



Scientist Spotlight with Bethany Goldblum

Q&A with prominent FAS-affiliated scientists and engineers

E-mail interview conducted by Allison Feldman, FAS

Dr. Bethany Goldblum is a member of the research faculty in the Department of Nuclear Engineering at the University of California, Berkeley and the Associate Director of the Nuclear Science and Security Consortium, a multi-institution initiative composed of seven academic institutions and four national laboratory partners working collectively to train the next generation of nuclear security experts. Goldblum manages the Bay Area Neutron Group, a diverse research team focused on fundamental and applied nuclear physics, nuclear-plasma interactions, radiation detection, and radiochemistry, which brings together undergraduate and graduate students at UC Berkeley, staff scientists from Lawrence Berkeley, Livermore, and Sandia national laboratories, and visiting researchers and scholars from around the world. She complements her passion for nuclear science with research and education in nuclear security policy through her leadership of the Nuclear Policy Working Group, a research-based educational programming effort that provides scholars from technical and social scientific fields with the opportunity to collaboratively developing policy solutions to strengthen global nuclear security. Goldblum completed her doctoral degree with perfect marks in nuclear engineering from the University of California, Berkeley in 2007.

1. What made you want to become a scientist or engineer and what is your primary field of focus?

To me, science is a quest for truth. From an academic perspective, it represents the opportunity to jointly explore an objective reality and advance knowledge for mankind.

My current field of focus is in nuclear security science. In this effort, I've worked on a range of issues including characterization of scintillating materials for neutron detection, network science applications to nonproliferation, nuclear science in high energy density plasmas, nuclear data for applications, and nuclear security policy. I've had the opportunity to make significant contributions to nuclear nonproliferation and thereby international security and I'm honored to work in this field.

2. Why did you get into this field of science or engineering? Was there a specific person or event that inspired you?

As an undergraduate student, I was greatly inspired by my physical chemistry professor, Dr. Ron Estler. He encouraged me to pursue research opportunities and through this I had my first taste of what being a scientist is really like. Ron said, "If you like mathematics, you'll love p-chem." He was right and from there I went on to study nuclear physics and now work on pressing issues in nuclear security science and policy. Thanks, Ron!

3. What was your first science experiment?

The first experiment I remember conducting was in my undergraduate introductory chemistry class. We coated a penny with zinc. The zinc coating on the penny makes it look silver and shiny. It was an "oh, wow" moment.

4. Do you have any advice specifically for younger scientists or engineers today?

Follow your passion.

5. What have you discovered to be the most effective strategy in connecting scientists or engineers with the greater technical community?

I recently established the Nuclear Policy Working Group (NPWG) at UC Berkeley. This is an educational programming effort designed to bring together students from technical and social scientific fields to collaboratively explore issues in nuclear security policy. I've found that creating a shared space environment within the NPWG promotes dialogue and encourages an open setting in which people with varying levels of expertise and experience can ask questions and generate ideas. In this shared space culture, connections to scientists and scientific concepts happen organically as a broader community works together to explore and address issues.

6. Do you find that people react in a certain way when you tell them you're a scientist? Do they make any assumptions?

People often say I don't "look like a scientist..."

7. What kinds of things do you do beyond what "normal people" see? What do you actually spend the majority of your time doing?

Thinking.

Scientist Spotlight is a new monthly installment that will feature Q&As with prominent FAS-affiliated scientists and engineers. To view last month's piece on FAS Board Member, Rodney Nichols, visit: https://fas.org/wp-content/uploads/2015/10/InterviewRN_final.pdf.