

Washington Ins & Outs

NIST and DOD Research Chiefs Depart; OSTP Gets Help

A few weeks before President Clinton sent his budget request for fiscal 1998 to Capitol Hill, **Arati Prabhakar**, the enterprising director of the Department of Commerce's National Institute of Standards and Technology (NIST), announced that she was taking maternity leave and would not take part in the budget exercise. Then, in early April, she informed the President that she was leaving the agency to join Raychem Corp in Menlo Park, California, as senior vice president and chief technology officer. Prabhakar's departure highlights the uncertain future of NIST's beleaguered Advanced Technology Program (ATP), which was initiated during the Bush Administration as an attempt to emulate, on a modest budget, what Japan's Ministry of International Trade and Industry had achieved, by conducting generic research on technologies that American companies were not likely to pursue on their own.

Among 288 projects ATP has taken on since 1991, it has funded work, on a 50-50 partnership with industry, on technologies such as flat-panel computer displays and advanced ceramics as well as on more fuel-efficient automobiles with Detroit's Big Three. The Clinton Administration raised ATP's budget and profile, but the effort was thwarted by Republicans in Congress who assailed ATP as a prime example of "corporate welfare." Last year, ATP was battered in the budget battle on Capitol Hill and its funding was cut to \$221 million, down \$121 million from fiscal 1995. The Administration's 1998 budget request for ATP is up, at \$275.6 million.

Prior to her appointment to NIST in 1993, Prabhakar was deputy director of the Pentagon's science and engineering office, and before that she was a program official at the Defense Advanced Research Project Agency (DARPA) for nearly four years. She came to Washington in 1984 with a PhD in applied physics from Caltech to work at the Congressional Office of Technology Assessment (OTA). (OTA was scuttled by Congress in September 1995.)

An aggressive champion of ATP who frequently skirmished with some members of Congress, Prabhakar says she didn't leave because of political or personality differences. "I came to Washington in 1984 for one year. It's my standard joke that I've been on my way to industry for 12 years now, and I'm finally going to get there," she says.

"Nothing that I planned ever happened according to my design. Something better always came along."

Her new employer, Raychem, produces wire and cable, electrical protection devices and leak detection systems. The company's net sales last year were \$1.67 billion.

Prabhakar's husband is no slouch either. He is **Patrick H. Windham**, senior staffer for science and technology at the Senate Committee on Commerce, Science and Transportation for the past 15 years. He first worked for the Commerce Committee in 1976 as a Congressional science fellow while a graduate student in political science at the University of California, Berkeley, and he joined the committee staff in 1982. As a principal aide to Senator Ernest (Fritz) Hollings of South Carolina, during his chairmanship of the Commerce Committee, Windham was closely involved in the creation of ATP during the Bush Administration and in its growth during the Clinton Administration.

The couple has moved to California with their daughter, Katherine, born in March.

Robert E. Hebner, deputy director of NIST's electronics and electrical engineering lab in Gaithersburg, Maryland, has been acting director of the agency since Prabhakar went on maternity leave. Hebner will continue in the post until the President picks a permanent director, who must be confirmed by the Senate.

Assailed from various quarters in and out of Washington for its lack of political influence, the White House Office of Science and Technology Policy (OSTP) is also snarled in the Senate's confirmation logjam. The nominations of **Kerri-Ann Jones** and **Jerry Melillo** to be associate directors of OSTP moved quickly and without mishap through a Senate Commerce, Science and Transportation Committee hearing on 23 April. But their confirmation by the full Senate is stalled, as are many other appointments and bills in this session.

Jones is a molecular biochemist and biophysicist with a PhD from Yale, where she studied the effects of stress on metabolism, using nuclear magnetic resonance. For more than a decade, until 1995, she worked for the Asia and Near East Bureau of the State Department's Agency for International Development.

