

# FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM

## Visit to UCLA: Feb 27, 2019



This report summarizes the visit of **David Cocke, S.E.** (Founder and President of Structural Focus) that took place at UCLA on Feb 27, 2019.

### ITINERARY OR AGENDA

TIME:	ACTIVITY:
11:00 AM – 12:00 PM	Visiting Professional arrives and meets with Civil and Environmental Engineering Faculty
12:00 PM – 1:00 PM	CEE 200 Seminar – “Concrete Structures – Then and Now” by Visiting Professional
1:00 PM – 2:30 PM	Faculty takes Visiting Professional to Lunch
2:30 PM – 3:00 PM	Question and Answer Session with Undergrad Students
3:00 PM – 4:00 PM	Question and Answer Session with Graduate Students as a part of Dr. John Wallace's Response to Ground Motions Class

### STUDENT CHAPTER VISIT PLANNING COMMITTEE

**LEAD ORGANIZER(S):** Michael Weyant, Vice President, [mweyant1@ucla.edu](mailto:mweyant1@ucla.edu)

- Bryan Hong                      President, [bryanyh@ucla.edu](mailto:bryanyh@ucla.edu)
- Omar Issa                        External Affairs Officer, [oissa@ucla.edu](mailto:oissa@ucla.edu)
- Rodger Lee                      Secretary, [rodgerleee@gmail.com](mailto:rodgerleee@gmail.com)
- Honor Fisher                    Media Director, [hfisher303@gmail.com](mailto:hfisher303@gmail.com)

### VISITING PROFESSIONAL LECTURE OVERVIEW

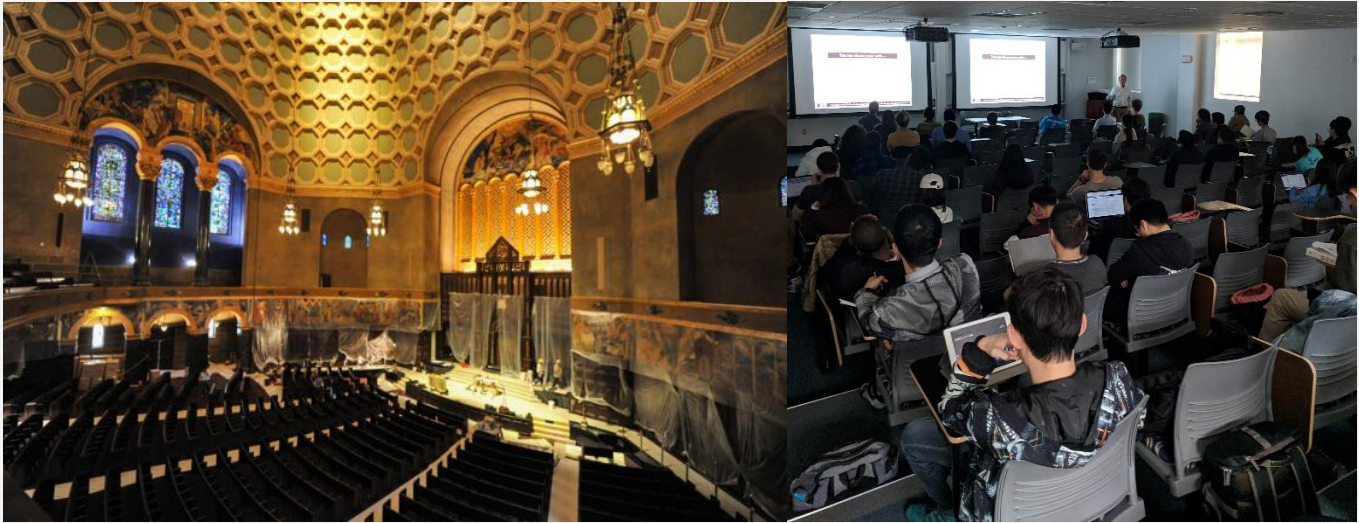
In this lecture, David Cocke, S.E. reflected on his career path, stressed the importance of community resilience in Earthquake Engineering, related what we as students should look forward to in our careers, and discussed the future of Structural Engineering. Mr. Cocke started off by sharing that his passion for Structural Engineering stems from, not just his interest in analysis and design, but also from the desire to strive towards creating a final product that is sustainable, creates a safe environment (especially in the case of disasters), and ultimately serves the needs of the client. In particular, these factors fuel his passion for preservation of historic structures. Some of the projects that Mr. Cocke worked on that he shared with us include the Wilshire Boulevard Temple, YouTube Space LA, and the Culver Studios Innovation Project. After showing us the final product from these projects, Mr. Cocke took a step back to explain to us the considerations that go into determining whether one should preserve, repurpose, or reconstruct a structure.

