

# FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM



## Visit to University of Illinois at Urbana-Champaign: April 15, 2015

This report summarizes the visit of **David Cocke** from Structural Focus that took place at the University of Illinois on April 17, 2015.

### ITINERARY OR AGENDA

TIME:	ACTIVITY:
11:00 AM – 12:00 PM	Lunch
12:00 PM – 1:30 PM	Presentation by David Cocke and Q&A sessions with students
1:30 PM – 2:30 AM	Tour of Newmark Civil Engineering Building including the large-scale structural testing facility, dynamics lab, and hydraulics lab
2:30PM – 5:00 PM	Break
5:00 PM – 6:00 PM	Tour of campus
6:00 PM – 8:00 PM	Dinner with student chapter at local restaurant

### STUDENT CHAPTER VISIT PLANNING COMMITTEE

**LEAD ORGANIZER (S):** Kexin Carol Chen, President, chen396@illinois.edu

- Mitch Knapp, Vice President, mrknapp2@illinois.edu
- Fangyu Wu, Secretary, fangyuwu@outlook.com
- Hong Kim, Graduate Advisor, hongrae722@gmail.com

### VISITING PROFESSIONAL LECTURE OVERVIEW

Around 40-50 students attended the midday lecture where Mr. Cocke shared his insight of what a structural engineer does in professional practice. He illustrated this through anecdotes on several interesting projects that his firm has been awarded by clients like Red Bull and Agensys. The lecture combined his technical and personal experiences in such a way that engaged attendees and left them excited. In the Q&A session, audience members asked several questions. These included project-specific technical questions, questions regarding the development of business relationships and partnerships, and questions about Mr. Cocke's motivation and decision to start his own business.

#### Lecture Abstract

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, preservation of historic structures and our client's needs for a viable facility. In the presentation, Mr. Cocke explained some of his firm's philosophy and strategies, as well as reviewed several case studies including Red Bull, Annenberg Center for Performing Arts in Beverly Hills, 3Labs, Agensys and the historic Wilshire Boulevard Temple restoration. Mr. Cocke

also introduced the students to their latest work with community resiliency involving post-disaster inspection programs. Finally, Mr. Cocke showed the students how a wide diversity of projects could provide engineers with the opportunities to contribute to a better future.

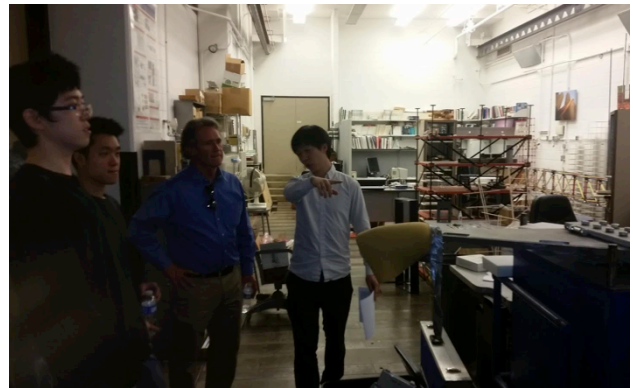
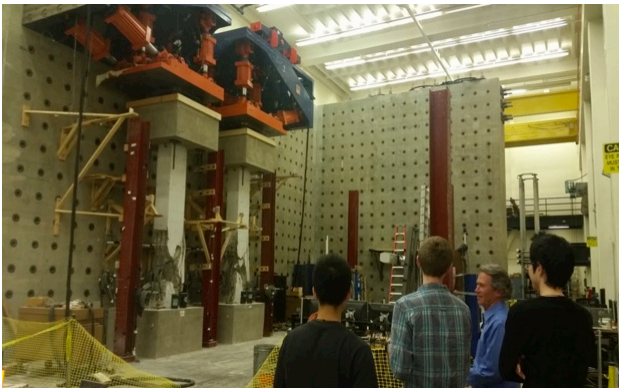
## Professional Bio

Structural Focus is a smallish Structural Engineering consulting firm located in the metropolitan area of Los Angeles. Mr. Cocke founded S. F. in 2001 after 20 years at Degenkolb with the goal to work on the most interesting and meaningful projects in Southern California. With 18 million people within an hour's driving distance, he theorized that his firm could focus on finding the most challenging and interesting architectural projects out there, say the top 5%, and be successful. The firm's mission is "to do projects we can be proud of, and be proud of how we do them." Now, 14 years later, the Structural Focus portfolio includes film studios, performing arts venues, historic landmark buildings, university and labs, and other projects like Red Bull Headquarters, Google and YouTube.

