



## Where Are They Now?: Sam Chadwick

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*Where can a graduate degree from the University of Illinois take you? In this series, we catch up with one recent Graduate College alum and ask the question: "Where are they now?"*

Sam Chadwick holds a BS (2010), MS (2015), and PhD (2017) in Civil Engineering all from the University of Illinois. She currently works as a Rail Engineer for WSP USA in Chicago, IL.

### What was your research area while studying at Illinois? In what ways has it helped you in your career?

I was in Dr. Christopher Barkan's RailTEC group, focusing in railroad engineering. My dissertation focused on identifying factors relating to train derailments resulting from highway-rail grade crossing collisions. Railroad engineering is a fairly niche part of civil engineering, so recent college grads with rail experience are in demand. My time in RailTEC helped me connect with potential employers, and my background in engineering statistical analysis has helped me work on a variety of projects as an engineering consultant.

### What are some of your main responsibilities, and what does a normal day or week look like for you?

I'm not sure there's such a thing as a "normal" week or even day for me! I enjoy consulting because of the variety. When I'm in the office, I mostly spend my day doing document review, engineering analysis and technical writing for several different clients. I work on many smaller projects simultaneously. WSP is a nation-wide company so I spend a lot of time on Skype with employees and clients across the United States. I have worked on projects from California to Maine, and routinely partner with coworkers from Florida to Oregon. Some projects take me into the field; I just finished a project for a railroad where I spent about 70 hours every other week on track in my hard hat and safety boots. It's quite a contrast with my 9-to-5, business casual time in the office.

### I understand you recently taught at the Tashkent Institute of Railway Engineering in Uzbekistan as part of the Fulbright Specialists program. Can you tell us more about that experience?



Sam Chadwick teaching at the Tashkent Institute of Railway Engineering in Uzbekistan as part of the Fulbright Specialists program.

It was a great experience. The Tashkent Institute of Railway Engineering is a school of approximately 6,000 students, all studying rail-related topics. I taught about 200 students total over 5 weeks including some employees of Uzbekistan Railways (the national rail owner/operator). One of my former co-advisers from Illinois forwarded me an email announcement looking for a rail lecturer. I applied because I enjoy traveling and learning about rail operations in other countries, and because I enjoy the opportunity to teach. My company was generous enough to allow me to go abroad and handle my typical responsibilities remotely. I highly recommend applying for the Fulbright Specialists program; you apply to be placed on their roster, and once you are on the roster you receive announcements about all their upcoming projects. If you match with a requesting institute, the program arranges all your travel and housing for the trip. I had some great cultural experiences thanks



to my hosts, and we all benefited from the knowledge exchange.

### **What has surprised you most about your current job?**

How quickly I've been able to gain experience and responsibility. Most people in my office started their jobs after undergrad or a masters' degree. I was a little worried that I would be "starting from behind" since I was in school for so long! But I've been able to use a lot of the skills I acquired during my PhD to demonstrate my value to the company, and in return I am already getting chances to manage small projects and lead teams.

### **What is the most interesting, rewarding, and/or challenging aspect of your job?**

The answer to all three is the variety of projects I get involved with. I enjoy that every day is a new challenge. I actually do very little work that fits the concept of "engineering" that I had when I started undergrad – though all the work I do benefits from my technical knowledge! Through my PhD work, I developed great skills as a writer and communicator; these are very valuable skills that not every engineer develops. As a result, I'm involved in many interesting projects where I interface with more "traditional engineers" to understand their goals and challenges, and then digest the technical aspects into reports and other deliverables.

### **What experiences made an impact on your career choice? Or was there a particularly memorable class or professor from Illinois that had an impact on your career?**

I'm probably an outlier in that I can pinpoint the exact moment I decided to pursue railroad engineering: Engineering Open House 2008. I met Professor Barkan's students and learned about their research. The group was very welcoming, and I quickly realized that railroading was a living industry, not one that reached its heyday in the 1800s! This approachability – a trait shared by all of the RailTEC faculty and staff – means I have never been hesitant to approach them for advice and guidance. I'm lucky to have benefited from their decades of experience in the industry.

### **What is one piece of advice you would give to graduate students at Illinois?**

Cultivate relationships with everyone you meet – professors, fellow students, visiting scholars, company representatives at conferences and career fairs. Railroad engineering is a particularly small field, so maybe my experience isn't typical, but having a wide network not only helps with finding a job after graduation, but also means you have tons of people to ask questions about technical or personal subjects.



*This interview was conducted by Mike Firmand, Assistant Director for Employer Outreach in the Graduate College. He works with employers to connect University of Illinois graduate students to new opportunities and promote the value of graduate education. He previously worked for the College of Business at Illinois State University and has held positions in insurance, marketing, banking, and retail and event management. Mike holds a B.S. in Recreation, Sport and Tourism from the University of Illinois and an M.S. in Communication from Illinois State University.*