

Bauer, Hubbard and Crandall win acoustical awards

The Acoustical Society of America presented three awards at its fall meeting last month. Two Silver Medals were awarded, one in engineering acoustics to Benjamin B. Bauer and one in noise to Harvey H. Hubbard, and the Trent-Crede Medal was given to Stephen H. Crandall.

The Silver Medal is presented to individuals for contributions to the advancement of science, engineering or human welfare through the application of acoustic principles, or through research accomplishments in acoustics.

Bauer was cited "for his contributions to engineering acoustics, particularly in the development of techniques and devices to pick up, record, and reproduce sound." Although born in Odessa, Russia in 1913, Bauer spent most of his youth in Cuba. He came to the US in 1930 and earned degrees in industrial engineering from Pratt Institute in 1932 and in electrical engineering from the University of Cincinnati in 1937. Bauer also pursued postgraduate studies in physics, mathematics and acoustics at Chicago and Northwestern Universities. He began working at Shure Brothers, Inc of Evanston, Illinois even before he completed his degree as a development engineer and later became director of engineering and vice president. Among his contributions at Shure Brothers was the invention of the first single-transducer unidirectional (cardioid) microphone. During World War II, his efforts led to the development

of special communications microphones and earphones for use in various branches of the military service.

In 1957 Bauer joined CBS, Inc to take charge of audio development technology at the CBS Laboratories in Stamford, Connecticut. He led a technical team that made significant contributions toward the understanding of the stereophonic phenomenon and the improvement of the quality of recorded music. Bauer's latest efforts were directed toward the development of techniques to produce multichannel sound. His research team created the SQ quadraphonic "matrix" system for phonographic reproduction and broadcasting.

The Silver Medal in Noise was presented to Harvey H. Hubbard "for his contributions to the understanding of aircraft noise, its generation, propagation and control, and its effects on people and structures." Hubbard studied electrical engineering at the University of Vermont and received his BS in 1942, after which he performed graduate work in aerodynamics at the University of Virginia. From 1942 to 1945 he served as an officer in the Army Signal Corps and Air Corps, and in 1945 joined the Langley Memorial Aeronautical Laboratory of the National Advisory Committee for Aeronautics in Hampton, Virginia. In 1954 Hubbard was appointed head of the vibration and flutter laboratory, where he supervised a variety of research projects dealing with propeller-induced loads and jet noise,

among other things. In 1958 he was appointed head of the atmospheric and acoustics branch of the Dynamic Loads Division, where the first extensive sonic-boom measurements and effects studies for steady-level flight conditions were performed. In 1959, with the formation of NASA, Hubbard was appointed head of the acoustics branch of the Dynamic Loads Division and continued in that position until 1973, when the branch was reorganized into the Acoustics and Noise Reduction Division. In his current role as assistant chief of that division, Hubbard plans and directs analytical and experimental research programs in structural dynamics, acoustics and noise control, as well as in human response to noise and vibration produced by commercial, military and general aviation aircraft and spacecraft.

The Trent-Crede Medal was presented to Stephen H. Crandall "for his contributions to education, research and professional development in vibrations, especially those aspects of random vibrations associated with component and structural failure." The ASA awards the Trent-Crede Medal to an individual who has made an outstanding contribution to the science of mechanical vibration and shock, as evidenced by publication of research results in professional journals or by other accomplishments in the field.

Crandall, a professor at MIT, is an author or coauthor of seven textbooks and monographs in structures, dynamics and

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vibrations. Through his research, he has made many contributions to the knowledge of extremal and first-passage problems and the effects of nonlinearity on the statistics of the vibration amplitudes. More recently, his attention has turned to some of the properties of wide-band random vibration of plates and membranes in which Chladni-like patterns are displayed.

Also presented at the fall meeting, held jointly for the first time with the Acoustical Society of Japan, were two Sato Medals to Katsumi Nakabayashi of the Technical Research Laboratories of Japan Broadcasting Corporation and Ryunen Teranishi, professor of psychoacoustics at the Kyushu Institute of Design. The Sato Medal is presented to individuals "for contributions to the advancement of acoustics through the publication of especially excellent papers in the *Journal of the Acoustical Society of Japan*."

Stepanishen receives British acoustics prize

Peter R. Stepanishen, an associate professor of ocean engineering at the University of Rhode Island, has received the 1978 A.B. Wood Medal and Prize from the Institute of Acoustics in England. After the presentation of the award at Imperial College, London, Stepanishen delivered a lecture entitled, "A Review of Impulse Response Methods to Evaluate Acoustic Transient and Harmonic Radiation from Arrays."