She is awaiting confirmation to head OSTP's national security and international affairs division. Melillo, codirector of the Ecosystems Center at the Marine Biological Laboratory in Woods Hole, Massachusetts, is in line for associate director for environmental issues at OSTP. He also has a PhD from Yale. Melillo's research in biogeochemistry includes work on global climate change, ecological consequences of tropical deforestation and sustainable management of forest ecosystems. He recently completed a three-year term as vice chairman of the International Geosphere-Biosphere Program. Until the Senate acts, Jones and Melillo are consultants and acting associate directors at OSTP.

Though OSTP has submitted names to the White House to fill two other vacant associate directorships—for science and for technology—the identities of these candidates have not leaked.

Meanwhile, OSTP's staff has been augmented by two physicists on assignment from their respective agencies. They are **Gerald L. Epstein**, a senior technical adviser at the Department of Energy, on detail to OSTP's National Science and Technology Council, and **Miriam A. Forman**, a senior program officer at NASA, also on detail to NSTC.

Epstein, who received a PhD in physics from the University of California, Berkeley, in 1984, was a senior associate at the Congressional Office of Technology Assessment (OTA), directing studies on nuclear proliferation, antisatellite arms control, ballistic missile defense and fusion energy. He was at OTA from 1983 until 1995, with the exception of two years (1989-91) that he spent directing a project at Harvard University's John F. Kennedy School of Government on the relationship between civilian and military technologies. At OSTP, Epstein is working in the national security and international affairs division on issues of counterterrorism technologies, the Comprehensive Test Ban Treaty, the Chemical Weapons Convention and the Department of Energy's science-based stockpile stewardship program.

Forman earned a PhD in physics at the State University of New York at Stony Brook in 1972 and taught in Stony Brook's department of Earth and space science until she joined NASA's space physics division in 1992. While at Stony Brook, she served in the late 1980s as deputy to the executive secretary of the American Physical Society, then William W. Havens Jr.

In mid-May, **Anita K. Jones**, director of defense research and engineering at the Pentagon and chief science adviser

to Defense Secretary William Cohen (and to his predecessor, William Perry), returned to the academic position she left in June 1993—that of professor of computer science and department chair at the University of Virginia.

Jones earned a PhD in computer science at Carnegie Mellon University in 1973. She announced her return to the University of Virginia just as her husband, **William Wulf**, also a professor of computer science at the same

university became president of the National Academy of Engineering (NAE). He had served nine months as interim president after Harold Liebowitz was voted out of office by NAE members.

IRWIN GOODWIN ■

WASHINGTON DISPATCHES

► **Debunking a Gender Gap** After an exhaustive four-year study of standardized exams taken by 15 million US students in the fourth, eighth and twelfth grades, the Educational Testing Service (ETS) of Princeton, New Jersey, concluded that “the average performance differences [between boys and girls] across all subjects is essentially zero.” The findings, released on 6 May, contradict the hoary assumption about gender differences in academic achievement. In comparing test results over the past 30 years, ETS found that although boys continue to get the highest scores on college entrance exams, such as the Scholastic Aptitude Test and American College Test, the sexes are evenly matched in most critical skills, including verbal reasoning, abstract reasoning and math computation.

The tests indicated that girls had a modest edge in short-term memory and perceptual speed and a somewhat larger advantage in language ability, especially writing. The superiority of girls in verbal skills held up for the 30 years over which the comparisons were made and shows no sign of lessening. By contrast, the higher ranking of boys in math and science was found to be surprisingly slight—indeed, “significantly smaller than 30 years ago,” the report states. In fact, the only subjects in which boys showed a clear advantage were mechanical and electronic ability and knowledge of fields such as economics and history.

