

FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM



Visit to University of Massachusetts, Amherst: April 20, 2023

This report summarizes the visit of **David Cocke** from Structural Focus that took place at the University of Massachusetts, Amherst, from April 20, 2023, to April 21, 2023.

ITINERARY OR AGENDA

April 20, 2023

Time	Duration	Events
9:00 am	45-60 mins	Coffee with SEM faculty, dept. Head, Dean, and EERI chapter (Gunness Student Center, Marcus Hall)
10:00 am	60 - 75 mins	UMass Seismic Design Competition Team and undergraduate careers in the industry (Gunness Student Center, Marcus Hall)
11:30 am	75 mins	FFVP Guest Talk with David Cocke "A Structural Engineer's Role in Preserving Historic Buildings"
1:00 pm	60 mins	Student research presentations and graduate careers in the industry (Higgins Room, Marston Hall)
2:15 pm	45 mins	Lunch with EERI staff
3:30 pm	60 mins	Faculty meetings - Professor Brena and Professor Peterman
7:00 pm	(--)	Dinner with students, faculty advisor, and SEM Faculty (Hadley Room, UMass Hotel)

April 21, 2023

Time	Duration	Events
8:30 am	45-60 mins	Breakfast with EERI Chapter
9:30 am	120 mins	Campus and structural labs tours

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- Divyansh R. Kapoor, President, dkapoor@umass.edu
- Thomas Vitalis, Vice President, tvitalis@umass.edu
- Sheila Ariana, Treasurer/outreach chair, sariana@umass.edu
- Prof. Scott A. Civjan, Faculty Advisor, civjan@umass.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Mr. Cocke's FFVP lecture was attended by 50+ undergraduate students, SEM graduate students, and faculty members. The lecture started with an introduction to EERI, EERI's mission, and various reasons why students and soon-to-be graduates should get and stay involved during and after school. This was followed by Mr. Cocke's FFVP lecture, which took a detailed look at the role of structural engineers in the preservation of historic buildings. The lecture was rich in information and was well received by the attendees, with lots of discussion during the lecture and the Q&A session. Below is a picture of Mr. Cocke presenting his lecture in the Guinness Student Center presentation room -



Lecture Topic

"A Structural Engineer's Role in Preserving Historic Buildings"

From the beginning of David's college experience, he was interested in older buildings. When choosing a field to study, he focused on structures and after his career started, he was able to participate in the renovations and restoration of historic buildings. From that day forward, David's nearly one half of his portfolio has consisted of the evaluation and renovations of existing buildings, including dozens of national historic landmarks. David will review the lessons he has learned about the unique challenges of structural engineering on historic buildings, as well as describe some of his own career path and provide some tips for a structural engineering student to follow leading to a successful career.

Professional Bio

David Cocke, S.E. has been practicing Structural Engineering since 1981 when he followed his fiancé from Virginia to the San Francisco Bay Area. He relocated from Degenkolb's San Francisco office to open their Los Angeles office in 1995 after the Northridge EQ and his first client was Warner Bros. assisting them with their earthquake repairs and retrofits. David left Degenkolb in 2001 to establish Structural Focus. He is a registered Structural Engineer in California and several other states, with expertise in seismic evaluation, historic preservation, retrofits and new design. Some of his most notable projects include the Hotel del Coronado, Glendale Masonic Temple, Wilshire Boulevard Temple, Red Bull North American Headquarters, Walls Annenberg Center for Performing Arts, Netflix Egyptian Theater, Culver City's new Amazon Studios, the new Sunset Glen Oaks Studios, and numerous projects for all of the major Southern California film studios.

David has been very involved in numerous professional associations throughout his career. He is the immediate Past President of the Earthquake Engineering Research Institute, and has been president of the national Structural Engineers Institute of ASCE, as well as the U.S.C. Architectural Guild. He has served on the board of directors of the Structural Engineers Association of California, of both the Southern and the Northern California Structural Engineers Associations, the California Preservation Foundation, Pasadena Heritage and the Los Angeles Conservancy. Since 2007 David has served as the SEAOC appointed Alternate Structural Engineer Member on the California Historical Building Safety Board and he is currently on the NIST federal Advisory Committee on Earthquake Hazards Reduction.

SUPPLEMENTAL ACTIVITIES

Department meet and greet breakfast

We started the day with coffee and a light breakfast with Mr. Cocke, our faculty members, department heads, the Dean, graduate students, and university staff. Mr. Cocke interacted with the attendees in an informal setting where he discussed his career and took general questions.

UMass Seismic Design Competition Team Meeting

After breakfast, Mr. Cocke met with members of the undergraduate seismic design team, who gave Mr. Cocke a brief presentation on their entry in this year's Seismic Design Challenge. The students discussed their design philosophy and got feedback from Mr. Cocke. This was followed by a discussion on career paths suited to undergraduate students in the industry.

