

National Science Board honors Seitz for many contributions

Frederick Seitz, president emeritus of the National Academy of Sciences and of Rockefeller University, has been presented with the fourth Vannevar Bush Award by the National Science Board. NSB, which acts as the policy arm of the National Science Foundation, established the award to recognize the outstanding contributions to society both of the individual and of science and technology; it makes its selection from time to time to honor efforts of particular significance to the national welfare. The three prior recipients of this honor were James R. Killian, William O. Baker and Lee A. DuBridge.

At the awards ceremony, Lewis Branscomb, chairman of NSB and vice president and chief scientist at IBM, described Seitz as a "man of extraordinary depth and modesty, gifted with high perception and uncommon patriotism, whose every undertaking is marked with humor and grace."

Seitz, a solid-state physicist, was recognized by the Board for his achievements as a researcher, as an educator, and as a leader of the scientific community. They noted his role as member of the President's Science Advisory Committee and as an advisor in numerous capacities to the Defense Department and to NASA; his efforts to apply science and technology to the needs of developing countries; his leadership at the National Academy and at the University; his international leadership as an advisor to NATO and to the Ministry of Education of India, and as a member of the US delegation to the UN; as well as for his scientific research.

The Board recognized his role as one of the founders of the quantum theory of the solid state of matter. His writings include *The Modern Theory of Solids*, which became for a long time the standard text in the field, and *The Physics of Metals*. He postulated the theory that explained the bubble chamber, contributed to the development of nuclear-reactor design, conducted studies leading to the theory of the plastic properties of solids and investigated problems associated with

radiation damage.

After obtaining his PhD from Princeton University in 1934, Seitz taught and pursued his research interests at the University of Rochester (1935-37), at General Electric Company (1937-39), and at the Randall Morgan Lab for Physics at the University of Pennsylvania (1939-42). He served as professor and head of the physics department at the Carnegie Institute of Technology from 1942-49, and then joined the staff at the University of Illinois where he served as director of the Control Systems Lab (1951-52), technical director (1952-57), head of the physics department (1957-64) and dean of the graduate school and vice president for research (1964-65). He became the first full-time president of the National Academy of Science in 1962, serving in that capacity until 1969. He was president of Rockefeller University from 1968 until his retirement 1978.



SEITZ

Franklin Institute awards medals

Seven physicists are among the winners of medals presented annually by the Franklin Institute for achievements in science and technology. Among them are Kenneth G. Wilson, who has won the Franklin Medal, and his father, E. Bright Wilson, who shares the Elliott Cresson Medal with Harold P. Eubank. In addition, Lawrence A. Harris was awarded the John Price Wetherill Medal posthumously, Erich P. Ippen and Peter Shank have received the Edward Longstreth Medal, and R. Hanbury Brown and Richard Q. Twiss have been given the Albert Michelson Medal.

Kenneth G. Wilson of Cornell University was honored with the Franklin Medal for his "development and application of renormalization group theory." In 1982 Wilson won the Nobel prize for his application of the renormalization group to critical phenomena at phase transitions (PHYSICS TODAY, December, page 17). This powerful mathematical tool has applications in many field of physics, par-

ticularly in areas where the difficulty of the problem is due to the multiplicity of scales, such as quark confinement, the onset of chaos and the Kondo problem. Wilson is now working in computer simulation, the use of inexpensive array processors for renormalization-group problems, and extending the range of the problems that the computer can handle with new algorithms and hardware. Wilson received his PhD in 1961 for work done under Murray Gell-Mann at the California Institute of Technology. After spending a year at CERN, Wilson came to Cornell University in 1963.

The Elliott Cresson Medal has been presented to E. Bright Wilson, professor emeritus of chemistry at Harvard University, "for contributions to chemical physics," and to Harold P. Eubank, principal research physicist at the Princeton Plasma Physics Laboratory, "for work in the area of plasma physics."

E. Bright Wilson has contributed to our understanding of molecular dy-