

FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM

Visit to University of Toronto: April 3rd, 2024



This report summarizes the visit of **Mr. David Cocke** from Structural Focus that took place at the University of Toronto on April 3rd, 2024,

ITINERARY OR AGENDA

TIME:	ACTIVITY:
April 2nd, 2024	
6:00 PM - 8:00 PM	Dinner with the UT-EERI Team and UofT community members
April 3rd, 2024	
10:00 AM - 11:00 AM	Undergraduate Seismic Design Team presentation and consultation
11:00 AM - 11:30 AM	Tour of the University of Toronto Structural Laboratory
11:30 AM - 12:30 PM	Free period – Personal work-time
12:30 PM - 02:00 PM	Lunch with UT-EERI Team and UofT community members
02:00 PM - 03:30 PM	FFVP Lecture and Q&A – Lunch & Learn format
Formal End of Day	
6:00 PM - 8:00 PM	Dinner with the UT-EERI Team and UofT community members

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZER(S):

- Marawan Zaki, President, marawan.zaki@mail.utoronto.ca
- Henri Monette, Vice-President, henri.monette@mail.utoronto.ca
- Nick Seal, Director of Finance, nick.seal@utoronto.ca
- Antoine Pepin, Director of Undergraduate Relations, antoine.pepin@mail.utoronto.ca
- Josh Hamilton, Director of Events, josh.hamilton@mail.utoronto.ca
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- Nicolas Maamary, Chapter Member, nicolas.maamary@mail.utoronto.ca
- James Bannister, Chapter Member, jamesdavid.bannister@mail.utoronto.ca
- Bright Lin, , Chapter Member, bright.lin@mail.utoronto.ca
- Professor Constantin Christopoulos

VISITING PROFESSIONAL LECTURE OVERVIEW

Lecture Abstract

The title of Mr. Cocke's lecture was "A Structural Engineer's Role in Preserving Historic Buildings." Mr. Cocke first began by introducing the EERI and its mission to reduce worldwide seismic risks as well as a brief biography of himself and his distinguished career as a structural engineer. Afterwards, he shared insights from several projects which Structural Focus has been involved with, discussing challenges, approaches, and the importance of strengthening historic building designs while maintaining the elements which preserve their historical

significance. Finally, Mr. Cocke finished his lecture by sharing career lessons which he accumulated over his storied career to achieve a successful and most importantly fulfilling career to the audience of students, faculty, staff, and professionals.

The lecture was well attended by graduate and undergraduate students, faculty members and industry professionals. Professors Oya Mercan and Michael Seica attended the lecture. Industry professionals from Cast Connex, Kinetica Dynamics, RJC, and Mott Macdonald joined the talk both in person and virtually. The picture below was taken after the lecture.



Lecture Abstract:

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 he has been fortunate to participate in the renovations and restoration of numerous historic buildings. 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, discuss some case studies and include some stories of his own career path and 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 start 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, and several Preservation organizations in California. 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, the Board of Directors of the Applied Technology Council and on the University of California Seismic Advisory Board.

SUPPLEMENTAL ACTIVITIES

Dinner on April 2nd, 2024

Upon arriving in Toronto, the UT-EERI executive members took Mr. David Cocke to Baro, a Latin inspired restaurant serving modern takes on Columbian and Argentinian cuisine. The group had the opportunity to be introduced to one another and a great discussion on structural seismic engineering ensued.

Undergraduate Student Presentation

To start off the day, The University of Toronto Seismic Design Team (UTSD) presented to Mr. Cocke the work that they had conducted throughout the school year in preparation for the 2024 Seismic Design Competition. Mr. James Bannister and Mr. Bright Lin first started by discussing the details of the Seismic Design Competition and presented their design of this year's tower, as well as its response under a non-destructive ground motion. They also discussed the custom shake table which the team had built in order to test their tower for future events. Finally, a fruitful conversation was had where Mr. Cocke shared his insight on key considerations for the team to keep in mind as well as some general advice.

