

Joseph H. Holmes Basic Science Pioneer Award

The Pioneer Award honors individuals who have significantly contributed to the growth and development of diagnostic ultrasound. This special award is named in honor of Joseph H. Holmes, MD, who was the first person named as an AIUM pioneer and was an important figure to both the field of diagnostic ultrasound and the AIUM. Each year, the Joseph H. Holmes Pioneer Award honors at least 2 current or retired AIUM members for their work in clinical science or basic science.

Kullervo H. Hynynen, MSc, PhD, FAIUM



Kullervo H. Hynynen, MSc, PhD, FAIUM, has made tremendous contributions to ultrasound, be it by teaching, presenting, writing, or researching and sharing his findings.

Dr Hynynen received his bachelor of science from the University of Kuopio in Finland in 1976 and continued to show great interest in learning more about physics, earning his masters in 1977 and his PhD in biomedical physics and biomedical engineering from the University of Aberdeen in the United Kingdom in 1982.

Dr Hynynen's original main interest was in using hyperthermia in treatment, as indicated by his thesis, "An Investigation of Some Factors Determining the Production of Local Ultrasound Hyperthermia with the View to Treating Neoplasms." In 1983, he joined the European Society of Hyperthermic Oncology's Ultrasound Task Group, and in 1985, after his move to the University of Arizona Health Sciences (UAHS) in Tucson, Arizona, he joined the North American Hyperthermia Society and, in 1989, UAHS's Brain Hyperthermia Protocol Committee. His work in ultrasound-induced hyperthermia led him to receive the Robinson Award Lecture from the North American Hyperthermia Society (known today as the Society for Thermal Medicine). Dr Hynynen's interest has since become more focused on ultrasound applications for cancer in the brain and getting past the blood-brain barrier.

All of his interests have led to him join multiple societies, to which he has remained devoted, including the Institute of Electrical and Electronics Engineers, The International Society for Optics and Photonics, and the AIUM, in which he has become a Fellow. Dr Hynynen also has been an invited speaker numerous times, has written hundreds of articles, has been a reviewer for more than 30 journals, owns 23 patents (and has applied for 6 more), and been an author of books, book chapters, and monographs.

All of this has occurred while he worked his way from research assistant professor to professor and from physicist to director of therapeutic ultrasound research at Brigham and Women's Hospital, followed by director of imaging research at Sunnybrook Health Sciences Centre in Toronto, Canada, and now director of the Centre for Research in Image-Guided Therapeutics and the Physical Sciences Platform at Sunnybrook Research Institute.

Dr Hynynen's incredible contributions to the field of ultrasound have made him more than deserving of the Joseph H. Holmes Basic Science Pioneer Award.