

FRIEDMAN FAMILY VISITING PROFESSIONALS PROGRAM

Visit to Cal Poly SLO: May 2nd, 2019



This report summarizes the visit of **David Cocke** from Structural Focus that took place at California Polytechnic State University, San Luis Obispo on May 2nd, 2019.

ITINERARY OR AGENDA

TIME:	ACTIVITY:
10:50 AM – 11:00 AM	Student Chapter President meets & welcomes Visiting Professional to campus
11:00 AM – 12:00 PM	SEAO Student Chapter Meeting
12:15 PM – 1:30 PM	Lunch with SEAO Student Chapter Board members
1:30 PM – 2:00 PM	High Bay Laboratory Visit
2:00 PM – 3:00 PM	Grad Mini-Symposium
3:00 PM – 3:30 PM	EERI SDC Team Visit
3:30 PM – 4:00 PM	One-on-one meetings with select faculty members

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZERS:

- Jenna Williams, EERI Student Chapter President, jwill107@calpoly.edu
- Sophia Looney, SEAO Student Chapter President, slooney@calpoly.edu
- Anahid Behrouzi, Faculty Advisor, behrouzi@calpoly.edu

VISITING PROFESSIONAL LECTURE OVERVIEW

Lecture Abstract – “Concrete Structures Then and Now”

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.

David Cocke, SE founded Structural Focus, a 22-person Structural Engineering consulting firm in 2001 after 20 years at another firm with a vision to work on the most interesting and meaningful projects in Southern California. In his presentation, David 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 post-disaster 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.

Professional Bio

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. 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 inspections information and providing direct services to government entities and business owners. David is a recognized expert in building business resiliency and continuity related to disaster risks.

SUPPLEMENTAL ACTIVITIES

SEAOE Student Chapter Meeting

David Cocke lectured at the weekly Cal Poly SEAOE Student Chapter Meeting. He presented on the history and progression of reinforced concrete use in California. 80 students were in attendance.



Lunch with SEAOE Student Chapter Board Members

Four students from the Cal Poly SEAOE Student Chapter attended a lunch on campus with the Visiting Professional. The students discussed the activities of their club and asked David for feedback on how to improve their events. In addition, David discussed his recent projects in industry and provided students with career advice.

High Bay Laboratory Visit

A graduate student team, Jerry Luong and Rory De Sevilla, presented their graduate thesis project to David Cocke in the High Bay Laboratory. Luong and De Sevilla are conducting research on the performance of non-ductile concrete shear walls by building and testing half-scale walls. The Visiting Professional provided feedback to students and shared his insight on the project.

Grad Mini-Symposium

David Cocke attended an informal meeting with graduate students where they presented, shared and discussed research projects to gain insight and feedback from the Visiting Professional. In addition, graduate students who will be entering industry received career guidance. 10 students were in attendance.

EERI SDC Team Visit

An informal meeting was held for David Cocke with EERI Seismic Design Competition team for project review, presentation, and discussion. Students shared their experiences from the recent Seismic Design Competition in Vancouver, Canada.

RESULTS, FEEDBACK AND LESSONS LEARNED

Results/Feedback:

- **Students benefit from having a visiting professional who was actively engaged in industry:** David Cocke was able to educate students on current code changes and processes, and this was something that the students had not seen presented by anyone else before.
- **Students gained their first exposure to Back to Business (B2B) model:** B2B refers to when an engineer works closely with the municipality to expedite the building inspection and repair process to get businesses back online after an earthquake event with limited downtime. David was able to effectively connect the concept of structural damage (which students are already familiar) to social and economic cost, and evolving policies to address these impacts.
- **Graduate students appreciate having guidance:** Although the graduate students enjoyed presenting their research, they were even more appreciative to have an industry member who could provide them insight on entering the industry.

Lessons Learned:

- **Professionals need downtime during their visit:** Our visit was particularly full of activities the entire day, and did not allot time for David to rest. Future visits would provide the Visiting Professional with time to relax or have a coffee break.
- **Faculty Visits should be scheduled earlier:** It would have been more desirable for more faculty to be able to visit with David during the day, but faculty were contacted too late to address this.

ACKNOWLEDGEMENTS

The Cal Poly SLO 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. They would also like to thank the Cal Poly SLO SEAOC Student Chapter for funding the Visiting Professional's lunch.

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, flier for SEAOC Student Chapter Meeting

ITEM 1



THIS WEEK IN SEAOC

**DAVID
COCKE**

STRUCTURAL FOCUS

THURSDAY MAY 2ND
11AM
KTGY
CHIPOTLE