

tions for NIST on the agency's organization, budget, and programs. Karen Brown, who has served as acting director since Bush took office, will return to her former position as NIST's deputy director. **JIM DAWSON**

Physics Societies Seek to Aid Fight against Terrorism

Since the terrorist attacks on 11 September, scientific societies—like individuals and organizations across the country—have been casting about for meaningful ways to help counter terrorism.

Scientific organizations—about 20 were on board at press time, led by the American Physical Society (APS) and including the American Institute of Physics and several of its other member societies—have set up a scholarship fund for survivors of the terrorist attacks and for victims' spouses and children. The Science and Engineering Scholarship Fund is a subset of the Families of Freedom Scholarship Fund, for which former President Bill Clinton and former Senator Bob Dole are raising \$100 million. To make a tax-deductible donation, or for more information, visit <http://www.aps.org/sciencefund.html> or call 1-800-335-1102.

Among other responses in the days following the attacks was a forum at the Optical Society of America's annual meeting, at which attendees discussed ideas ranging from upping security at scientific conferences to holding meetings focused on sensing devices for domestic defense technologies, reports OSA Executive Director John Thorner. But, he adds, "there was a real wariness about getting the society into a position of supporting the war effort by immediately holding conferences on, for example, laser-guided bombs. Instead, the sentiment seemed to be that the purpose of a scientific society is to encourage worldwide exchange of knowledge to help break down walls of prejudice and ignorance." A letter by Caltech astrophysicist Anneila Sargent, president of the American Astronomical Society, urged "all AAS members to take responsibility for ensuring that our profession is one that welcomes and celebrates diversity." And the American Geophysical Union's Executive Director Fred Spilhaus says AGU is "discussing how new demands on government may affect our science and its funding and how we might want to

modify our advice on public policy matters. We are also taking special care to assure that we are serving our members in the Middle East as well as possible."

More generally, the science community hopes that President Bush's new science adviser will serve as a conduit for funneling technical skills and knowledge to the White House. John Marburger, former director of Brookhaven National Laboratory (see *PHYSICS TODAY*, August 2001, page 22), was confirmed as science adviser on 23 October. Two weeks earlier, at his confirmation hearing, he named the fight against terrorism as his highest priority.

Marburger will be among the high-profile physicists and policy-makers at a meeting of the APS physics policy committee in mid-December. The idea is to get physicists thinking about how they might contribute to antiterrorism and war efforts by applying existing, and developing new, methods for such things as seek-

ing survivors in rubble, sensing biological and chemical agents, identifying faces and voices, tracking movement of individuals, and detecting underground hideouts.

The first thing, says Mike Lubell, head of public affairs at APS and the meeting coordinator, "is to ask questions such as: What are we facing in the area of terrorism? What kind of risk assessment can we do? Then, if we look at the risks, which ones can we take care of with existing technologies? Which need new technological developments to be successfully handled? Once you have this list, you can then ask what R&D we should look at to address the shortfall."

"One reason that this whole government structure for supporting science was put together at the end of World War II was to make sure we had a well-trained scientific force that could come to the nation's help as needed," continues Lubell. "The science community has an obligation."

TONI FEDER

Terrorism Sets Agenda for New Congressional Fellows

Physical chemist Kristen Kulinowski was in the Madison Building at the Library of Congress on the morning of 11 September, excited at being a new congressional fellow for the Optical Society of America (OSA) and the International Society for Optical Engineering. The congressional fellows were just settling in for the day's orientation session when the announcement came that the World Trade Center in New York had been hit by an airplane.

Within a couple of hours, Kulinowski was standing in the heat and smoke outside the Pentagon. She was providing food and drinking water to the first wave of firefighters battling flames in the gaping hole that had been ripped into the building by a terrorist-piloted airliner. In addition to science, Red Cross disaster relief work is a "passion," Kulinowski said, and during the past 10 years she has worked a hurricane, a tropical storm, floods, and house fires. When the Pentagon was hit, she quickly offered her services to the local Red Cross. "There was a lot of chaos," she said. "I identified myself as an experienced Red Cross team member, and I had my uniform on. I looked the part."

Kulinowski eventually found herself in the courtyard at the center of the Pentagon, helping crews fighting

the fire from the inside out. "The inside walls weren't damaged. There were broken windows, but I think those were broken by the firefighters."

Two months later, Kulinowski, who received her PhD in physical chemistry from the University of Rochester in New York, was working in Representative Edward Markey's (D-Mass.) office on Capitol Hill, dealing with the ongoing anthrax scares



KULINOWSKI

and refocusing her political agenda on chemical and biological weapons and nuclear power plant safety. Nanoscience, the area she planned to work on when she came to Washington, DC, "seemed less immediate after September 11," she said.