Student Research Presentations and Structural Labs Tour

Mr. Cocke met with structural engineering and mechanics graduate students in an informal setting where students presented and discussed their works and findings with Mr. Cocke. This was followed up on the next day with a lab tour where additional students shared their experimental work with Mr. Cocke.

RESULTS, FEEDBACK, AND LESSONS LEARNED

The program was well received by students and faculty members, with large turnouts at each of the events. Based on the lessons learned from previous experiences, we planned and promoted student-focused events that provided both graduate and undergraduate students an opportunity to meet and interact with Mr. Cocke. Additionally, switching to a two-day event allowed us to host more activities without the schedule getting too packed.

In the future, we would like to build up on this trend and continue hosting events that both our students and visiting professionals enjoy. Although we had some participation from students from geotechnical engineering, the number of non-structural students was small. For our next event, we would also like to involve graduate students and faculty from our geotechnical and geology departments to diversify the crowd in attendance.

ACKNOWLEDGMENTS

The UMass Amherst EERI Student Chapter is grateful to Mr. David Cocke for joining us in Amherst as our Friedman Family Visiting Professional. It was great to meet him and learn more about his work as well as the role structural engineers play in preserving historic buildings. The Chapter also gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Mr. David Cocke through their Friedman Family Visiting Professional Program endowment.

The chapter also gratefully acknowledges the support of the UMass Amherst Dept. of Civil and Environmental Engineering for their help with organizing and funding the event. Special thanks also go out to our faculty members for their involvement and for promoting the events in their classes, which helped us reach a large number of undergraduate and graduate students and improve the overall quality of our program.

LIST OF ATTACHMENTS

Included at the end of this report are two attachments to supplement the information included above. A list of the attachments is included below:

- Photo from dinner
- Shared fliers for public events

Dinner Photo -



Fliers on the next page



2023 Friedman Family Visiting Professionals Program

David Cocke, SE, F.SEI, F.ASCE, F.SEAOC

Chairman, Structural Focus, CA, USA

Time	Events	Location
10:00 AM 11:15 AM	UMass Seismic Design Competition Team and undergraduate careers in the industry	Gunness Student Center
11:30 AM 12:45 PM	FFVP Guest Talk with David Cocke "A Structural Engineer's Role in Preserving Historic Buildings"	
1:00 PM 2:00 PM	Student research presentations and graduate careers in the industry	Higgins Room

All are welcome and encouraged to attend all events. Please refer to the following slides for more details

David Cocke founded *Structural Focus* in 2001 after 20 years at a previous firm. He is a registered structural engineer in California, Arizona, Nevada, and several other states, with expertise including new structural design, seismic evaluation, historic preservation, and retrofit design. David has managed a variety of project types and sizes, including large and small historic landmark building strengthening and repairs, new laboratory buildings, repair and retrofit of commercial buildings, design of new studio production facilities, evaluations of large building inventories (industrial, high-tech and film studios), and numerous university and school renovations, additions and strengthening. During his career, David has served in many leadership roles and on numerous Boards of Directors of professional engineering organizations as well as preservation organizations. He is very active in the preservation of historic buildings and has made numerous presentations regarding the reuse of existing buildings as supporting sustainability principles. David is also co-founder and Managing Director of SAFEQ Institute, which serves as a resource for post-disaster inspection information and provides direct services to government entities and business owners. David is a recognized expert in building business resiliency and continuity related to disaster risks. He believes that pre-planning and partnerships with cities can greatly reduce business interruption after an earthquake or other disasters. That belief is the driving idea behind SAFEQ Institute. - <https://structuralfocus.com/>

**UMass SDC Team Presentation**

(Gunness Student Center at 10:00 am)

Join the UMass Amherst Seismic Design team that annually designs and builds a 6 feet balsa wood scale model of a skyscraper for the EERI Seismic Design Competition. This year the competition was held in San Francisco, California (April 11-14) and involved designing three skybridge-connected skyscrapers that can withstand seismic loading taken from actual earthquakes! We design and test our structure using SAP 2000 to simulate how the structure will behave in the competition on a shake table. Join us to learn more about the team and ways to get involved.

Undergraduates are encouraged to attend!

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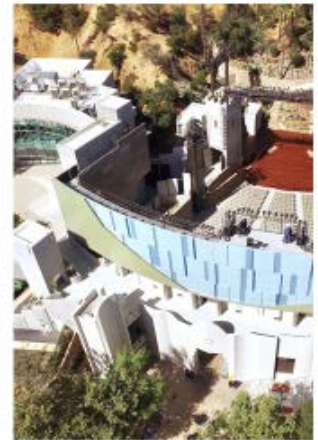
FFVP Guest Lecture: David Cocke (Hosted in CEE 605)

(Gunness Student Center at 11:30 am)

“A Structural Engineer’s Role in Preserving Historic Buildings”

Join the current CEE 605: Finite Element Analysis class and SEM graduate students for a guest lecture by David Cocke, this year’s Friedman Family Visiting Professional, to learn about seismic structural retrofit of historic buildings through case studies.

All are encouraged to attend!



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