

Joseph H. Holmes Pioneer Award-Basic Science

In 1977, the Pioneer Award, which honored an individual who significantly contributed to the growth and development of diagnostic ultrasound, was established. This special award was renamed in 1982, to honor Joseph H. Holmes, MD, who died that year. Dr. Holmes, the first person named as an AIUM pioneer, was an important figure to both the field of diagnostic ultrasound and the AIUM. His early efforts in ultrasound research, which included tissue characterization and ultrasound's diagnostic use in polycystic kidney disease and orthopedics, helped to advance the field of ultrasound and encourage others to conduct new research. Serving the AIUM in many capacities, Dr. Holmes was president from 1968 to 1970, and was editor of the AIUM's official journal, which was then titled, the Journal of Clinical Ultrasound, for nearly 10 years. Each year the Joseph H. Holmes Pioneer Award honors two current or retired AIUM members, one in clinical science and the other in basic science.

Peter D. Edmonds, PhD, FAIUM

From early in his career and further, in retirement, Peter D. Edmonds, PhD, FAIUM, has made significant contributions to the growth and development of diagnostic ultrasound through research projects supported by the National Institutes of Health on ultrasound phantoms, tissue characterization by ultrasonic techniques and bioeffects of ultrasound.



After receiving his Bachelor of Science degree in Physics with honors and while earning his PhD at the Imperial College of Science and Technology, London University, UK, Dr Edmonds pursued his career as a physicist in the Ultrasonics Laboratory at the 1st Physics Institute of the Technical University in Stuttgart, Germany. Then, after he had received his PhD, Dr Edmonds continued working on the development of ultrasound measurement techniques for studying the chemical kinetic behavior of liquids at the Akers Research Laboratory of Imperial Chemical Industries in Welwyn, UK.

In continuation of his education, Dr Edmonds completed a post-doctoral fellowship in the chemical engineering department at the California Institute of Technology, Pasadena CA. From there, he moved to the Moore School of Electrical Engineering at the University of Pennsylvania, Philadelphia PA, where he was an assistant professor and tenured associate professor of Electrical and Biomedical Engineering. He taught graduate courses and conducted research on the kinetic behavior of liquid and liquid-crystalline states of organic materials by ultrasonic techniques. On sabbatical leave in 1969–1970, Dr Edmonds became a Senior Research Fellow at the Bioengineering Center of the University of Washington in Seattle, WA, reviewing the bioeffects of ultrasound, particularly those pertinent to diagnostic and therapeutic ultrasound, and assisting in the organization of a conference on priorities in basic research on diagnostic and therapeutic ultrasound.

Thereafter, Dr Edmonds moved to New York to become an administrator of Technical Services at the Institute of Electrical and Electronics Engineers (IEEE), whose duties included his becoming the Administrative Secretary of the IEEE Group on Engineering in Medicine and Biology. Ultimately, he spent the most years (22) at SRI International (formerly Stanford Research Institute) in Menlo Park, CA, where he led research projects involving 5 teams of biologists and supported by the National Institutes of Health. Concurrently, he was actively involved in the International Electrotechnical Commission (IEC) as the United States Chief Delegate at meetings of Technical Committee 87, Ultrasonics, and chair of the U.S. Technical Advisory Committee for Ultrasonics to the U.S. National Committee for the IEC. At that time in 1981, Dr Edmonds was also the Editor of *Ultrasonics*, volume 19 of the *Methods of Experimental Physics* series of books, published by Academic Press.

Dr Edmonds has been a long-standing, active member of the American Institute of Ultrasound in Medicine, including serving on the Board of Governors; as Chair of the Technical Standards Committee; and as secretary, vice-chair, and chair of the Basic Science and Instrumentation Community. He also served on the Bioeffects Committee and the International Relations Committee, as well as multiple subcommittees, such as the Output Standards Subcommittee and the Tissue-mimicking Phantoms Subcommittee. As a part of his volunteer work with the AIUM, Dr Edmonds contributed to “Mechanical Bioeffects from Diagnostic Ultrasound: An AIUM Consensus Statement”, and was a coauthor of the “AIUM Bioeffects Consensus Report: Fetal Thermal Effects of Diagnostic Ultrasound” as a result of participating in the AIUM Mechanical Bioeffects Conference in 1998.

Since retiring from full-time research and employment, Dr Edmonds has continued working with the International Electrotechnical Commission, serving as Convenor and Co-Convenor for the Pulse-echo Diagnostic Equipment Working Group (WG9) of the Ultrasonics Technical Committee (TC87), which prepares standards related to the characteristics, methods of measurement and specifications of fields, equipment, and systems in the domain of medical ultrasonics. Also, he was the Convenor of the Terminology Working Group of TC87, which contributed Part 802, *Ultrasonics*, to the *International Electrotechnical Vocabulary* (www.electropedia.org); and he organized TC87’s meetings hosted by the United States in Philadelphia in 1988 and San Francisco in 1995.

It is because of such devotion to ensuring the safety of ultrasound imaging that the American Institute of Ultrasound in Medicine is proud to honor Peter D. Edmonds, PhD, FAIUM, with the 2023 Joseph H. Holmes Pioneer Award for Basic Science.