

New York science academy goes modern

After more than 55 years in the historic, but cramped, Woolworth Mansion on East 63rd Street in Manhattan, the New York Academy of Sciences moved in September to the glass-encased 40th floor of 7 World Trade Center, the first building to rise on the site of the September 11 terrorist attacks. The 32-room Woolworth Mansion (left), donated to the academy by Norman Woolworth in 1949, allowed the science organization to relocate out of a few rooms loaned to it by the American Museum of Natural History. But in recent years, the mansion, with a main room that held only 90 people, had proved too small to allow the academy to conduct large programs, said NYAS president Ellis Rubinstein. The new headquarters in the 7 WTC building (right) has a 300-person auditorium and will allow the 26 000-member academy to present programs to a broader audience, Rubinstein said. The new building is on the site of the last building to fall in the 2001 terrorist attacks. "We've rocketed into the future," he said, "and we're making a statement that we care about New York. We feel a little patriotic." **Jim Dawson**



FRANK ZIMMERMAN / CB RICHARD ELLIS



DAVID SUNDBERG / ESTO PHOTOGRAPHY

sensor, and attempt to fix the Space Telescope Imaging Spectrograph, which was installed in 1997 and stopped working in 2004. The mission will also replace the Wide Field Planetary Camera 2 with an improved model and replace the lenses used to correct the *HST* mirror (the COSTAR module) with the Cosmic Origins Spectrograph, which can work without COSTAR. The crew will also affix a bracket to the underside of the telescope to accommodate a de-orbit module that will be attached onto the *HST* at a later date, by either a robotic or a manned mission.

NASA had investigated sending a robotic mission to the *HST* after a service mission was cancelled in the wake of the 2003 space shuttle *Columbia* tragedy. A National Academy of Sciences advisory panel that reviewed the cancellation (see *PHYSICS TODAY*, March 2004, page 29) said the likelihood that a robotic mission could save the *HST* was remote, and the risks of the shuttle flying to the *HST* were nearly the same as flying to the International Space Sta-

tion. According to Griffin, one compelling argument in favor of a manned mission was that with new safety equipment the shuttle can be repaired in orbit if the need arises. "Griffin's announcement [about servicing the *HST*] is quite consistent with the conclusions of our committee in terms of human risk, mission risk, and the science value of an *HST* servicing," said New Jersey Institute of Technology's Louis Lanze-



NASA

During a 1997 servicing mission, the space shuttle positions the *HST* into a cargo bay with a robotic arm. A final servicing mission is planned for 2008.

rotti, who served on the NAS panel.

The successor to the *HST*, the *James Webb Space Telescope*, is behind schedule, and is not expected to fly before 2014. The new plan will allow *HST* observations at UV and near-IR wavelengths to continue beyond 2013, instead of ending in late 2008, when the *HST*'s current batteries are expected to fail.

Paul Guinnessy

Congressional fellows bridge science and policy

"I have to immediately become an expert on whatever issue comes up," says Donald Engel, this year's congressional fellow for the American Physical Society (APS). Engel is working as a staffer for Representative Rush Holt (D-NJ). "I work on math and science education, and on Einstein's alley"—a project to promote science and technology industry in New Jersey, he says. Engel, who last spring completed his PhD on computational protein design at the University of Pennsylvania, first heard about the fellowships as a college freshman in a course on careers in physics. "It has been in my head that I wanted to apply since then," he says.

Engel is one of about 140 new science and technology policy fellows spending a year in the offices of the US Congress and in executive branch agencies through a program organized by the American Association for the Advancement of Science. The American Institute of Physics sponsors a fellow in the State Department (see the story on page 36), and AIP and some of its member societies sponsor a half dozen congressional fellows. Fellows attend a nine-day crash course on the legislative and executive branches of government. Then they step into the best fit they can find in an agency, Senate or House office, or congressional committee.