This discussion on rehabilitation then led Mr. Cocke to specifically focus on how engineers have approached designing and preserving concrete and reinforced concrete structures over the years, while specifically focusing on some lessons learned during significant seismic events such as the 1970 San Fernando Earthquake. Many conferences and meetings with practicing Structural Engineers and Academics have occurred over the years that resulted in modifications to the Design Code or Ordinances by Municipal Governments. In particular, the 2014 "Resilience by Design" and 2015 LA Ordinances resulted in mandatory retrofits of timber and non-ductile concrete structures, adoption of a "Back to Business" Program, and a Voluntary Building Rating System.

The mention of a Building Rating System led Mr. Cocke to enter a discussion about the importance of Urban Resilience and the value of having Building Occupancy Resumption Programs to provide building owners the option to hire engineers to "pre-certify private post-earthquake inspection by qualified engineers based upon an approved written inspection plan." These "Back to Business" (B2B) Programs serve to dramatically speed up the timeline over which structures can become operational again after a significant event.

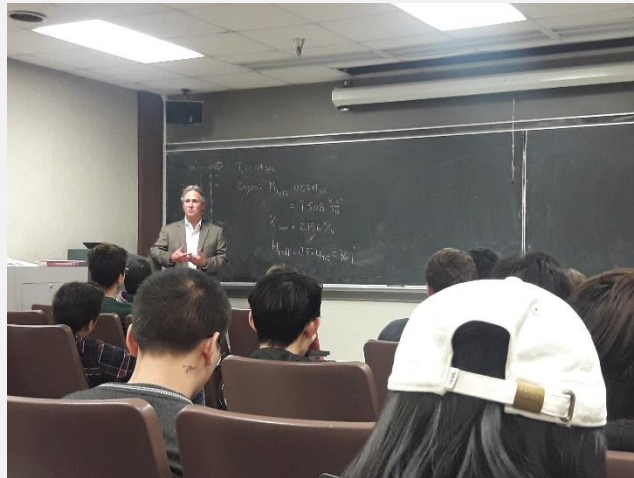
Lastly, Mr. Cocke summarized what he views to be the necessary characteristics to be a great structural engineering consultant. Among these qualities are not only the need to be a skilled analyst, express creativity, and ensure team coordination, but also the ability to communicate well, understand people, and have business acumen. Above all, he mentioned that finding what you are passionate about in structural engineering (or any field for that matter) is the key to producing the best quality work that one can produce.

Overall, the attendees, who consisted of about 60 individuals including undergraduate students, graduate students, and professors were inspired by David Cocke's work and his ability to convey his passion about his approach to structural engineering.



**Figure 1:** Wilshire Boulevard Temple

**Figure 2:** David Cocke giving his lecture



**Figure 3:** Graduate Student Q&A Session



**Figure 4:** Hotel Cecil

## Professional Bio



**David Cocke, S.E.** is the founder and President of Structural Focus in Gardena, CA. He has been practicing Structural Engineering since 1981 and is a registered Structural Engineer in California and several other states, with expertise in seismic evaluation, historic preservation, retrofits and new design. Some notable projects include the Red Bull Headquarters, Wallis Annenberg Center for Performing Arts in Beverly Hills, the new Amazon campus at The Culver Studios, and restoration of the Wilshire Boulevard Temple.

David joined EERI in 1992 and is a Charter Member of the Southern California Chapter. He is an active member of the EERI Initiatives Development Committee and currently participates in the

Friedman Family Visiting Professionals Program. David has served on the Board of Directors of numerous other organizations including the California Preservation Foundation, Pasadena Heritage, USC Architectural Guild, SEAONC, SEAOSC, and SEAOC. He recently finished his term as Vice President of EERI. In 2014, David was named to Los Angeles Mayor Eric Garcetti's Mayoral Seismic Safety Task Force to perform a year-long study of seismic risk in Los Angeles, resulting in the Mayor's *Resilience by Design* report. David has also been leading the effort to bring *Back to Business (B2B)*, a building occupancy resumption program, to Southern California. Currently, David is on the Board of Directors of Los Angeles Conservancy, is the current President of the Structural Engineers Institute of ASCE.

