

tunities to voice concerns directly to Chinese participants. Another petition is planned, and there may be a chance to speak directly with Clinton Administration officials.

Joseph Birman of the City College of New York, the current chair of CIFS, expresses confidence that the new Administration "will bring to the situation the seriousness [that we feel is appropriate]."

The State Department's assistant secretary for human rights has yet to be appointed at this writing, but Winston Lord has been named Assistant Secretary for Far Eastern Affairs and Morton Halperin may be made an assistant secretary in the Pentagon, where he would preside over a newly created human rights office.

Lord, a former ambassador to China, has been outspoken in recent years on the subject of democratic rights in the PRC, and he is well acquainted with Fang Lizhi. Lord was ambassador to China at the time of the famous incident in which Fang was prevented by Chinese secret police from attending a 1988 banquet in Beijing hosted by then vice president George Bush.

Halperin, a very sharp critic of US support of authoritarian regimes in past decades, has (like Lord) worked in senior foreign policy positions for both Republican and Democratic governments.

—WILLIAM SWEET

JOHNSTON IS ELECTED 1993 VICE PRESIDENT OF AAPT

Karen L. Johnston of North Carolina State University is the new vice president of the American Association of Physics Teachers. She succeeds Howard G. Voss, a physics professor at Arizona State University, who is now AAPT president-elect. The current president is Reuben E. Alley, a professor of electrical engineering at the US Naval Academy in Annapolis, Maryland. The officers began their one-year terms in January following the association's meeting in New Orleans.

Johnston earned a BS in teaching in 1971 and an MS in physics in 1974 from Sam Houston State University. After earning a PhD from the University of Texas, Austin, in 1979, Johnston became an assistant professor of physics at Memphis State University. In 1982 she joined the faculty at North Carolina State University, where she is now a professor of physics. Johnston's research in physics education has dealt primarily with



Karen L. Johnston

the development of problem-solving skills using microcomputers and student learning in the physics laboratory. She has also been involved in developing physics curriculums and educating graduate teaching assistants for academic careers.

In other election results, John W. Layman of the University of Maryland was elected AAPT secretary and Jennifer Bond Hickman of Phillips Academy in Andover, Massachusetts, was elected to the executive board.

NEW RESEARCH DIRECTORS AT GE AND NEC-PRINCETON

Some telling commonalities and contrasts are to be found in the selection of new research chiefs at General Electric (Schenectady) and the NEC Research Institute (Princeton).

Both Lewis S. Edelheit, the new senior vice president for corporate research and development at GE, and C. William Gear, the new president of NEC-Princeton, are products of the University of Illinois, Urbana-Champaign—testimony to the university's outstanding position in solid-state physics, applied mathematics and computer science.

Yet Edelheit takes the reins at a company that has had to divest itself of many traditional activities in recent years, while NEC, at least until very recently, has been able to support ever more far-flung operations, including arcane research conducted in distant countries. It would not be much of an exaggeration to say that if GE still is electric, its research is not quite so general as it once was. Japan's NEC,

on the other hand, has become so general that it can pay New Jersey researchers good salaries to study things like chess and the game go.

That said, GE's reputation in the physics community as a place where research has declined is not altogether warranted, according to Edelheit. While basic research, especially in condensed-matter physics, has been cut, Edelheit says the total number of PhD scientists now at the corporate research lab—nearly 400—is larger than in 1985, when the number was 355. Edelheit says GE now puts less emphasis on generation of new proprietary knowledge and more of a premium on the ability to adapt new knowledge rapidly to product needs.

"Technology available to put into products is exploding," Edelheit observes, "but I can't think of anything anywhere that's still controllable in terms of being proprietary. So everybody is drawing on a common pool, and research has to be very focused to leverage knowledge out of that pool."

Medicine in, aerospace out

Edelheit, who was manager of the Electronic Systems Research Center at GE R&D before being named senior vice president for research, earned a BS (1964), MS (1965) and PhD (1969) at the University of Illinois. He started his career at the GE research lab, but in 1976 he moved to GE Medical Systems in Milwaukee, where he worked on a new computed tomography scanner developed by GE and formed and managed the new Applied Science and Diagnostic Imaging Laboratory. He also served as general manager of the Computed Tomography Programs Department.

In 1986 Edelheit left GE to become president and CEO of Quantum Medical Systems in Seattle. He remained in that position after Quantum was acquired by Siemens but returned to GE in 1991 to take charge of electronic systems research.

Edelheit succeeds Walter L. Robb, a chemical engineer who is 14 years his senior. Robb initially worked on nuclear fuel reprocessing and isotope separation at the Knolls Atomic Power Laboratory, but in 1968 he was made manager of the GE Medical Venture Operation and in 1973 general manager of GE's Medical Systems Division in Milwaukee. Robb became a vice president of GE in 1974 and a senior vice president in 1983, and in 1986 he became head of the R&D Center, succeeding Roland Schmitt.

