FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to Johns Hopkins University: April 20, 2017

This report summarizes the visit of **Nathan Gould** from ABS Consulting that took place at the Johns Hopkins University on April 20, 2017.

ITINERARY OR AGENDA

TIME:	ACTIVITY:
8:30 AM – 9:15 AM	Pick-up & breakfast with Xilei Zhao (Student Chapter President), Prof. Judith Mitrani-Reiser, Prof. Henry Burton, and May Thu Nwe Nwe
9:15 AM – 9:30 AM	Walk to department with Xilei Zhao (Student Chapter President) and May Thu Nwe Nwe
9:30 AM – 10:00 AM	Meet with Prof. James Guest, Associate Professor
10:00 AM – 10:30 AM	Meet with Prof. Stavros Gaitanaros, Assistant Professor
10:30 AM – 11:00 AM	Meet with Prof. Sauleh Siddiqui, Assistant Professor
11:00 AM – 11:30 AM	Meet with Prof. Judith Mitrani-Reiser, Assistant Professor
11:30 AM – 11:45 AM	Lab tour with thin-walled structures group (Dave Fratamico and Guanbo Bian) of Prof. Benjamin Schafer (Professor)
12:00 PM – 1:00 PM	Guest lecture by Visiting Professional
1:15 PM – 2:30 PM	Lunch with graduate students and postdocs, including Dave Fratamico, Gonzalo Pita, Reza Behrou, and Astrid Fischer
2:30PM	Depart to airport

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S): Xilei Zhao, Student Chapter President, xzhao29@jhu.edu

- May Thu Nwe Nwe, Student Member, mnwenwe1@jhu.edu
- Judith Mitrani-Reiser, Student Chapter Advisor, jmitrani@jhu.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Prof. Judith Mitrani-Reiser (Student Chapter Advisor) introduced EERI and the visiting professional. Then, the visiting professional, Dr. Nathan Gould, gave a presentation on "Enhanced Seismic Design Integrated into a Multi-Hazard Design Approach." Around 30 people, including faculty members, postdocs, graduate students, and undergraduate students, attended the lecture. The audience were very interested in the talk, and Dr. Gould got multiple questions after his talk.

Lecture Abstract

Multi-Hazard design, which incorporates both natural and manmade hazards, has become a popular design requirement for critical structures. While many Owners and various project team members anticipate a relatively easy integration of the respective hazards based on their understanding of the loads generated by the hazards, numerous complexities arise during the actual integration of a multi-hazard design approach into construction documents.

A case study of recently designed emergency communications facility will be reviewed to understand the development of the design criteria and integration of the different conventional and extreme load criteria into a cohesive multi-hazard strategy to provide a higher level of protection for both structural and non-structural elements that are deemed to be critical to the post-event operations of the facility. Specific design features such as enhanced vertical and lateral load paths, and attachments of critical non-structural elements will be examined to illustrate the implementation of a multi-hazard strategy in the actual structure.

Professional Bio

Dr. Nathan Gould, Chief of Technology for the ABS Consulting Advanced Engineering Division, also serves as the General Manager of the St. Louis office of ABS Consulting. He is a practicing structural engineer with over 25 years of experience in the design, construction and rehabilitation of major structures in all regions of the United

States. Dr. Gould is active in the utilization of performance based seismic design criteria and methodology for the design of new buildings and the retrofit of existing structures.

Dr. Gould is the author of numerous technical papers including recent articles on Performance Based Seismic Design, Progressive Collapse of Structures, Managing Extreme Wind Losses, and Terrorism Risk. He currently serves on several technical committees and organizations related to seismic analysis and design, including the NEHRP Advisory Committee on Earthquake Hazards reduction. He has been a member of several post earthquake reconnaissance groups, including teams that investigated damage following the 2010 Haitian and 2011 Christchurch events. Dr. Gould is a licensed Professional and Structural Engineer in several states.

SUPPLEMENTAL ACTIVITES

Breakfast with Student Chapter President and advisor

Dr. Gould had breakfast with Xilei Zhao (Student Chapter President), Prof. Judith Mitrani-Reiser (Student Chapter Advisor), Prof. Henry Burton, and May Thu Nwe Nwe. Xilei Zhao briefed Dr. Gould the development of our Student Chapter, and future visions. Dr. Gould gave several useful suggestions on our future development.

Meeting with faculty members in the department

Dr. Gould met with several faculty members, including Prof. Guest, Prof. Gaitanaros, Prof. Siddiqui, and Prof. Mitrani-Reiser. They discussed multiple topics, including research interest, future collaboration, development of EERI Student Chapter at Hopkins, etc.

Lab tour with thin-walled structures group

Two graduate students, i.e., Dave Fratamico and Guanbo Bian, led a lab tour for Dr. Gould. They showed Dr. Gould our department's most advanced equipment in structural engineering.

Lunch with graduate students and postdocs

Dr. Gould had lunch with graduate students and postdocs, and gave them useful advice in job hunting and career development. Our graduate students and postdocs asked a lot of questions during the lunch and greatly benefited from the conversations.

RESULTS, FEEDBACK AND LESSONS LEARNED

Dr. Gould's visit was very successful. Our Student Chapter worked closely with the department and managed to arrange multiple activities for Dr. Gould. Both our Student Chapter and Dr. Gould benefited a lot from this visit. Our faculty members developed professional contact and potentially future collaborations with him, and our students enjoyed the guest lecture and received useful career suggestions from Dr. Gould.

ACKNOWLEDGEMENTS

The Johns Hopkins University EERI Student Chapter acknowledges the support of the Friedman Family for sponsoring the travel of Nathan Gould through their Friedman Family Visiting Professional Program endowment. We also extend our deep gratitude to the Department of Civil Engineering at Johns Hopkins University for the financial support of this activity (food and drinks for the guest lecture).

LIST OF ATTACHMENTS

- Item 1, i.e. flier for event

JOHNS HOPKINS
WHITING SCHOOL
of ENGINEERING

Department of Civil Engineering

GRADUATE SEMINAR

Enhanced Seismic Design Integrated Into A Multi-Hazard Design Approach

Dr. Nathan Gould
Chief of Technology, Advanced Engineering Division
ABS Consulting

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April 20, 2017 12-1 PM
JHU Homewood Campus, Hackerman Hall B-17

Seminar is FREE and open to the public. Attendance is required for all enrolled Civil Engineering graduate students. For parking please see link for visitors at www.jhu.edu and select information on Homewood Campus.