

## WHAT CAN PHYSICISTS DO?

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

### Kevin Ingles writes code for electrical engineering applications

By Toni Feder

**Computational research scientist,  
applied electromagnetics division,  
Applied Research Associates**

BS, physics; BS, mathematics and statistics;  
University of South Alabama, 2018  
PhD, physics, Ohio State University, 2023

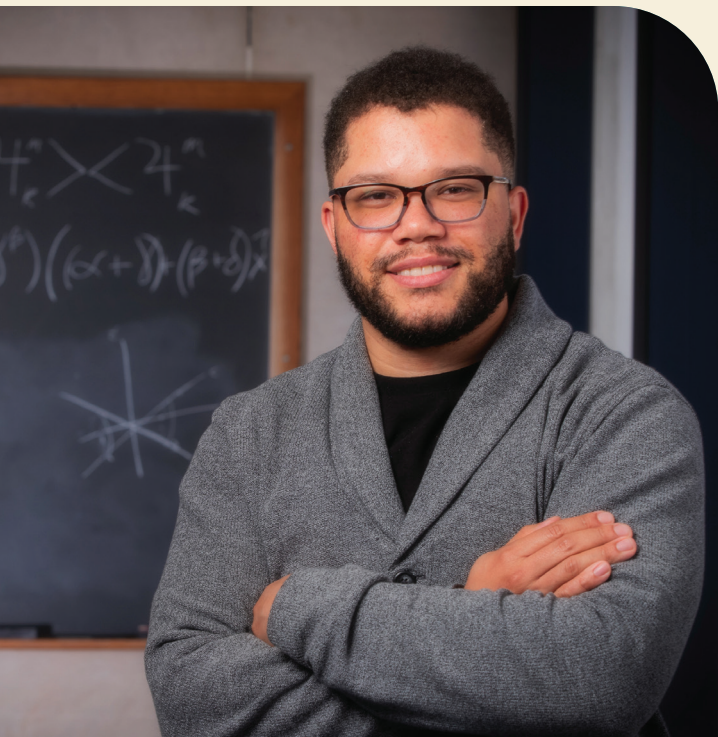
#### What was your research focus?

Particle phenomenology and nuclear theory, with a focus on strong interactions.

#### What were you looking for in a job?

I was convinced I would be a professor. But a year into my postdoc, I decided to leave academia. I had burned myself out, and seeing how hard all my previous mentors worked sent up red flags for my long-term mental health.

(Photo courtesy of Kevin Ingles.)



I looked for jobs that required computational physics. And, both to be close to my partner and to collaborate in person, I wanted to find a job in Columbus, Ohio.

#### How did you find your job?

LinkedIn and other job sites. I read blog posts and watched YouTube videos to learn how to craft my résumé. I emphasized that I wanted to write C++ code and use programming to solve complex technical problems.

In May 2024, I applied to 40 or 50 jobs. I got three interviews. I started at Applied Research Associates in July 2024. The company provides services, products, and applications in electromagnetic propagation, microelectronics, and computational modeling, among other areas. Clients include the US military, aerospace companies, and related commercial industries.

#### How do you spend your time?

I work primarily on our simulation code base, fixing bugs and building new features. The simulations help clients evaluate and improve the performance of antennas, sensors, and other technologies before they're built or deployed.

I also communicate technical concepts to nontechnical colleagues and support business development. I coauthor at least one proposal or application a month.

#### What do you like about your job?

I enjoy making a bit of code work harder, faster, better, or at larger scales. I like that projects move quickly. Contract timelines are typically two to three years.

#### How do you use your physics in your job?

Through critical thinking, comfort with equations, and quantitative reasoning.

#### What new skills have you needed?

I've learned to be pragmatic, focusing on solving the immediate problem rather than tackling an entire class of problems. I've also had to grow comfortable delegating tasks to others.

#### Is there anything you'd like to add?

People should remember that it's more common to not be an academic. I do miss teaching, but every now and again I get an opportunity to lecture, and I get excited.

PT

Read more interviews in the series  
at <https://physicstoday.org/wcpd>.