While Kulinowski's story is perhaps the most dramatic of the 30 or so scientists who are beginning their yearlong fellowships on Capitol Hill under the sponsorship of a host of scientific societies, the 11 September events and the subsequent anthrax attacks have changed the lives of virtually all of the fellows.

Karen Wayland, the 2001–02 fellow for the American Geophysical



WAYLAND

Union, took a job on 10 October with Senator Harry Reid (D-Nev.). Wayland, who holds a PhD in geology and resource development from Michigan State University, expected to work on issues such as waste-

water infrastructure legislation. While infrastructure is still a concern, the question has shifted to how safe such systems are from terrorist attacks. "We are looking at the safety of all the critical infrastructures," Wayland said. "The safety of nuclear waste, and how vulnerable water systems in small communities are. It is a whole range of things."

Wayland was in an elevator in the Hart Senate Office Building that tested positive for anthrax. Because she was in a "hot zone," she was on a full 60-day regimen of antibiotics. "If I had to be anyplace during this, I'm glad to be here," she said. "We're getting more information and there is less panic here than anywhere else."

American Physical Society fellow Jennifer Wiseman, who holds a PhD in astronomy from Harvard University, was weighing several offers on Capitol Hill when the anthrax attacks occurred and, as a result, had to deal with delays in the placement process. "I've been in every infected building, but not on the problem days. But it's an intense time. In spite of walking around in anthrax-ridden buildings, I think this is great."

Wiseman, a Hubble Fellow at Johns Hopkins University before coming to Washington, planned on working for the House Science Committee's subcommittee on space and aeronautics. "I considered a diverse range of opportunities, and the choices have been hard. I'm using this as a test experience to see if I want to stay in the policy realm or go back to academia."

The American Institute of Physics's new fellow, Maureen Melody, planned to spend the year working on intellectual property issues in the office of Representative Howard Berman (D-Calif.). Melody, who holds a PhD in applied physics from the University of Michigan, did her thesis "on the singing voice," she said. "As part of that, I got my computer to sing in different voices, and the idea of intellectual property rights arose." Berman is on a subcommittee that

The yearlong congressional fellowship programs are intended to enable scientists to broaden their experience through direct involvement with the legislative process and to provide members of Congress with scientific advice and information. Information about the AIP, APS, AGU, and OSA fellowships, including how to apply, is available on the Web. For AIP: <http://www.aip.org/pubinfo>. For APS: <http://www.aps.org/fellowship>. For AGU: http://www.agu.org/sci_soc/policy/congress_fellow.html. For OSA: <http://www.osa.org/aboutosa/awards/other/congSPIE.cfm>. Applications for the 2002-03 term are due in early 2002.

deals with intellectual property, so Melody expected to be deeply involved in the issue. "If I like this I might continue to work on policy, but I would be surprised if I didn't end up back in academia at some point," she said.

Given the atmosphere on Capitol

Hill, she said, it was difficult to know when the focus will return to issues not related to terrorism. "It is tense and distracted around here now," she said in late October. "Things are being can-



MELLODY

celed and no one knows what the agenda will be." And she, like many people in Washington, was anxious about another terrorist attack. "The only thing that worries me is what's next. I'm in the bull's-eye."

Eric Werwa, who is being sponsored jointly by OSA and the Materials Research Society, came to Capitol Hill from his job as an assistant professor of physics at Otterbein College in Ohio. "In addition to teaching physics, I taught a course called 'Energy, Science, and Society,' and I became excited about the idea of doing it, not just teaching it," he said.



WERWA

Werwa landed in Representative Mike Honda's (D-Calif.) office, which he believed would be a good place to pursue his interests. "Honda's on the science committee, he's interested in energy issues, and he's interested in education, which I come from," Werwa said. "He represents Silicon Valley and my background is materials science." Werwa holds a PhD in electronic materials from MIT.

Only a few days after Werwa sat down at his desk in the Cannon House Office Building, anthrax forced the staff out. They returned a few days later, Werwa said, and he expected his immediate focus would be on ways to increase biosecurity. **JIM DAWSON**

AIP Forum Focuses on Color Digital Documents

Attendees at the annual Industrial Physics Forum, held in Rochester, New York, on 22 and 23 October, were shown the latest developments in color copying technology as they toured the Xerox Corp's Wilson Center for Research and Technology. The forum, "Color Documents in the Internet Era," was sponsored by the American Institute of Physics's Corporate Associates, *The Industrial Physicist*, and the Optical Society of America. Some participants arrived a day early to attend an academic-industry workshop that focused on revitalizing undergraduate-level physics curricula. The AIP Prize for Industrial Applications of Physics was presented to retired Bell Labs, Lucent Technologies physicist Charles Henry for his work on the optical properties of quantum wells and semiconductor lasers.



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