

ASA SILVER MEDALISTS HONORED AT MEETING IN NEW ORLEANS

The Acoustical Society of America, during its November meeting in New Orleans, bestowed Silver Medals on four individuals. The Silver Medal in Underwater Acoustics and Engineering Acoustics went to Victor C. Anderson; the Silver Medal in Noise to George C. Maling Jr.; the Silver Medal in Engineering Acoustics to Alan Powell; and the Silver Medal in Musical Acoustics to Thomas D. Rossing.

Anderson was cited for "pioneering underwater sound research in ambient noise and for the invention and engineering development of the delay time compression correlator and digital multibeam steering sonar." The DELTIC correlator, which Anderson worked on in the mid-1950s, is a device used in sonars for generating cross-correlation functions in real time. The other invention for which Anderson was cited, the DIMUS sonar, allows the simultaneous generation of a set of preformed beams from a hydrophone array.

Anderson earned a PhD in physics from the University of California, Los Angeles, in 1953. He has spent much of his career at the Marine Physical Laboratory of the Scripps Institution of Oceanography: In 1947 he became a research assistant there, and in 1968 he became a professor of applied physics at the University of California, San Diego, and associate director of the lab. He retired in 1989.

Maling was cited for "outstanding leadership in noise control and in the development of widely used, internationally and nationally standardized methods for noise evaluations." In the early 1960s Maling designed and built a plenum for acoustical testing of small air-moving devices; this plenum was eventually adopted as an international standard. From 1976 to 1979 he headed the American National Standards Committee S-1 on acoustics and was involved in developing standards for determining the noise emission of sound sources.

Maling earned a PhD in physics from MIT in 1963, after which he continued to work there as a re-

searcher for two years. In 1965 he joined IBM in Poughkeepsie, New York, where he was a senior physicist until retiring in July 1992.

Powell was cited for "leadership in research in the silencing of ship noise and for fundamental contributions to aeroacoustics." As technical director of the David Taylor Naval Ship Research and Development Center from 1966 to 1985 Powell built up a large program in ship acoustics. More recently he has returned to personal research in aeroacoustics, studying phenomena involved in flow resonances, such as those in edge tones and the screech of supersonic jets.

Powell earned a PhD in engineering from the University of Southampton in England in 1953. From 1956 to 1964 he was a member of the engineering faculty at the University of California, Los Angeles. In 1964 he joined the David Taylor Model Basin, which became the David Taylor Naval Ship Research and Development Center in 1966. In 1986 he became a

professor of mechanical engineering at the University of Houston.

Rossing was cited for his "major influence on research and teaching in musical acoustics and contributions to the understanding of percussion instruments." He and his students have studied modes of vibration and sound generation in a wide variety of bells, gongs, drums and bar percussion instruments, using techniques such as holographic interferometry and experimental modal testing. Rossing has written several books on acoustics, including *The Physics of Musical Instruments* (Springer-Verlag, New York, 1991), which he coauthored with Neville Fletcher.

Rossing received a PhD in physics from Iowa State University in 1954. After three years as a researcher in the Univac division of Sperry Rand, he joined the physics faculty of St. Olaf College. Since 1971 he has been a professor of physics at Northern Illinois University.

OBITUARIES

Gerard Kitchen O'Neill

Gerard O'Neill died on 27 April 1992, after losing a seven-year battle with leukemia. Like Richard Feynman in similar circumstances, he worked and pursued new adventures until a few days before his death. He accomplished more in the years after he became sick than most of us accomplish in a lifetime.

He had three careers. As an experimental physicist, he invented and developed the technology of storage rings that is now the basis of all high-energy particle accelerators. As a teacher and writer, he explored the possibilities of human settlement and industrial development on the Moon and in orbiting space colonies. As an entrepreneur, he founded several companies to develop new commercial technologies, ranging from a cheap satellite navigation system (Geostar) and a secure short-range

office communication system (Lawn) to a high-speed train system.

O'Neill began his scientific education as a radar technician in the US Navy. He then went to Swarthmore College as an undergraduate and to Cornell University as a graduate student in physics. After earning his PhD in 1954, he came to the Princeton University physics department as an instructor. Two years later he published a letter in *Physical Review* entitled "Storage-Ring Synchrotron: Device for High-Energy Physics Research." In two pages it laid down the path that high-energy physics has followed for the subsequent 36 years. If you read the letter now, you can see that almost everything in it is right. But it took a long time before most of us understood how right it was. O'Neill built a storage ring himself at Stanford to convince people that it was feasible. He solved the tough technical problems of injecting a beam from an accelerator into the ring and keeping