

PROFESSOR MACK A. BREAZEALE
in memoriam



(1930 – 2009)

Dr Mack A. Breazeale – retired Distinguished Research Professor and Senior Scientist in the National Center for Physical Acoustics at the University of Mississippi, Member of the Advisory Editorial Board of Archives of Acoustics, passed away at his home in Oxford – Mississippi, USA on 14th September 2009.

He was educated in physics and received a B.A. degree from Berea College, the Missouri School of Mines in 1953, an M.S. degree from the University of Missouri in 1954 and the Ph.D. degree from the Michigan State University in 1957. In 1959–1960 he was a Fulbright Research Fellow at the Technical University of Stuttgart, Germany. He was professor of physics at the Michigan State University (1957–1962) and at the University of Tennessee (1962–1995), followed by his appointment as a Distinguished Research Professor of Physics at the National Center for Physical Acoustics of the University. From 1977 to 2001 he was Associate Editor for Nonlinear Acoustics of the Journal of the Acoustical Society of America. He was a fellow of the Acoustical Society of America and received its Silver Medal in physical acoustics in 1988. He was a fellow of the Institute of Electrical and Electronics Engineers (IEEE) and Great Britain's Institute of Acoustics, as well as a member of the American Physical Society and Phi Kappa Phi, Sigma Xi, Sigma Pi Sigma honor societies and participated in other numerous American and international scientific bodies. In 2008, during the IEEE International Ultrasonics Symposium in Beijing, China, he was honored with the Achievement Award of the IEEE UFFF (Ultrasonics, Ferroelectrics, and Fre-

quency Control) Society, “for a five-decades-long career of major contribution to non-linear ultrasonics”.

Professor Breazeale’s scientific interest focused on physical acoustics and particularly, he has contributed to nonlinear acoustics of solids. He developed a more accurate theoretical description of elastic effects in solids with original approach, using ultrasonic and optical methods to confirm it by measuring temperature dependences (in a wide range) of third-order elastic constants and other nonlinear parameters in several important crystals of diamond lattice type, in piezoceramics and in other media. He studied the Bragg diffraction of laser light by ultrasonic waves and used the acousto-optic interaction for imaging of ultrasonic fields. He has published many original papers and books.

Polish acousticians had an opportunity to cooperate fruitfully with him during last thirty years. He attended in the few (starting with the 1st one in 1980) Schools on Acousto-optics and Applications, organized every three years by the University of Gdańsk and in Symposia on Hydroacoustics organized every year by the Polish Naval Academy and the Gdańsk University of Technology. In 1997, during the EAA Symposium on Hydroacoustics and Ultrasonics in Gdańsk, he was awarded by the Polish Naval Academy Medal. Since 2004 he served as a member of the Advisory Editorial Board of Archives of Acoustics.

Polish acousticians community and particularly the group of Mack Breazeale’s friends in Poland, working in the field of physical acoustics and applications of ultrasonics including hydroacoustics, have been deeply upset by the loss of such an outstanding scientist. He will be long remembered as a great person, a tried friend and a wonderful man.

A. Śliwiński
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