University of Toronto – Structural Testing Facility Tour

After the Undergraduate Seismic Design Team presentation, Mr. David Cocke was given a tour of the University of Toronto Civil and Mineral Engineering Structural Testing Facility. The tour was led by Messrs. Nick Seal and Marawan Zaki of the UT-EERI executive team. The tour focused on the available testing devices and ongoing research at the University of Toronto as well as the current undergoing laboratory upgrades. The picture below was taken after the tour.



Lunch with the University of Toronto Structural Engineering Community

Prior to his lecture, the UT-EERI chapter took Mr. David Cocke to the Gallery Grill restaurant located at Hart House on the University of Toronto campus. Due to inclement weather, we could not pursue a full campus tour as we wanted, however Mr. Nick Seal took the opportunity to point out several key buildings and details of the University of Toronto campus on our way there. The photo below was taken after dinner.



Dinner and Farewell

Mr. Cocke and the Chapter members had dinner together at a local restaurant before separating. Mr. Cocke shared advice with Chapter members on career development and extra-curriculum activities

RESULTS, FEEDBACK AND LESSONS LEARNED

Overall, the UT-EERI team was very pleased with the event and are extremely thankful to Mr. Cocke for sharing his time and expertise with our community. We have received a lot of great feedback from the undergraduate and graduate students that the talk was highly inspiring and that they were able to take multiple key lessons from it. Mr. Cocke's lecture provided a great opportunity for the University of Toronto structural engineering community to learn more about historical retrofitting a niche structural application that is seldom discussed but one with a very rich experience. Interest in the EERI chapter and earthquake engineering has noticeable increased.

While we were initially worried that attendance may be low due to the approach of the examination period, we were pleasantly surprised to see such a great turnout of students, faculty, staff, and industry partners in attendance. Even still we are planning further improvements to increase the attendance of undergraduate students.

Following Mr. Cocke's visit, the UT-EERI team also invited Mr. Jeffrey Salmon and Mr. Behrad Keshavarz, two Engineers in Training (EITs) at Ausenco who presented the seismic upgrade projects they have been involved with. Following the success of Mr. Cocke's talk we saw a notable increase in attendees to that event.

For future visits and guest lectures, EERI U of T is interested in topics on:

- Advanced structural systems such as controlled rocking systems and base isolation
- Performance based design
- Performance of nonstructural components and systems

ACKNOWLEDGEMENTS

The University of Toronto 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.

The Chapter is also grateful to the Department of Civil and Mineral Engineering, You're Next Career Network at U of T, Engineering Society at U of T, and the Engineering Alumni Association at the University of Toronto, for their financial support.

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 event



Date: April 3rd, 2:00-3:30 PM EST

In-person Session: Galbraith Rm. GB202

Zoom Session: ID: 850 6793 1567

Pass: 478966

A STRUCTURAL ENGINEER'S ROLE IN PRESERVING HISTORIC BUILDINGS

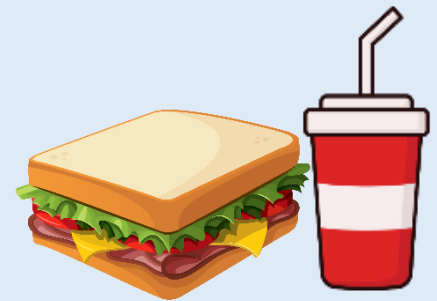
**Guest Lecture by Mr. David W. Cocke, SE,
F. SEI, F. ASCE, F. SEAOC
Founder & Principal of Structural Focus**



Lecture Abstract: 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 he has been fortunate to participate in the renovations and restoration of numerous historic buildings. 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, discuss some case studies and include some stories of his own career path and some tips for a structural engineering student to follow leading to a successful career.



Register here



**Food and Drinks will be
provided!!!**

***For more information, or to join the U of T EERI Student Chapter, email:
uoft.eeri@gmail.com***