

WHAT CAN PHYSICISTS DO?

An interview series that profiles scientists who opted for careers outside of academia.

Janine Abyad oversees airport infrastructure projects

By Toni Feder

Lead civil engineer, Federal Aviation Administration New York Airports District Office

BS, physics, Rowan University, 2014
MS, civil engineering, Rowan University, 2016
Master of engineering management, Rowan University, 2022

How did you figure out what you wanted to do?

I liked physics until we got to the more complex and theoretical part in upper-level classes. I knew I liked practical, hands-on research. I spoke to the engineering department at Rowan and they suggested I look into civil engineering. I began speaking to professors and learned that I could lead my own research project. For my master's, I studied nonnuclear alternatives

to the nuclear-density-gauge method for pavement acceptance testing. I was looking into comparable devices that would avoid radiation exposure, inaccuracies, and the need for specialized training.

How did you get into airport design and construction?

During my master's studies, a classmate told me that their company was hiring civil engineers. The company was providing engineering contract support in pavement R&D for the Federal Aviation Administration. I got hired and was part of a team that collected and analyzed data for nondestructive pavement testing.

I moved to the FAA New York Airports District Office as a civil engineer in 2019. I was responsible for managing and implementing federal airport infrastructure grants for airports in New York state.

How do you spend your time?

Now, instead of R&D, I do design, construction, and grant management for airport infrastructure projects. I've been a part of terminal improvements, runway and taxiway rehabilitations, extensions, and more. While working, I went back for a second master's degree in engineering management.

When I started at the FAA, I was a civil engineer. In 2023, I got into airport compliance work, adjudicating complaints from airport tenants. It was interesting, but I missed the technical work. Recently, I returned to my civil engineering position.

What do you like about your job?

I get to use both my technical skills and my people skills.

How do you use your physics background?

The ability to think through ideas in different ways to resolve an issue. My physics background also gives me credibility.

What new skills did you need when you started working?

Being able to work with people who have different skill sets and learning to communicate effectively with everyone from lab techs to PhDs, other engineers, and managers.

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(Photo courtesy of Janine Abyad.)