## SUPPLEMENTAL ACTIVITIES

### Question and Answer Sessions with Undergraduate and Graduate Students

After David Cocke presented his lecture and had lunch with faculty, we proceeded to host two Question and Answer sessions: one with undergraduate students in the Civil and Environmental Engineering conference room, and the other in Professor John Wallace's Response to Ground Motions lecture for graduate students. Students focused on asking both technical questions, such as the prevalence of performing inelastic analyses in practice, business questions, such as what compelled Mr. Cocke to find a niche such as historic preservation, and career advice questions, such as what additional skills should we as students focus on improving once we enter the industry. The audience was quite engaged, and the students came away feeling very satisfied with their interaction with David Cocke.

## RESULTS, FEEDBACK AND LESSONS LEARNED

- Lecture

As in previous years, the lecture was co-programmed with the Civil and Environmental Engineering Graduate Student weekly seminar, which provides an excellent platform to gather graduate students and professors to the same venue. More so than in previous years, we heavily encouraged undergraduate students to attend the lecture and, as a result of our efforts, about 10 undergraduate students attended. Overall, we believe David Cocke was very well received by everyone and that this arrangement to co-program should continue in the future to ensure large participation and a good venue for the lecture.

- Undergraduate Question and Answer Session

Despite significant outreach to undergraduate students, the Undergraduate Q&A Session had admittedly poor attendance. This was likely caused by the fact that this session conflicted with a lot of undergraduate lectures. For both EERI and the other Civil Engineering clubs on campus, we tend to have much better attendance at info sessions when they are scheduled at the evening to ensure conflicts are minimized. If we plan on doing this type of event during the visit in the future, we will try to ensure adequate attendance by either coordinating with a professor for an undergraduate class to have our visitor answer questions during part of a lecture, or by scheduling the event in the evening.

- Graduate Question and Answer Session

Unlike the Undergraduate Q&A Session, we had excellent attendance since we coordinated this event to occur during Professor John Wallace's lecture. The students were very engaged and were able to ask David Cocke both more technical questions, as well as career advice questions. It was clear that the students got a lot out of our speaker's advice, and they were quite happy that they were able to spend more time with him when they did not really have the opportunity to after finishing his lecture earlier in the day.

## ACKNOWLEDGEMENTS

The University of California, Los Angeles EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of David Cocke 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:

- Item 1, fliers for event

**C&EE 200 Section 1 Seminar**  
**EERI at UCLA Distinguished Speaker Series**  
*Structural, Geotechnical and Civil Engineering Materials*

**Concrete Structures – Then and Now**

**David W. Cocke, SE, F.SEI, F.ASCE**  
**President of Structural Focus**

Engineering students learn a lot about analyzing structures, designing systems and connections and other tools to be successful as a practicing engineer in the real world. In real life, engineers have a tremendous impact on our society. The profession plays a major role affecting important issues such as sustainability, public safety, the aesthetics of our built environment, community resilience and recovery from disasters, economic growth, preservation of historic structures and our client's needs for a viable facility.

In this presentation, David Cocke, SE will explain some of the Structural Focus philosophy and strategies, touch generally on a few recent projects. Structural Focus has built a strong reputation not only in design of new ground-up facilities, but in the evaluation and seismic retrofits of complicated older structures. With the recent wave of mandatory seismic retrofit ordinances, the number of future retrofits of older concrete buildings is growing significantly. Pre-1980 concrete structures are particularly susceptible to severe earthquake damage and David will show some EQ damage photos, provide some concrete history and latest retrofit practices. David will also present a more detailed case study of the complicated seismic retrofit of a large historic concrete building in DTLA. David will also introduce you to their latest work in promoting community resiliency involving postdisaster inspection programs. During this discussion, David hopes to show how a wide diversity of projects can provide engineers with the opportunities to contribute to a better future and how their passion can lead to their success.

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**Where:** A18 Haines Hall

**When:** 12:00 – 12:50 PM, Wednesday, February 27, 2019



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seismic risk in Los Angeles, resulting in the Mayor's *Resilience by Design* report. David has also been leading the effort to bring *Back to Business (B2B)*, a building occupancy resumption program, to Southern California. Currently, David is on the Board of Directors of Los Angeles Conservancy, is the current President of the Structural Engineers Institute of ASCE.