The careers of both Edelheit and Robb are indicative of the major

trends at GE in the last decades—the emergence of medical electronics as one of the company's most successful activities, along with its withdrawal from some more traditional fields. (General Electric is now the world's leading manufacturer of CT scan and MRI equipment.)

Under chairman John F. Welch Jr, who has often said that a big company has to be Number 1 or 2 in whatever it does worldwide, GE has traded its consumer electronics operations in the US for Thomson's medical electronics business in Europe and, more recently, sold its aerospace and naval propulsion divisions to Martin Marietta. GE continues, however, to be a major producer of jet engines, electrical equipment such as locomotives, motors and turbines, household appliances, lighting and plastics.

As part of the deal with Martin Marietta, which was concluded last November, the St. Louis aerospace company acquired GE's Advanced Technology Laboratory in Moorestown, New Jersey, which does work on digital processing and artificial intelligence, and an electronics lab in Syracuse, New York, which works on communications, optoelectronics and microelectronics. Martin Marietta also gained some access to the GE corporate research center in Schenectady for aerospace-related programs.

NEC research environment

The NEC Research Institute at Princeton, founded in 1988, has turned out to be an oasis in an otherwise rather inhospitable national research environment. With an annual budget of about \$25 million, the institute currently has about 40 researchers. Research money is allocated by person rather than project, according to a system of seniority.

Gear, who obtained his bachelor's degree at Cambridge University in 1956 and his master's and doctoral degrees in mathematics at the University of Illinois in 1956 and 1960, succeeded Dawon Kahng as president of the institute. Kahng, who died in May 1992, was founding president of the institute. Gear was vice president for computer sciences, and Joseph A. Giordmaine, formerly head of solid-state research at AT&T Bell Laboratories, was vice president for the physical sciences.

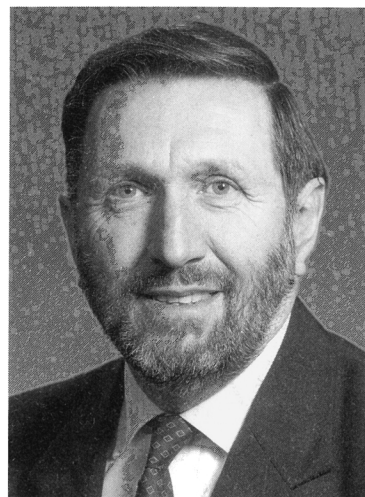
Concurrently with Gear's appointment to the presidency of the institute, Giordmaine was named senior vice president for the physical sciences.

From 1960 to 1962 Gear was a computer engineer at IBM, where he worked on the famous 360 project



Lewis S. Edelheit

that launched IBM's most successful mainframe. From 1962 to 1990, when he joined NEC, Gear was a professor of computer science at the University of Illinois, where he served as department head from 1985 to 1990. He is past president of the Society for Industrial and Applied Mathematics and a former managing editor of SIAM's *Journal on Scientific and*



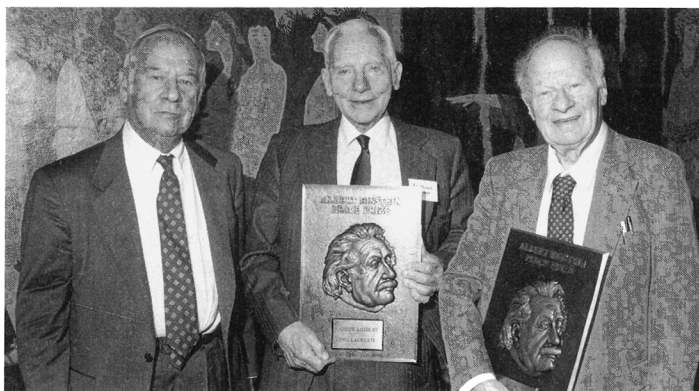
C. William Gear

Statistical Computing.

The main purpose of the NEC lab is to develop fundamentally new approaches to the design of computers, which is why staff members are permitted and even encouraged to spend their time studying games and trying to understand human consciousness.

—WILLIAM SWEET ■

Einstein Peace Prizes for Bethe and Rotblat



Award ceremony at University of Chicago luncheon for Einstein Peace Prize winners: From left, Paul Warnke (the former chief US arms control negotiator who served as chairman of the selection committee), Joseph Rotblat and Hans Bethe. The awards are made by the Albert Einstein Foundation, which has the mission of drawing attention to individuals who have contributed importantly to nuclear disarmament. Bethe, who headed the theory division of the Manhattan Project, was cited especially for publicizing dangers associated with nuclear weapons after World War II and for his role in founding the Union of Concerned Scientists. Rotblat, another veteran of the Manhattan Project, was commended particularly for cofounding Pugwash—the organization of elite scientists, established in 1955 with help from a Canadian businessman, to promote nuclear arms control and disarmament. Taking note of Rotblat's resignation from the Manhattan Project when it became apparent that Germany would be defeated, Warnke said Rotblat recognized therewith that "deterrence was the only legitimate reason for nuclear weapons."