

John Daniels had a great job. As a tenured associate professor in the Department of Civil and Environmental Engineering at the University of North Carolina-Charlotte, he was well established in his career. But like many who apply for a AAAS Science & Technology Policy Fellowship, John sought to expand his experience outside academia. “I wanted a broader connection and understanding of where my scientific field fit into the greater picture,” says John. He also wanted to use his engineering expertise to serve his country.

One day he came across the AAAS Fellowship website and recalled that his mentor, Hilary Inyang, had been a AAAS Fellow at the Environmental Protection Agency. “Dr. Inyang remembered his experience as a pivotal moment in his career,” says John. “I knew this was something I wanted to apply for.”

John opted for a placement in the Division of Engineering Education and Centers at the National Science Foundation (NSF). “I wanted to work on broad issues, so I pursued NSF,” he says. “And the mission of the division resonated with me.” John was involved with a number of high profile assignments, including co-authoring the announcement for the Innovations in Engineering Education, Curriculum, and Infrastructure program. “We are working to improve how students learn and to increase the number of students in engineering education.”

Being based in Arlington, Virginia, was also a good fit for his wife and two young children. “Living in the DC area is culturally and intellectually invigorating,” he says.

Before returning to his academic post in August 2010, John will spend one more year at NSF as a program director under the Visiting Scientist Program. He believes that the fellowship experience will meaningfully influence his academic work at UNC. “I will be a more informed faculty member and in a better position to mentor students. I am also positioned now to pursue work I would otherwise not have been able to do, such as responding to issues that are multidisciplinary,” he says. “This experience is relevant to anyone at any stage.”

Unlike John Daniels, who was well established in his career, **Amy Sharma** finished her PhD in biomedical and electrical engineering from Duke University just nine months before starting the AAAS Fellowship. Growing up outside Washington, DC, in Springfield, Virginia, Amy always felt a strong political influence. “The fellowship was very appealing to me, because I believe the last decade has been very bad for science funding.”

Amy was asked to interview at the Division of Computer and Network Systems at the NSF, but because the division’s work seemed outside her expertise she initially wondered why. When she learned about its hands-on work in education, she was intrigued. “Education reform is interesting and when I left the interview I felt that I really should take this opportunity,” she says.

Part of her fellowship assignment was to work on the Broadening Participation in Computing program, which encourages minorities and women to enter the field of computer science. Amy helped plan a children’s workshop to learn computer skills including web design, and fostered outreach to national organizations such as 4-H, Girl Scouts, and the Boys and Girls Club of America. Because entry into computer science by minorities and women has been declining since the 1980s, this program could have a tremendous impact. “Girl Scouts can reach millions of students to teach them what they can do with computing,” Amy explains.

Amy is now working at the Georgia Tech Research Institute in the Sensors and Electromagnetic Applications Laboratory (SEAL). “I am doing some real engineering, but also get to flex my new policy muscles in interacting with and soliciting clients,” she explains. “There are opportunities here for me to become either a focused expert or a broad project manager. As a next step, it’s a good mesh of my engineering background and my fellowship experience.”

For AAAS Fellows **Kelley Cormier** and **Matt Wilson**, a high school class and a chance encounter with a professor steered their careers toward the AAAS Fellowships.

When Kelley Cormier was growing up in Cumberland, Maine, she could never have guessed

that a high school Russian language class would shape her life's work. Traveling twice to Russia as an exchange student and then to Kazakhstan with the Peace Corps, Kelley learned fluent Russian and discovered an interest in international development and agriculture. "I applied for the fellowship because I wanted to understand and be involved in helping develop international programs and strategies."

Kelley, who has a PhD in development studies with a specialization in economics and law from the University of Wisconsin-Madison, spent her first fellowship year in the Office of Education, Higher Education, and Workforce Team at the U.S. Agency for International Development (USAID). One of her duties was to work on program monitoring and evaluation. "An evaluation can affect the direction of a program," explains Kelley. "And, it can affect its outcome."

A social scientist by training, Kelley was able to use her skills to fill this need in her office and do it in a methodologically rigorous way. "There is recognition of the need to understand and evaluate youth programs. Without evaluation, you don't know the reasons for differing outcomes and don't have justifications for program funding," she says.

After her year at USAID, Kelley accepted a position at the Foreign Agricultural Service at the U.S. Department of Agriculture. "This position will be a step toward my area of technical expertise in agricultural development," she says. "The fellowship has absolutely opened doors. There are a lot of options and career paths I can take from here."

For Matt Wilson, a talk by Dr. Bruce Alberts left a lasting impression. While working on his PhD in biochemistry and molecular biology at the University of Pittsburgh, Matt attended a talk by Dr. Alberts, a biochemistry professor and the current editor-in-chief of AAAS' journal *Science*, who spoke about the importance of scientists becoming involved in policy. Matt later pursued a post-doc at the University of California, San Francisco. In discussing scientific articles with his lab mates, "I realized I was most excited about science papers that also touched on moral or ethical implications," he says. "Friends

told me that these issues are addressed in science policy—and then I remembered Dr. Alberts' speech."

As the National Science Board's first AAAS Fellow, Matt is working on the STEM (Science, Technology, Engineering, and Mathematics) Innovators program to help identify the needs of talented kids, especially those who may be overlooked or underserved. Toward the end of his first fellowship year, Matt organized a panel of high-profile experts—including Education Secretary Arne Duncan and Dean Kamen, the inventor of the Segway—to discuss how schools can encourage the next generation of STEM leaders. The National Science Board's policy recommendations will come out in 2010. "The goal is to improve education and raise the ceiling of achievement," he explains. "Because I've renewed my fellowship for a second year, I will be able to see this through."

Kelley Cormier, PhD, Development Studies (Economics and Law), University of Wisconsin - Madison

2008-09 Diplomacy Fellow; Agency for International Development, Bureau for Economic Growth, Agriculture and Trade, Office of Education, Higher Education and Workforce Team

John Daniels, DEng, Civil Engineering University of Massachusetts - Lowell

2007-09 Energy, Environment, Agriculture & Natural Resources (EEANR) Fellow; National Science Foundation, Directorate for Engineering, Division of Engineering Education and Centers

Amy Sharma, PhD, Biomedical Engineering Duke University

2007-09 Energy, Environment, Agriculture & Natural Resources (EEANR) Fellow; National Science Foundation, Directorate for Computer and Information Science and Engineering, Division of Computer and Network Systems

Matt Wilson, PhD, Biochemistry and Molecular Biology, University of Pittsburgh Medical Center
2008-09 Health, Education & Human Services (HEHS) Fellow; National Science Foundation, National Science Board