

The Fourth James R. Killian, Jr.
Faculty Achievement Award Recipient
1975-76

Frank Press, Professor of Geophysics
Head, Dept. of Earth and Planetary Sciences

Citation

The James R. Killian, Jr. Faculty Achievement Award, established by the MIT faculty in 1971, is intended to recognize extraordinary professional accomplishments by members of the faculty. The Award thus honors the monumental example set by Dr. Killian himself, as well as supporting the principle he so brilliantly defended, that the quality and strength of any educational institution depends primarily on the quality and strength of its faculty. The Selection Committee is extremely pleased to announce its choice of Frank Press, Professor of Geophysics and Head of the Department of Earth and Planetary Sciences, to be the fourth recipient of the Award.

Professor Press is a distinguished geophysicist, both because of the impact of his scientific work on the development of modern geophysics and because of the influence of his personal leadership in national science planning and administration. He thus exemplifies and honors the constructive duality that Dr. Killian himself has displayed so extraordinarily.

Professor Press came to M.I.T. in 1965 as Chairman of the Department of Earth and Planetary Sciences after illustrious academic careers at Columbia University and the California Institute of Technology. He received his Bachelor of Science degree from the College of the City of New York in 1944 and Ph.D. in 1949 from Columbia University. Between 1949 and 1955 Dr. Press was on the faculty of Columbia University where he

collaborated closely with the late Dr. Maurice Ewing, the world leader in oceanography and marine geophysics. In 1955 he was appointed Professor of Geophysics at the California Institute of Technology and in 1957 he became the director of its famous Seismological Laboratory, a post he held until he came to M.I.T. Under his chairmanship, the Department of Earth and Planetary Sciences at M.I.T. has expanded significantly its programs in geology and geophysics, planetary sciences, oceanography, interdisciplinary studies and the Joint Education Program with the Woods Hole Oceanographic Institution.

Professor Press is recognized throughout the world for his many pioneering contributions in geophysics, oceanography and lunar and planetary sciences. He has published two books and over 150 scientific papers. His primary scientific activities have been in seismology and the study of the earth's interior. Since the beginning of his career he has realized the importance of long-period surface waves in understanding the earth's structure. He developed the theory for these waves and the instrumentation to record them. In 1960, Professor Press and his colleagues were able to make the first observations of the earth's free oscillations following the great Chilean earthquake. Today, the analyses of seismic surface waves and free oscillations are the most powerful techniques for the study of the structure and the properties of the earth's crust and deep interior. He was the first scientist to see the need and to develop techniques for seismic studies of the moon and planets. The experiments he helped guide have revealed, through the Apollo program, that the moon, like the earth, has a crust and a mantle, but is seismically much less active than the earth.

Professor Press' scientific leadership and achievements have been recognized by the scientific community in general and by his colleagues and students in particular. He was

elected to the National Academy of Sciences in 1958 and the American Academy of Arts and Sciences in 1966. He has received the Columbia University Medal for Excellence, the California Scientist of the Year Award, the Townsend Harris Medal of the College of the City of New York, the Gold Medal of the Royal Astronomical Society, and the Arthur L. Day Medal of the Geological Society of America. Professor Press' contributions to science are magnified both by his continuing individual efforts and by his students and post doctoral fellows in many universities and research laboratories all over the world.

Professor Press was an organizer and mover of the International Geophysical Year which lasted a decade and contributed to international explorations of Antarctica and the oceans. He has been prime mover of the research efforts on earthquake prediction in the United States and in international cooperation with Japan, the U.S.S.R., and the People's Republic of China. Currently he is involved in the expansion of the Joint US/USSR Cooperation in Marine Geology and Geophysics.

In public service, Professor Press has contributed continuously to national scientific efforts, science planning and policy. He has served on the President's Science Advisory Committee and many national and international panels, scientific councils and advisory boards. He was a member of the U.S. Delegation to the Nuclear Test Ban Conference.

Now at the height of his career, Professor Press brings to the Killian Lectureship the ability to discuss national and scientific issues with the authority of one who is making important contributions to science through his own teaching and his research, one who is an advisor to government, and a leader in international cooperation. We look forward to an exciting and provocative series of lectures next year.

Selection Committee:

Robert L. Bishop
Richard M. Held
William T. Martin
Alexander Rich
William M. Siebert, Chairman