

• **NEXT STEP** •*Advice from Young Engineers Moving Forward in Their Careers*

Practice Nontechnical Skills to Balance Life, Learning, and Work

IT WOULD BE EASY TO ASSUME that Siavash Zamiran, Ph.D., P.E., M.ASCE, doesn't get much sleep. Zamiran, who was presented with the ASCE Edmund Friedman Young Engineer Award in 2019, works full time as a geotechnical engineer for St. Louis-based Marino Engineering Associates Inc. (MEA), teaches geotechnical engineering on an adjunct basis at Missouri University of Science and Technology (Missouri S&T), and serves as the chair of the Sustainability Committee for the St. Louis Section. But he says his enthusiasm, optimism, organizational skills, and devotion to self-improvement keep him going. By continuing to teach in the subjects in which he practices, he maintains up-to-date knowledge and skills. And by reading, networking, and listening to podcasts, he has learned how to manage his time and tasks to achieve a rewarding balance of work, school, and life.

You have just been promoted from project engineer to senior project engineer at MEA and taken on a new adjunct professorship. How are you managing all the responsibilities of both?

What helps is that the courses I teach are in the areas in which I work. There is a saying that if you want to learn something perfectly, teach it. When I had the opportunity to teach geotechnical engineering, I took it so that I could better learn and understand all the rules, formulas, and principles. On a daily basis, I use those same principles in my consulting, analysis, and design.

How did the opportunity at Missouri S&T present itself?

I am very involved in civil engineering organizations, especially ASCE. My ASCE experiences have helped me to increase my network and connect to other professionals in my area. Also, being in contact with my coworkers who practice in other specialties and with professors in other areas of academics helped.

How does your job as a senior project engineer differ from that of a project engineer?

When I was a project engineer, I was involved almost entire-

ly in the technical parts of the work—the design and analysis. Now that I am a senior project engineer, I have more responsibilities for project management, relationships with clients, and supervising staff.

The good thing about working for a small-sized company, which MEA is, is that it gives me the opportunity to be involved not just in my own work but also other disciplines and areas, including business development, marketing, and client relationships.



**Siavash Zamiran,
Ph.D., P.E., M.ASCE**

EMPLOYERS

Marino Engineering
Associates Inc. (MEA)

Missouri University of Science
and Technology (Missouri S&T)

NEW TITLES

Senior Project Engineer (MEA)

Adjunct Professor of
Geotechnical Engineering
(Missouri S&T)

PREVIOUS TITLES

Project Engineer (MEA)

Adjunct Professor of
Geotechnical Engineering
(University of St. Louis and
Southern Illinois University
Edwardsville)

What are the chief skills and abilities that you developed in your previous positions that help you in these new positions?

Being in a more senior position and managing projects and relationships require lots of 'softer' skills in parallel with the technical skills. And you really don't learn those softer skills in school. So I try to increase those skills myself. I read and study about project management, time management, self-organization, and other nontechnical topics. This is useful not only for my work but also for other parts of my life.

Also, when I was working on my dissertation, I had to start something from scratch, come up with the idea, do the research, collect the information, conduct the analysis, develop a procedure, and create an output of my study. Finally, I had to put all that together into a two-hundred-page dissertation and defend it in front of committee members. I worked on it for two years, and it taught me how to handle a long-term, multiple-part project from start to finish. That was a very helpful, practical experience.

What personal traits or characteristics do you believe help you in these new positions?

I am generally enthusiastic and optimistic about things. And I am consistent about

what I want and pursuing it. There is a compound-effect rule that says if you want to reach a goal, you have to be consistent in doing small steps each day, and those steps will compound and accumulate until you reach that result. So, you might not see big results in the short term, but in the long term, you will. It's all about persistence.

I also try not to fear rejection. That gives me the ability to take risks and seek opportunities and adventures; fear can

be a barrier to all that. So, for example, when I wanted to apply for a research position to pursue my Ph.D., I got rejected a couple of times, but that didn't discourage me. If you interview with one professor, you have a low probability of success. But if you interview with one hundred, you can get rejected ninety-nine times and still succeed that one time.

What technical skills helped you achieve these positions?

The skills I gained from courses in the principles of geotechnical engineering, like soil mechanics, foundations, and the strengths of materials. I have a fair understanding of them, and as I said, when I teach them, that improves my own knowledge.

I am also developing my skills in specific computer programs related to my area. Those programs and computational skills are not taught in traditional school curricula, so I have learned about those programs and how to do specialized analyses on my own.

How have nontechnical skills helped you in your achievements?

The softer skills sound easy because they are not technical, but it's hard to learn them and use them in practice. And once you learn them, it's very easy to use them just for a short period of time and then forget them. But when I keep myself updated and read about them on a day-to-day basis, that improves my learning curve and keeps me motivated.

I have a list of books and articles to read, and of course magazine articles are more motivating because you can read and finish them quicker. There is also something called a mastermind group—a small group of peers who get together to talk about these skills. I have a group of friends, something like a mastermind group, that I keep in contact with. I get more motivated when chatting with them.

What role did mentors, advisers, or your network play in your achievement?

Being surrounded by friends who are skilled is very motivating. Again,

working in a small company gives me an advantage. I can work directly with officers, such as the president of the company. And I also work with faculty at the school where I teach, and they always try to be the top in their fields. That motivates me to follow their path.

What do you hope to accomplish in these new positions?

I'd really like to learn more about my area of expertise; I read technical materials to increase my knowledge and stay updated. When I do that, I have more confidence about what I am doing.

And right now, I want to learn more about the growing areas of programming, data science, and machine learning. I also want to learn more about automation and statistics and incorporate them into the areas of my interest.

What types of positions do you see yourself moving toward over the next few years?

I'd like to remain working in the industry and being involved in academics. I'd like to go toward more managerial positions like project manager, where I'd be working more independently on projects from the start and then developing and finalizing them.

What advice would you give to other young engineers who would seek positions similar to yours?

Continuing your learning is important; when you finish school, that shouldn't be the last time you open a textbook or read technical material.

Also, keep your life-work balance by being more organized and by learning personal development skills. People might think working full time and teaching would be overwhelming, but learning those personal skills teaches you how to balance everything in your life: work, education, health, and relationships. —LAURIE A. SHUSTER

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