► **What Bush Wrought** On the eve of the 52nd anniversary of V-E Day, H. Guyford Stever, this year’s recipient of the National Science Board’s Vannevar Bush Award, extolled Bush for enlisting US scientists to help win World War II by developing radar, missiles and nuclear bombs. Bush “is celebrated for four little words, *Science—The Endless Frontier*,” said Stever. “He should be better known as a national hero.” Bush’s legacy, he declared, is the country’s continuing leadership in academic and industrial research. In 1941, Bush plucked Stever, who had just received his PhD in physics from Caltech and was working as a postdoc at MIT’s Radiation Laboratory, to work in Washington at the Office of Scientific Research and Development. When the US entered the war, Bush shipped Stever off to London, where as a science liaison officer, he analyzed developments in British radar and German rocketry.

After the war, Stever became an aeronautical engineer and helped pioneer the technologies of supersonic aircraft and guided missiles. He chaired the special committee on space exploration convened by the National Advisory Committee for Aeronautics that provided the first guidelines for establishing NASA and the country’s civilian space program. In 1968, Stever led the effort to merge the Carnegie Institute of Technology with the Mellon Institute, to form Carnegie Mellon University. Then, as director of the National Science Foundation, he became the science adviser to Presidents Nixon and Ford. But he never lost contact with the physicist-engineer who “discovered” him, Vannevar Bush. In praising him, Stever also made sure that the 150 science board dinner guests learned how Bush pronounced his odd first name—van-EE-ver.

Also honored at the dinner was the late Carl Sagan, the Cornell University astrophysicist, who received a posthu-

mous NSF Director’s Public Service Award (accepted by his widow, Ann Druyan), and Eric A. Cornell, adjunct professor at the University of Colorado at Boulder and physicist at the National Institute of Standards and Technology, accepted the prestigious Alan T. Waterman Prize for young researchers. Cornell and University of Colorado physicist Carl Wieman, first demonstrated Bose-Einstein condensation in a gas (PHYSICS TODAY, August 1995, page 17). The Waterman Prize gives Cornell \$500 000 over the next three years.

► **Off the Internet** The huge commercial success of the Internet has led the National Science Foundation to end its cooperative agreement with Network Solutions Inc of Vienna, Virginia, which assigns and administers Internet names and addresses. NSF funded much of the R&D to create the Internet, but, says Joseph Bordogna, NSF’s acting deputy director, “The Internet has gone from the development stage to the application stage, and its administrative structure needs to be supported by its commercial customers.” NSF is now turning its attention to the next-generation Internet, which is the subject of the Administration’s fiscal 1998 budget request of \$100 million, to be shared among five agencies. But the Republican-led House Science Committee has refused to authorize the funds for the proposed project, arguing that the Internet is now a profitable symbol of high technology and global communication and therefore doesn’t need government support.

Without involving the Internet, NSF has augmented its own “backbone” network service with “The Chicago STAR TAP” (Science, Technology and Research Transit Point), which provides an interconnection point for US and Canadian scientists who collaborate on research and education projects requiring large databases. The operation of this interconnection is shared by the University of Illinois at Chicago, the National Center for Supercomputer Applications at the University of Illinois in Urbana-Champaign, Argonne National Laboratory and Ameritech Corp.

► **EMF Research Plugged Back In** Often it’s the inconsequential that attracts most support on Capitol Hill. A case in point: On 29 April, the House passed HR 363 by a lopsided 387-to-35 vote, thereby extending Department of Energy research on the health risks of electromagnetic fields (EMFs) associated with power lines and household appliances. The bill, which sparked statements on the House floor by seven members in favor and no opposition, had been approved a few days before by the Science and Commerce committees. The bill directs DOE to continue the Research and Public Information Dissemination Program (RAPID) for an extra year. After the National Academy of Sciences’s National Research Council had found “no conclusive and consistent” evidence of health disorders from EMFs in homes, DOE wanted to pull the plug on RAPID at the end of fiscal 1997, on 30 September (see PHYSICS TODAY, May, page 47). The additional year is expected to cost about \$4.5 million. In fact, the program, originally projected to cost \$65 million over five years, will be authorized under the bill for \$45 million, but its sponsors don’t believe all that money will be spent.

IRWIN GOODWIN ■