Written Testimony of

Xiaoxing Xi
Professor of Physics
Temple University

Before the

Committee on Science, Space, and Technology
Subcommittee on Investigations and Oversight
Subcommittee on Research and Technology
United States House of Representatives

At a Joint Hearing Entitled
"Balancing Open Science and Security
in the U.S. Research Enterprise"

Presented
October 5, 2021

Chairman Foster, Ranking Member Obernolte, Chairwoman Stevens, Ranking Member Waltz, Chairwoman Johnson, Ranking Member Lucas, and Members of the Subcommittees, thank you for the opportunity to appear before you today.

My name is Xiaoxing Xi. I am a professor of physics at Temple University. Like many first-generation immigrants, I hail from a foreign country. I was born in China and got my PhD degree there. In 1989, my wife and I came to this country because America offered the best opportunity to do science and it was the most welcoming place in the world to foreigners. In the United States, our careers flourished, our family grew larger, and we became American citizens. We are as proud as any other citizens to call America our home.

I remember vividly a fine spring day six years ago. I was busy with my teaching, research, and my duties as chair of the Physics Department. At dinnertime, I gave a public lecture for a science festival at an Irish pub, and then went to the airport to pick up my wife, who was returning from an overseas trip. My elder daughter was home from college for a few days, and my 12-years-old daughter was anxious about her dental surgery the next morning. By the time we made a plan to visit a famous Korean fried chicken restaurant, it was way past midnight. Little did we know that a few hours later, armed FBI agents would raid our house and take me away in handcuffs. Based on emails I had sent from my Temple University address, the federal government charged me for passing sensitive U.S. company technology, a device called pocket heater, to China. The charges were totally false. I had never shared the pocket heater information with anyone in China. Almost four months later, after leading experts in my research field provided affidavits saying that the emails I had sent were not about the pocket heater at all but my own widely published research, the government dropped the case. But our life had been wrecked.

On that fateful morning, when I answered the loud knocks on my door and the FBI agents put handcuffs on me, when the agents pointed their guns at my wife and two daughters

and ordered them to walk out of their bedrooms with their hands raised, I thought, “Why are they doing this to me? I have not done anything that warrants this. This operation must cost taxpayers tons of money.” Unfortunately, the exact same early morning raid scene was repeated for the University of Tennessee, Knoxville professor Anming Hu, who was acquitted by a federal judge several weeks ago, and it was played out again for the Cleveland Clinic researcher Qing Wang, whose case was dropped by the DOJ in July. When the DOJ uses this much resource going after innocent Chinese scientists, we must ask, “Are they catching the real spies? Are they spending our tax money responsibly to protect our country?”

The problem is that law enforcement officials consider Chinese professors, scientists, and students nontraditional collectors, or spies, for China. We are presumed guilty until proven innocent. It is only a matter of time and chance that any scientist of Chinese descent may get the knocks at his or her door by FBI agents and be snatched away. Profiling Chinese scientists based on where they come from ruins people’s lives. I know that personally. I am sure Professor Anming Hu knows it as well. I have no doubt Professor Qing Wang knows it, too.

All Chinese professors, scientists, and students are not spies for China. They are contributors to America’s economic security and national security. Most professors do fundamental research. As the NIH director has said, “Most of what we do in science, we publish it.” Without any evidence that they have stolen for China, academics are being charged for failure to disclose their activities in China. Academic collaboration with China was once encouraged by the U.S. government and universities. Selections into the Chinese government talent programs were celebrated just as selections into similar prestigious talent programs in other countries. Now, academics face the possibility of criminal prosecution for having responded to these encouragements. This is not fair. It has not always been clear what professors are required to disclose. When the policy towards academic collaboration with China has changed so abruptly, it is only fair to communicate the new policy clearly to everyone before throwing people in jail.

Let me be clear: a policy that targets Chinese scientists and cracks down on openness in fundamental research does not protect America’s research security. It makes the U.S. less competitive in innovation and less attractive to talents around the world.[1] It threatens the U.S. leadership in science and technology. It must stop.

[1] Data from a September 2021 survey by the American Physical Society (to be published; contact: elsesser@aps.org) shows that

- nearly one in five physics professionals in the United States (non-student APS members; N > 1,400) have either chosen – or been directed – to withdraw from opportunities to engage in professional activities with colleagues based outside the United States due to current research security guidelines;
- more than 43% of international physics graduate students and early career scientists – i.e., PhD graduates with fewer than five years of experience – perceive that the United States is an unwelcoming country for international students and scholars; and
- at least 40% of international, early career scientists who chose to come to the US to study and/or work say that the US government’s current response to research security concerns makes their decision to stay in the US long term less likely or much less likely.

BIOGRAPHY

Xiaoxing Xi, recipient of the American Physical Society 2020 Andrei Sakharov Prize, is Laura H. Carnell Professor of Physics at Temple University. Prior to 2009, he was Professor of Physics and Materials Science and Engineering at the Pennsylvania State University. He received his PhD degree in physics from Peking University and Institute of Physics, Chinese Academy of Sciences, in 1987. After several years of research at Karlsruhe Nuclear Research Center, Germany, Bell Communication Research/Rutgers University, and University of Maryland, he joined the Physics faculty at Penn State in 1995. His research focuses on the materials physics of oxide, boride, and 2-dimensional dichalcogenide thin films. He is author of over 350 refereed journal articles and 3 U.S. patents in the area of thin films of high-T_c superconductors and magnesium diboride. He is a Fellow of the American Physical Society. Since 2015, he has spoken out actively for open fundamental research and against racial profiling.