The science person

Kevin Whittlesey, this year's fellow for the Optical Society of America (OSA) and the Materials Research Society (MRS), was a fellow last year at the National Academy of Sciences (NAS). "I got a snapshot of the science policy landscape, and the bug bit me," he says. Whittlesey earned his PhD in 2005 at Northwestern University for research in neural tissue engineering. When he first came to Washington, he says, "I wasn't sure whether I would encounter refugees from the lab who were burned out on science. What I found was a lot

State Department clarifies visa policy for foreign scientists

A US State Department official has clarified a visa processing policy, saying that people applying for visas to enter the US do not have to leave their passports with consular offices while awaiting approval. Applicants have typically been leaving their passports with consular officers for the duration of the application process, making it impossible for them to travel internationally while waiting for the US visa.

In an e-mail to Amy Flatten, director of international affairs for the American Physical Society, Stephen "Tony" Edson, the State Department's deputy assistant secretary of visa services, said it is not necessary for consular officials to keep passports during visa processing, "and travelers should feel free to ask for their passports back."

"The only relatively minor inconvenience will be for applicants to return their passports to the consular section once they are cleared so that the visa can be issued," he wrote. "No traveler should ever have to defer or miss travel because we are holding their passport for visa issuance."

The clarification is important for non-US physicists and other scientists who, because of the nature of their work, are often subject to a more rigorous investigation before a visa is granted. That investigation, known as a Mantis review, caused visa delays in the wake of the September 11 terrorist attacks, and can take several weeks to complete. It is triggered when the visa applicant is involved in work related to any of a long list of items on the State Department's technology alert list.

Edson's e-mail to clarify the policy can be found at <http://www.aps.org/programs/international/visa/passport.cfm>. Flatten said scientists applying for visas should take a copy of the e-mail with them to their US consulate.

Jim Dawson

of really intelligent PhDs, many of them very much into science, but they wanted to be more actively engaged in the decision making that affects all of us." Whittlesey joined the office of Rep. Doris Matsui (D-CA) because, he says, "House staffs are usually about 10 people. Senate staffs can be 50. So in a House office, as opposed to having a subset of science issues, you are the science person."

This year's AIP fellow is Jonna Hamilton, whose 2006 PhD from Brown University focused on how puffins use their wings to both swim and fly. She is working on energy and environment issues in the office of Senator Richard Durbin (D-IL). "I love academics, and I love science, but [doing my research] I felt like I wasn't doing anything that mattered in the broader scheme of

things," she says. "Here, I get to use my scientific training to influence policy in a positive way."

In choosing to work for Sen. Christopher Dodd (D-CT), Mark Wenzel, this year's fellow for the American Geophysical Union, looked for "politics, personality, and portfolio." When PHYSICS TODAY spoke with him, Wenzel, who holds a 2006 PhD in Earth and planetary sciences from the University of California, Berkeley, had just joined Dodd's office and expected to work on defense procurement, energy and the environment, and competitiveness.

Eleanore Edson, this year's fellow sponsored by OSA and the International Society of Optical Engineering (SPIE), came to the office of Sen. Hillary Clinton (D-NY) from a fellowship at the NAS. As a graduate student in neurobiology at



Congressional fellows sponsored by physics societies this year include, from left: Jonna Hamilton, Donald Engel, Alex Saltman, Kevin Whittlesey, and Mark Wenzel.

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AIP Sponsors Dufty in the State Department

"I am in the middle of a steep learning curve. My days are full," says James Dufty, the American Institute of Physics' eighth State Department fellow.

Dufty is working for a year in the Bureau of International Organization Affairs, where he serves as a liaison between the US government and the natural sciences and social and human sciences sectors of the United Nations Educational, Scientific and Cultural Organization (UNESCO). A theoretical physicist who has been on the faculty of the University of Florida for 35 years, Dufty says he chose the bureau because "it was an opportunity to come in where there was a vacuum. I have come to an office where I am the only person with a science background."

UNESCO is in the process of reviewing its two science sectors and drafting a strategy for the next six years. One aim is to organize the science sectors in a more interdisciplinary way. "My role is to help communicate what US policy would be, and to make sure that the restructuring is consistent with US objectives," says Dufty. For example, "there could be a resolution on having an ethical policy developed by UNESCO for science." Such a resolution could provide guidance for safety and commercialization standards in areas such as nanoscience. Ethics is not an easy issue, says Dufty. "We want to bring potential problems under control, but we don't want to stifle research."