## SUPPLEMENTAL ACTIVITIES

### Lab Tour

Four officers guided Mr. Cocke on a tour of Newmark Civil Engineering Building's dynamics lab, large-scale structural testing facility, and nearby hydrology lab. Hyungchul Yoon, a PhD student, conducted the tour of the dynamics lab. He described to Mr. Cocke the variety of testing equipment, shake tables, and student projects located inside the dynamics lab. Afterwards, the vice president of the chapter, Mitch Knapp, conducted a tour of the large-scale structural testing facility, where he discussed the ongoing hybrid simulation of a reinforced concrete structure. Lastly, the group received special permission to visit the Ven Te Chow Hydrosystems Laboratory. It was very interesting for Mr. Cocke to see the large wavemaker and the oscillatory tunnel.



## Campus Tour



Seven officers accompanied Mr. Cocke on a tour of the university's campus. The tour started in the north, on the engineering campus, and extended south to the business campus. It first included a visit to the Electrical and Computer Engineering Building. This facility opened in Fall 2014 and is a LEED Platinum Certified building. Afterwards, the group walked to the main quad and observed a variety of student activities. From there, the officers and Mr. Cocke proceeded to the undergraduate library. Interestingly, it is located underground to prevent the library from blocking light to

the prestigious Morrow Plots, a federally protected plot of land used for agricultural research. Lastly, the group visited the Business Instructional Facility, another LEED Platinum Certified building on campus. Mr. Cocke was particularly struck by the architectural appeal of the suspended stairways and noted that he may consider a similar configuration for one of his projects.

## Dinner

Mr. Cocke had dinner with seven officers including two graduate advisors at a local restaurant, Destihl. The restaurant is classy yet casual and good for a nice group gathering. Over dinner, the officers talked about interesting stories regarding the university and the Civil Engineering department. Mr. Cocke also talked about his experience in college and his first job experience, where he had to adjust to a different lifestyle. Everyone had a nice evening, and the students gained important insight regarding what they may face after graduation.



## RESULTS, FEEDBACK AND LESSONS LEARNED

- It was a challenge to schedule Mr. Cocke's visit because we typically coordinate with the EERI student chapter at Purdue University. Mr. Cocke understandably has a tight schedule as well. Furthermore, our chapter had many large activities to coordinate in the same semester. A lot of communication, therefore, took place to determine a date that worked for everyone.
- Another challenge included choosing activities beyond the lecture to round out the afternoon and evening. We planned to invite faculty members to meet Mr. Cocke during a scheduled break or for dinner; however, many indicated that they were busy that day. In the future, we should consult faculty members to determine the time of the visit and to extend to them an early invitation to lunch or dinner.

## ACKNOWLEDGEMENTS

The University of Illinois EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of David Cocke to University of Illinois 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, i.e. flier for event
- Item 2, professional slide show or other handouts
- Item 3, other items





# STRUCTURAL ENGINEERING: MORE THAN DESIGNING A BUILDING

04/17, 12PM, YEH 3310, **FREE LUNCH**

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**DAVID COCKE** founded Structural Focus in 2001 after 15 years in San Francisco with Degenkolb Engineers, and another five years founding and managing the Degenkolb Los Angeles office. At Structural Focus, David has worked on the design of new buildings, and the evaluation and retrofits of hundreds of buildings including the Red Bull Headquarters and Google LA Headquarters. In his presentation, David will explain some of their philosophy and strategies, as well as review several case studies including Red Bull, Annenberg Center for Performing Arts in Beverly Hills, 3Labs, Agensys and the historic Wilshire Boulevard Temple restoration. David will also introduce you to their latest work with community resiliency involving post-disaster inspection programs. Finally, David hopes to show you how a wide diversity of projects can provide engineers with the opportunities to contribute to a better future.

*Photo credit: Los Angeles Times*

