

PROFILE: Steve Miller

When you become established at NASA, very few people leave.

Prof. **STEVE MILLER** is one of the few.

Miller joined the MAE faculty in August 2016 after working as a United States government civil servant with NASA for 7 years. He had worked as a theoretical aeroacoustician at Langley Research Center in Hampton, VA.

His work involved the combined study of aerodynamics, acoustics and turbulence. The practical applications of this kind of research includes reducing the noise pollution on an aircraft carrier deck and reducing the chances that rocket engine flows vibrate a payload and lead to failure.

“When I joined NASA, I had no idea how much I didn’t know,” Miller said. “There were five to six people in the organization who I would say are literally geniuses. It’s really unique to work with someone like that. You learn so much about how to think about how the world works, how to solve challenging problems and how to have tenacity.”

One of his favorite parts of the job was trying to solve problems that have never been solved before.

“You become an explorer,” he said. “You get an inquisitive sense that gets built into you from that experience, and I don’t think I could have gotten that anywhere else.”

So why did he decide to leave?

Because academic freedom is one of his core values, he said. To him, it means he has the requirement to reach out, learn new things and extend human knowledge to answer the problems of society.

While NASA was an incredible opportunity, he said in the NASA world you’re behind a fence armed with guards — you can’t interact with the public as easily.

“You have a real opportunity at a university to change the direction of society,” Miller said, “to speak out and challenge scientific ideas or engineering processes or even mathematical equations. It’s an environment where you should spread your wings and diversify your knowledge.”

Miller is able to walk out his front door, stroll to campus, listen to the bells sound across the grounds and really absorb the atmosphere of the university. He’s made



friends in engineering but also in other departments, like mathematics and art history. He feels at home.

“People don’t appreciate how amazing the culture is here at UF,” he said.

But before he even arrived at campus, he had a good feeling about the department.

At NASA, he’d worked with a few researchers from UF MAE, and he said every one of them was top-notch.

“The best students coming out of MAE are comparable, if not better than, students coming from other top schools like MIT and Caltech,” he said.

Now he has the opportunity to teach and inspire undergraduates with that same potential. He has an open-door policy, helping students with everything from classwork to career advice to interview prep.

“It’s good to help others,” he said. “Research is important, but people are more important. The university is made up of people — it’s a community — and I really believe that.”

In addition to teaching Compressible Flow this semester, he’s also setting up his research lab. He’s been hiring grad students and formulating research projects.

“It’s sort of like combustion,” he said. “Once you have that spark, the reaction happens. It explodes with awesome research ideas.”

His goal is to set up a great lab with eight to 10 students and carry on the research he’s dedicated himself to. He’s already looking forward to watching his students present their theses, and is off to an excellent start with his recent ONR Young Investigator Program award to study turbulence and acoustic sources.

“Those are going to be the best days of my life at UF,” he said. “That’s the product I’m most proud of.” 