Not surprisingly, liaising between the US government and UNESCO doesn't involve the kinds of condensed-matter calculations Dufty usually does. But, he says, "I think the point is that someone in the sciences has a perspective that is different from someone who came up in the foreign or civil service."

"I wanted to contribute to the State Department," continues Dufty. "But I also want to go home and talk to my colleagues who, I think, have very little understanding of how policy is made."



Dufty

gressional fellows have stayed in policy, a third have returned to academia, and a third have struck out in new directions. Most of last year's fellows have stayed in the Washington area, at least for now.

Two 2005–06 congressional fellows—Jamie Link, sponsored by OSA and SPIE, and Vivek Mohta, sponsored by APS—have jobs at the Science and Technology Policy Institute in Alexandria, Virginia, doing research related to US competitiveness and innovation and the effective allocation of federal R&D spending. Josh Trapani, last year's AGU fellow, has a fellowship as a policy analyst at the USDA Forest Service. Trapani says he may still return to academia. Being a congressional fellow, he says, "is an intense educational experience. Everything moves fast. Getting things done by deadline was more important than getting them done perfectly. And I learned that science has an important role to play in policy, but it's just one piece. It's about negotiating between a whole lot of things, and to have science trump everything else doesn't make sense."

Benjamin Gross, last year's fellow for OSA and MRS, is the only one of the bunch to have left Washington. Now job hunting in San Francisco, he says he would like to work in the technology sector doing product management or consulting. "One of the blessings and curses of the congressional experience is that I have almost too many options in terms of career paths I could pursue." Science policy and politics, Gross adds, are "addictive. People talk about Potomac fever. It's hard to put down."

Toni Feder ■



Edson

Harvard University, she says, "I realized I wanted to have a career that addressed the big picture of numerous scientific issues—as opposed to the minutiae of one particular research area." As a Clinton staffer, Edson's purview is

aging, substance abuse, mental health, and military health issues. "I meet with constituents. I attend meetings and seminars. And a lot of my job is to find support for legislation that is still pending and to work on new legislation ideas," she says.

Alex Saltman is working on arms control, energy, and the environment in the office of Rep. Adam Schiff (D-CA) and, like Engel, is sponsored by APS. Saltman earned his PhD in string theory this past summer from Stanford Uni-

versity. He came to Washington "to do something socially useful" and says he is "undecided about whether to go back to academia or stay in policy." But, he adds, "it seems that we scientists are in big demand here [in Washington]."

Potomac fever

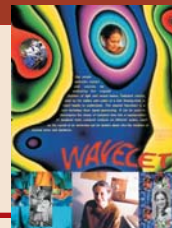
Over the years, roughly a third of con-

web watch

To suggest topics or sites for Web Watch, please visit <http://www.physicstoday.org/suggestwebwatch.html>.
Compiled and edited by Charles Day

<http://www.pdksciart.com>

The PDK Poster Project portrays women scientists and their work in a series of dramatic yet personal posters. Designed by Pam Davis Kivelson and Inga Dorosz, the posters aim to encourage women and girls to pursue careers in the physical sciences and mathematics.



<http://www.sound101.org>

The physics and physiology of sound perception is the topic of **BadVibes: The Hunt for the Worst Sound in the World**. The interactive website, which has been put together by Trevor Cox, accompanies a major acoustics exhibition at the Museum of Science and Industry in Manchester, England.



http://www.oeb.harvard.edu/cfs/media_frame.html

Harvard University's Andrew Biewener and his colleagues study the mechanics of animal locomotion, including how wallabies hop, emus run, and cockatiels fly. To view Biewener's experimental subjects in action, visit **Movies and Media from the Concord Field Station**.

Applications for congressional fellowships are due early in 2007. For details, visit http://fellowships.aas.org/02_Areas/02_Congressional.shtml, which has links to the various sponsoring professional societies.