

# FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM

## Visit to University of Michigan: February 11, 2021



This report summarizes the visit of **Troy Morgan** from Exponent Inc., New York that took place at the University of Michigan on February 11, 2021.

### ITINERARY OR AGENDA

TIME:	ACTIVITY:
10:20 AM – 10:30 AM	Welcome by Prof. Seymour Spence
10:30 AM – 11:00 AM	Meeting with Prof. Evgueni Filipov
11:00 AM – 11:30 AM	Meeting with Prof. Seymour Spence
11:30 AM – 12:00 PM	Meeting with Prof. Jason McCormick
2:15 PM – 3:00 PM	Meeting with graduate students (Omar, Bowei, WeiChu and Srinivasan)
3:00 PM – 3:30 PM	Meeting with Michigan Seismic
3:30 PM – 4:00 PM	Break + Seminar preparation
4:00 PM – 5:00 PM	Seminar + Q&A

### STUDENT CHAPTER VISIT PLANNING COMMITTEE

#### LEAD ORGANIZER(S):

<b>Srinivasan Arunachalam</b>	EERI Student Chapter President	sriarun@umich.edu
<b>Andrew Hager</b>	SDC Captain	hagera@umich.edu
<b>Xiao Xiao Wen</b>	SDC Captain	xxwen@umich.edu
<b>Mackenzie Zabel</b>	SDC Captain	mzabel@umich.edu
<b>Professor Seymour Spence</b>	Faculty Advisor	smjs@umich.edu

### VISITING PROFESSIONAL LECTURE OVERVIEW

Troy Morgan presented a seminar on 'Adventures in Seismic Risk Mitigation' which was well received by the student and faculty community at the University of Michigan.

#### Lecture Abstract

The modern era of civilization is marked by immense networks of complicated, interdependent systems and rapidly evolving technologies, including the world of civil infrastructure. Many of these technologies, while born from academia, are implemented, and refined in the world of industry. As today's complex ideas are put into practice, there is an increasing tendency for things to fail under extreme loading such as earthquakes, and an urgent desire to prevent such failures. This talk draws on projects from structural engineering, including nuclear plant reliability analysis, urban post-earthquake reconnaissance, and insurance investigations related to alleged earthquake damage.

## Professional Bio

Dr. Morgan is a recognized expert in the field of seismic isolation and passive energy dissipation systems, and specializes in performance of structures under extreme loading such as earthquakes, wind, flood, and explosions. He has performed extensive research on the numerical simulation and experimental behavior of innovative seismic protective devices and optimization of their use within performance-based engineering frameworks. Prior to joining Exponent, Dr. Morgan was Assistant Professor at the Center for Urban Earthquake Engineering at the Tokyo Institute of Technology in Japan. Dr. Morgan received his B.S., M.Eng., and Ph.D. degrees from the University of California, Berkeley.

## SUPPLEMENTAL ACTIVITIES

### Meeting with faculty

Select members of the civil engineering faculty at the University of Michigan met with Dr. Morgan and discussed advances in seismic design approaches and new technologies that could impact the profession in the near future.

### Meeting with graduate students

Research scholars (Ph.D. and postdocs) at the University of Michigan took the opportunity to learn the spectrum of professional activities Troy was involved in during his career. This information enabled them to understand the range of research-driven opportunities available in the industry once they graduated. A series of technical discussions paved way for the students to better appreciate the current research trends in academia and the needs of the industry.

### Meeting with Michigan Seismic

The undergraduate seismic design team met with Dr. Morgan to discuss potential designs for the 2021 competition. Dr. Morgan gave helpful advice and guidance for Michigan Seismic on how to improve the building iterations. Michigan Seismic undergraduate members also discuss various topics with Dr. Morgan, such as careers related to structural engineering and networking opportunities within EERI.

## RESULTS, FEEDBACK AND LESSONS LEARNED

Brief description of challenges during the process, general reception of the program and Visiting Professional. Also, a description of other topics or disciplines the Student Chapter would like to cover in future visits, and related goals.

- FFVP has decent attendance and was advertised across the campus, the meeting went well, and students and faculty were engaging in conversations with Dr. Morgan.
- Registration for the event is the most confusing part of the whole visitation program.
- University of Michigan EERI student chapter warmly welcomed Dr. Morgan and deeply appreciates the generosity of EERI for sponsoring the FFVP. For future references, we welcome all topics that involves structural engineering and earthquake engineering.

## ACKNOWLEDGEMENTS

The University of Michigan EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the virtual visit of Troy Morgan 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:

- Flier for event



**EERI FFVP Program**

*Presenting a lecture by*  
**Troy A. Morgan,  
Ph.D., P.E.**

**Principal Engineer  
Exponent Inc.**

## **Adventures in Seismic Risk Mitigation**

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**Thursday, February 11**  
4:00-5:00 p.m.  
Register [here](#)

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