

# FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

## Visit to University of North Carolina State University: April 12, 2017



This report summarizes the visit of **Mr. David Cocke** from Structural Focus that took place at the North Carolina State University on April 12, 2017

### ITINERARY OR AGENDA

TIME:	ACTIVITY:
9:00 AM – 9:45 AM	Student Chapter President and Vice President meet and welcome the Visiting Professional and give a tour to the Constructed Facilities Laboratory.
9:45 AM – 10:45 AM	Student chapter officers present current research topics to Mr. Cocke
11:00 AM – 12:00 PM	Tour to Centennial Campus and Hunt Library
12:00 PM – 1:00 PM	Lunch at the NCSU State Club with EERI officers and Dr. Mervyn Kowalsky (Chapter Faculty Advisor) and Dr. James Nau
1:15 PM – 2:30 PM	Mr. Cocke met with other students in the civil engineering department
3:00 – 4:00 PM	Mr. Cocke' presentation

### STUDENT CHAPTER VISIT PLANNING COMMITTEE

**LEAD ORGANIZER(S):** {enter name of student members who lead the visit, chapter role, email}

- Christopher Price, President, cwprice@ncsu.edu
- Zachary Krish, Vice-President, zfkris@ncsu.edu
- Emrah Tasdemir, Treasurer, etasdem@ncsu.edu
- Ana Gabriela Haro, Secretary, agharo@ncsu.edu
- Leo Barcley, Secretary, lbbarcle@ncsu.edu
- Diego Aguirre, Secretary, daaguirr@ncsu.edu

Also include names of any faculty, industry advisors or others who helped.

### VISITING PROFESSIONAL LECTURE OVERVIEW

Mr. Cocke began the presentation with an overview of EERI along with the programs that are available through the organization. He then moved on to discuss the trajectory of his career and how he has utilized various opportunities throughout in order to arrive at his success today. Several case studies of unique projects that he and his firm have worked on and the challenges that were faced were also discussed. An emphasis was put on the philosophies and strategies that were employed to address the problem and provide the most effective solution for everyone involved. There were several questions throughout the presentation from the various faculty, graduate students and undergraduates that were in attendance.

### 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. Structural Focus is a 20-person Structural Engineering consulting firm located in the metropolitan area of Los Angeles. David 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. In his presentation, David will explain some of the Structural Focus philosophy and strategies, as well as review several case studies including the Annenberg Center for Performing Arts in Beverly Hills, 3Labs, Agensys and the historic Masonic Temple and the Wilshire Boulevard Temple restoration projects. David will also introduce you to their latest work with community resiliency involving post-disaster inspection programs. During this discussion, David hopes to show you how a wide diversity of projects can provide engineers with the opportunities to contribute to a better future and how your passion can lead to your success.

### Professional Bio

David Cocke, S.E., F. SEI, F. ASCE, founded Structural Focus in Los Angeles in 2001 after 20 years at Degenkolb Engineers. He is a graduate of Va. Tech and is a registered structural engineer in a dozen states and has an expertise in seismic evaluation, historic preservation, retrofit design and new structural design. Some of David's more notable projects include the Annenberg Performing Arts Center in Beverly Hills, the Google Los Angeles headquarters, Red Bull North America headquarters, the Wilshire Boulevard Temple restoration in Los Angeles, multiple buildings at Dreamworks, Warner Bros. and Sony Pictures, and many others. David served on Los Angeles Mayor Garcetti's Special Task Force in 2015 for the writing of the Resiliency by Design document.

David is the current Vice-President of EERI and serves on the Board of Governors of the Structural Engineers Institute and on the Board of the Los Angeles Conservancy. He has served on numerous Boards for the Structural Engineers Association in California, and on boards of several other preservation organizations. In addition, David is the SEAOC appointed Structural Engineer Alternate on the California Historical Building Safety Board, serving in that position since 2007.

### SUPPLEMENTAL ACTIVITIES

#### Tour to the Constructed Facilities Laboratory

The objective of this tour was to show the structural laboratory at NC State University to the visitor as well as to show the different ongoing research projects. The tour was guided by the lab manager, Dr. Greg Lucier. Each of the ongoing projects were presented by the students conducting the research or in their absence Dr. Lucier. Mr. David Cocke was able to interact and engage with the researchers.

#### Tour to Centennial Campus and Hunt Library

The objective of this tour was to show part of the NC State campus. Due to time constraints the tour was kept brief. The EERI President and Vice-President gave the tour and showed the different facilities in Centennial campus highlighting The James B. Hunt Jr. Library.

## Earthquake engineering Officers research presentations

The goal of this activity was to formally present the different ongoing research projects at NC State related with earthquake engineering. A total of 6 presentations were given by the EERI officers to the visitor. He provided his thoughts and perspective to each of the presentations through an interactive dialoged with each of the presenters.

## Organized Meetings with Civil Department Students

The goal of this activity was allow students to interact with Mr. David Cocke. The meetings were casually set and allowed students close to graduation a chance to get advice and ask questions to a practicing professional. Some photos of this activity can be seen below.



## RESULTS, FEEDBACK AND LESSONS LEARNED

David Cocke's visit was enjoyed and very much appreciated by everyone involved. His interactions with each of the students and faculty were excellent and provided a unique perspective on the industry of structural engineering. His lecture focused primarily on the issues that lie beyond the technical aspects of structural design and allowed the students to get a broader understanding of what is involved in a project's success.

Our Student Chapter considers the following topics important for future visits:

- Displacement-based design
- Soil-structure interaction
- Probabilistic seismic hazard analysis

## ACKNOWLEDGEMENTS

The NC State University EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Mr. David Cocke through their Friedman Family Visiting Professional Program endowment.

## LIST OF ATTACHMENTS

Included at the end of this report is attached the flyer to supplement the information included above.



# LIFE AS A STRUCTURAL ENGINEER



David Cocke, S.E., F. SEI,  
F. ASCE

Wednesday, April 12, 2017  
3:00PM – 4:00PM, Mann Hall 323

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