

Ciprian, Nathaly

The Structural Engineering Association of Ohio (SEAO) has been a source of inspiration for me. I spent the first six years of my career as a Facilities engineer at one of the largest manufacturing companies in the United States. Though I had reviewed countless engineering design plans and managed their construction, I longed to understand the calculations behind the plans. Last year, I was fortunate to be hired by a start-up company with a manager willing to impart his knowledge of structural engineering. My new role included joining local architecture, engineering, and construction (AEC) organizations to expand our knowledge base and market our services. In search of applicable organizations, I happened upon the annual state conference of the Structural Engineering Association of Ohio.

The conference was filled with insightful topics ranging from stability implications of mining to design of building facades. There were in-depth presentations explaining the application of changes to wind and snow design code and how policy changes in government can affect our practice. One presenter stood out because of her extensive knowledge, ability to teach complex topics, positive energy, and confidence. I listened intently, soaking in the lecture, and aspiring to one day reach her level of expertise. She was kind enough to share advice after the presentation and even added me to her LinkedIn network.

In doing so, she exposed me to the amazing achievements of other structural engineers such as those who assessed the destruction of earthquakes in Syria and Turkey and those striving for carbon neutrality in building design. Again, my passion for structural engineering was renewed. I was reminded of my long-term career goal of positively impacting the world we live in and I was seeing how I could do that within my career path. All of these experiences led me to seek opportunities to stay involved in SEAO. Unfortunately, I'm at a place in life where it is difficult for me to participate as much as I would like, but I am making time whenever I can. So far, I have provided a handful of suggestions for the Young Members group and helped coordinate a continuing education presentation. I attend the monthly continuing education opportunities and plan to attend the conference again this year.

I would encourage anyone interested in structural engineering to become involved with their local SEA, especially those who are early in their career and are potentially more available. Students may be attracted to the organization if it provides exposure to different sectors of structural engineering through presentations, job site tours, or mentorship. One mentorship program I participated in provided monthly topics for the student/mentor pairs to discuss during their time together. Topics included resume writing, workplace etiquette, managing imposter syndrome, crucial conversations, and more. It was geared towards building the students' confidence and resources in preparation for their first year in the workforce.

Students may also be interested in structural engineering competitions that would put their studies into practice. Examples include popsicle stick bridges loaded with weights, straw buildings tested in a wind lab, speed competition for designing and installing welds for different conditions, or speed competition for obtaining geotechnical boring samples and

performing laboratory testing. SEAs could provide learning opportunities for students seeking to pass the Fundamentals of Engineering exam or those seeking to learn relevant modeling software. Finally, students would participate in structural engineering career fairs for internships and post-graduation jobs.

Continuing involvement after graduation is imperative to building a network of professional engineers. I've come to realize that there are thousands of pages of code we must be familiar with and hundreds of structural conditions we might encounter throughout our careers. It would be difficult for each of us to become experts on every topic. However, if we know people who are experts, we can engage in dialogue to ensure successful project completion. Similarly, SEAs provide excellent continuing education opportunities not only through presentations, but also through Code Committee involvement. Most recent graduates probably don't know how codes are generated and that there are opportunities available to sit in on code development meetings. These experiences would be excellent preparation for the PE and SE exams.

When graduates relocate for their first job out of college, SEAs could provide avenues to make friends and explore their new surroundings. For instance, the organization may host monthly happy hour socials at a different local brewery or a hiking trip to a local trail. They could organize scavengers for iconic structural buildings in the area, book clubs with an emphasis on structural topics, or volunteer opportunities like Habitat for Humanity. For professionals with families, they may benefit from an annual inclusive event such as a picnic or baseball game.

Furthermore, I think it's important to get employer buy-in to allow participation in SEA on company time. Continuing education opportunities would ensure licensing renewal, expand the company's knowledge base, and expose cutting edge innovations. Career fairs are a great way to get new talent both short term and long term. Local building tours hosted in partnership with architects and contractors are a great way to meet new clients. Perhaps there could be a state level database through SEAs for large projects that require structural engineering services. Applying for and receiving awards for completed projects are great marketing opportunities as well.

While I shared many ideas for encouraging participation in SEAs, I think it's important for each individual organization to focus on one or two items of their choice instead of spreading themselves too thin. Once the strategy is selected, they should develop a thorough plan for implementation and then promote it through their local college of engineering, directory of structural engineering organizations in the state, and LinkedIn. The key is to create an atmosphere that inspires success and encourages collaboration because at the end of the day, I believe we are all in this field to create a safe environment that all people can enjoy.