer, a first-year student, said "The coolest part of the night was seeing Patrick go from a super professional presenter at the seminar to a regular guy at dinner." Our chapter Webmaster, a fourth year Ph.D. student appreciated time to talk to Mr. Otellini "about the challenges and goals of this new position," as Chief Resilience Officer for the City of San Francisco.

– University of Colorado, Boulder EERI Student Chapter

As a new student chapter, we had no clue how to find speaker for addition event for our members. Thank to the program, we were able to apply and have high quality visiting professional.

– University of California, Irvine EERI Student Chapter

In the evaluation forms, professionals often observed that there seems to be a lack of information available to students about their careers and how the industry works. The participating professionals also appreciated their ability within this program to help fill that need, and appreciated their experiences as shown in the following quotes:

I enjoyed meeting the students and trying to help them understand what can really happen in the real world with their careers. Even the grad students seem so naive about how the industry and business works. They were full of questions, and it's a real pleasure to "mentor" them if just a little bit.

– David Cocke

The lecture was very enjoyable. I also enjoyed the meetings with the students and individual meetings with faculty members that are doing earthquake related research.

– Jim Malley

The officers of the Rice University EERI Student Chapter created a terrific full-day agenda including one formal presentation, tours of their lab and a unique Oshman Engineering Design Kitchen, meetings with faculty members, lunch with graduate students, and a final dinner with the officers and faculty members. I was treated very nicely and enjoyed myself immensely. I hope they got as much out of it as I did. It just simply could not have been better!

– David Friedman

I found the most beneficial aspect of my trip was visiting with graduate students, and faculty, and getting exposed to their ongoing research efforts, particular as they relate to earthquake engineering and risk reduction. I also enjoyed the interaction with students and faculty following my lecture. I was given a tour of the geotechnical and structural engineering labs, and introduced to their diverse research projects.

– Faiz Makdisi

This trip was invaluable. The student chapter did an amazing job of making the most of my trip and scheduling back to back meetings for almost two full days which added a really great dynamic to the trip.

– Patrick Otellini

GOALS, PLANS, AND ACTIVITIES FOR 2015-2016 ACADEMIC YEAR

For the 2015-2016 academic year the committee plans to schedule at least 6-8 university visits pending a detailed budget assessment.

Based on feedback extracted from the student chapter evaluation forms, requested topics for future visits included:

Displacement-based design	Soil-structure interaction
Probabilistic seismic hazard analysis	Controlled rocking systems
Performance of nonstructural components and systems	Practitioners making innovative contributions to geotechnical engineering
Base isolation	Seismology
Performance-based design	Seismic design in steel and concrete structures
Geotechnical topics related to earthquakes	Geological and social aspects of earthquakes
Lessons learned from earthquakes	Retrofit of historical buildings
Masonry structures	Women or racial/ethnic minority practitioners in earthquake engineering and risk management
Interdisciplinary research and practice that demonstrates the importance of collaboration between structural and geotechnical engineers, city planners, policy makers, sociologists, and the public in reducing earthquake risk	

- University of Colorado, Boulder is home to many different research groups and student organizations that would like the opportunity to collaborate further with practitioners, to enhance both academic knowledge and professional practice of earthquake risk management and long-term community development
- San Jose State University is interested in seeing projects or studies related to earthquake engineering that involve disciplines outside of engineering. Such topics would aid the Student Chapter in working toward its mission to educate engineering students about earthquake engineering and seismic design.

LIST OF ATTACHMENTS

See the Friedman Family Visiting Professional webpage for report downloads and other information:

<https://www.eeri.org/projects/friedman-family-visiting-professionals-program/>