Stepanishen graduated from Michigan State University in 1963, from the University of Connecticut in 1965 and from Pennsylvania State University in 1969. From 1963 to 1974 he was employed by the Electric Boat Division of General Dynamics where he was involved in acoustic-related anti-submarine warfare problems. Since 1974, he has been a faculty member of the department of ocean engineering at the University of Rhode Island. In addition to his work on underwater acoustics, Stepanishen is currently doing research in medical acoustics directed towards the development of noninvasive techniques to provide diagnostic information to complement x-ray techniques.

Linus Pauling wins Lomonosov Gold Medal

The Soviet Academy of Sciences presented a Lomonosov Gold Medal to Nobel Laureate Linus Pauling at the opening of the International Symposium on Biochemistry and Molecular Biology in Moscow. Two Lomonosov medals are given each year, one to a Soviet scientist and one to a foreign scientist. Pauling



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was given the medal for his contributions to biochemistry and molecular biology.

Pauling won the Nobel Prize for Chemistry in 1954 for his research into the nature of the chemical bond and the Nobel Peace Prize in 1962 for his efforts to ban nuclear testing in the atmosphere. In 1971 he was presented with the Soviet Union's Lenin Peace Prize. He is currently emeritus professor of chemistry at Stanford University and a fellow of the Linus Pauling Institute of Science and Medicine.

Canadians honor Robson and Hardy

The Canadian Association of Physicists has presented its 1978 Medal for Achievement in Physics to John M. Robson and the 1978 Herzberg Medal to Walter N. Hardy.

Robson was born in England in 1920 and received a BA (1942), an MA (1946) and an ScD (1963) from Cambridge University. He joined Canada's National Research Council Atomic Energy Project just at the end of the war. There he took advantage of the new NRX, the first major reactor designed for research, to study free neutron decay. His subsequent experiments have "made a substantial contribution to our knowledge of weak-interaction physics," according to the CAP. In the last decade Robson has been actively performing research in the areas of attenuation of neutrons and gamma rays in shielding materials, nuclear reactions and the properties of ultracold neutrons. Robson is currently a professor of physics at McGill University.

Hardy was born in Vancouver, British Columbia in 1940 and carried out his undergraduate and graduate studies at the University of British Columbia. After completing his PhD thesis in 1964 Hardy spent two years at Saclay, France with Anatole Abragam's group on an NRC

postdoctorate overseas fellowship and a Rutherford memorial fellowship. He was a staff member at the North American Rockwell Corporation's Science Center in California for five years, returned to UBC as an associate professor in 1971 and was promoted to professor in 1974. Hardy's contributions have ranged from molecular and solid-state physics to applied physics and engineering. His most significant contributions are to the understanding of solid hydrogen.

Lawrence Lanzl is AAPM Coolidge Award winner

The American Association of Physicists in Medicine presented its Coolidge Award to Lawrence H. Lanzl at its 20th Annual Meeting and Exhibition in San Francisco in August. Named for x-ray pioneer William D. Coolidge, the award recognizes medical physicists for their distinguished careers and contributions to the medical field. Lanzl is the seventh recipient of the award.

Lanzl received his BS (1943) from Northwestern University and his MS (1947) and PhD (1951) from the University of Illinois. Areas he has been involved in include the removal of the electron beam from the betatron and its development for radiation therapy, the design of a Co⁶⁰ rotation therapy unit, the development of a heterogeneous phantom, and the use of computers for calculation of dose distributions. In 1951 he became a senior physicist at the University of Illinois and later moved to the University of Chicago Medical School's department of radiology. Lanzl has also been affiliated with the Argonne Cancer Research Hospital of the University of Chicago since 1951. He is currently a professor of medical physics at the Pritzker School of Medicine and the Franklin McLean Memorial Research Institute at the University of Chicago. Lanzl is a past president of the AAPM.

Arden L. Albee, professor of geology at Caltech, will succeed **Rochus E. Vogt** as chief scientist at the Caltech Jet Propulsion Laboratory. Albee will retain his faculty position during his four-year appointment at JPL.

Roger R. Dube, formerly of the Jet Propulsion Laboratory is now an assistant professor at the University of Michigan-Dearborn.

Plattsburgh State University College has appointed **Paul Roman** as dean for graduate studies and research. Roman was professor of physics at Boston University, where he had been on the faculty since 1962.

Rob York has been hired as chairman of the