

FRIEDMAN FAMILY VISITING PROFESIONALS PROGRAM



Visit to University of Victoria: March 10-11th, 2024.

This report summarizes the visit of **Maria Mohammed** from Structural Focus that took place at the University of Victoria (UVIC) on March 10-11th, 2024.

ITINERARY OR AGENDA

| TIME: | ACTIVITY: |
|-------------------------------|--|
| Sunday March 10 th | |
| 5:00 PM | Welcome dinner with Visiting Professional and Student Chapter members in downtown Victoria, walk around inner harbor and parliament building areas |
| Monday March 11 th | |
| 9:20-9:50 AM | Arrive to UVIC campus, walk to café for coffee & chat for Visiting Professional and Student Chapter President |
| 10:00 AM – 11:30 AM | Guest Lecture by Visiting Professional with Q&A discussions between undergraduate/graduate students |
| 11:30 AM – 1:00 PM | Tour of campus and informal discussions with club executives |
| 1:00 PM – 1:30 PM | Informal meeting with faculty advisor to the Student Chapter |
| 1:30 PM – 2:30 PM | Lunch with Visiting Professional and Student Chapter members on campus |
| 2:30 PM – 4:00 PM | Tour of Student Chapter lab space and informal discussions between Visiting Professional and Student Chapter executives |

STUDENT CHAPTER VISIT PLANNING COMMITTEE

LEAD ORGANIZERS:

- Mara Lambert-Wilson, President, uviceeri@gmail.com
- Bradey Ross, CO- Vice President, uviceeri@gmail.com
- Camryn Nadeau, CO- Vice President, uviceeri@gmail.com
- Lina Zhou, Assistant Professor, Team Faculty Advisor, linazhou@uvic.ca

VISITING PROFESSIONAL LECTURE OVERVIEW

Maria Mohammed's presentation engaged undergraduate and graduate students, and faculty members in her work as a structural engineer. Starting the presentation by providing an overview of EERI, its mission statement and the importance of earthquake engineering in seismically active areas. As well as outlining the importance and opportunity provided through the FFVP program creating connections between industry and students.

The lecture was held during the CIVE 458 Class: Timber Structures, lecture attendance was made up of students taking the course, graduate TA's, other members of the civil engineering department and student chapter members. At the end of the lecture there was an opportunity for questions and answers where students were engaged in talking about their encounters with heritage buildings and create conversations over the latest developments in engineering technologies.

Lecture Abstract

Retrofitting and renovation to ensure seismic resilience is essential to keeping heritage buildings in use and protecting the history of a city. Working with existing and heritage classed buildings brings its own set of challenges to balance keeping the historic aspects but incorporating modern solutions to reinforce the structural system. By going through project examples and taking the students through the process and unique requirements that come with each project, highlights the continual growth and innovation happening in the structural engineering industry.

Another aspect of structural engineering and further development in seismic engineering is continual work in post-earthquake building evaluations. The ability to visit where earthquakes have happened and learn from failures, update codes and ensure the best practices are in use is essential to designing safe buildings.

Finally, as a student, Maria greatly appreciated and was inspired by the limited opportunities she had to interact with practicing structural engineers; now as a practicing structural engineer, she participates in programs like the Friedman Family Visiting Professionals with hopes that her story of becoming a structural engineer, and her day-to-day experiences of working as a structural engineer, will inspire the future generation into entering a field that she's very passionate about. Sharing experience from career opportunities, to participation in the seismic design competition and the fulfilling role as a structural engineer.

Professional Bio

Maria Mohammed joined Structural Focus in 2013 after graduating from the University of Southern California with a B.S. in Civil Engineering in 2012 and an M.S. in Structural Engineering in 2013. Maria is a licensed Structural Engineer in California and has extensive experience working on the retrofit and renovation of historic structures and existing buildings, as well as the design of new buildings. She has worked on significant projects at Structural Focus, including Google LA HQ, the John Anson Ford Amphitheatre, CBRE Masonic Temple, and several projects on the Paramount Studios lot, among others.

Maria has participated in post-earthquake reconnaissance efforts after the 2019 M7.1 earthquake in Searles Valley, CA. Maria was also selected to participate in EERI's class of Housner Fellows in 2020. In addition to her involvement within EERI, Maria is also actively involved in the Structural Engineers Association of California and Structural Engineers Association of Southern California. She has served and continues to serve as the Chair of various committees in both associations and is currently serving on the Board of Directors for SEAOSC.

SUPPLEMENTAL ACTIVITIES

Dinner with Student Chapter Members

On the first day of the visit, eight undergraduate student chapter members met with Ms. Mohammed at a local restaurant in Victoria's downtown inner harbor. We were able to have informal conversations about professional development, work-life balance, our passions for engineering – what got each of us interested in the field, interesting projects and industry developments, and the differences in Canadian and American building codes. With this being Ms. Mohammed's first trip to Victoria we wanted to show her around the capitol area, including the harbor, the famous Empress hotel, Parliament buildings and to see the types of residential and commercial buildings that are typical to Victoria.



UVIC Campus Tour

UVIC is a unique campus with plenty of green space, older buildings and some exciting new construction happening. Such as new student resident buildings, engineering building expansion and lab space, and indigenous law building. With new mass timber being used in many of these projects we were able to walk and watch the construction sites to see the structural sections. Ms. Mohammed was able to identify various construction methodologies and how they differ from those used in the United States.

Review of UVIC SDC Lab and Towers

As an extension of the campus tour heading over to the student chapter lab space, we toured the space and were able to show Ms. Mohammed the history of the UVIC chapter and the tower designs. With her previous participation in the competition, we had an insightful conversation on how methods for tower construction have changed over the years.

RESULTS, FEEDBACK AND LESSONS LEARNED

Brief description of challenges during the process, general reception of the program and Visiting Professional. Also, a description of other topics or disciplines the Student Chapter would like to cover in future visits, and related goals.

The process for organizing and conducting Maria Mohammed's went well. UVIC student chapter was extremely grateful to have this opportunity to participate in FFVP and interact with an industry professional. Ms. Mohammed was eager to share her experience and listen and encourage our aspirations leading to an overall successful visit.

In future visits, our student chapter would like to have professionals from the following topics:

- Disaster management
- Mass timber and composite material structures
- Structural modeling of damper devices

ACKNOWLEDGEMENTS

The University of Victoria EERI Student Chapter gratefully acknowledges the support of the Friedman Family for sponsoring the travel of Maria Mohammed through their Friedman Family Visiting Professional Program endowment.

We would like to extend a huge thank you to Maria Mohammed for visiting our university offering her time, insightful presentation, expertise and encouragement to us students making the transition to young professionals. Her structural engineering knowledge and passion for the industry made this visit a memorable experience.