

2007 Rayleigh Award of the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society

Arthur Ballato



DR. ARTHUR BALLATO (S'55–M'59–SM'71–F'81–LF'02) is the 7th recipient of the IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society Rayleigh Award. The award was presented during the Awards Ceremony at the 2007 IEEE International Ultrasonics Symposium in New York, NY, on October 29th, 2007. The laudation was presented Prof. Ryszard M. Lec (Drexel University, Philadelphia PA). Dr. Ballato's award citation reads: "For outstanding leadership and pioneering contributions to the fields of piezoelectric materials and devices, and for his continued dedication to education."

Arthur Ballato received the S.B. degree in electrical engineering from the Massachusetts Institute of Technology, Cambridge, MA, in 1958, the M.S. degree in electrical engineering from Rutgers University, New Brunswick, NJ, in 1962, and the Ph.D. degree in electrophysics from the Polytechnic Institute, Brooklyn, NY, in 1972. He began his professional career in 1958 at the U.S. Army Signal Corps R and D Laboratory, Fort Monmouth, NJ, working on precision resonators for frequency control and selection, lection, and properties of piezoelectric, and other crystalline materials. He became an Army ST in 1990, and served as principal scientist, first of the Electronics Technology and Devices Laboratory, then of the Electronics and Power Sources Directorate of the newly formed Army Research Laboratory, Fort Monmouth, NJ. He is presently chief scientist of the Communications-Electronics Research, Development and Engineering Center, Fort Monmouth, NJ, of the U.S. Army Research, Development and Engineering Command. He is principal scientific advisor to the Director and Center management. He also provides technical interfaces with academia, industry, and federal and state governmental elements.

Dr. Ballato is a member of advisory committees of various universities; and an adjunct professor at Rutgers University. He is author of more than 350 technical articles and book chapters, more than 50 patents, and editor of several books. He is an IEEE Life Fellow, a member of the American Physical Society, American Ceramic Society, International Institute of Acoustics and Vibration, the Electromagnetics Academy, and Sigma Xi. He is a Chartered Engineer and Fellow of the Institution of Electrical Engineers (London), and Fellow of the Acoustical Society of America. He was elected Fellow of the Institute of Electrical and Electronics Engineers "for contributions to the theory of piezoelectric crystals and frequency control." He received the C. B. Sawyer Memorial Award "for contributions in the field of piezoelectric crystals such as: stacked crystal filters, electric circuit analogs, and stress effects in doubly rotated plates." He has received the U.S. Army R and D Achievement Award, the highest in its category, four times. Dr. Ballato has served as member of the Technical Program Committees of the IEEE International Ultrasonics; International Frequency Control; Semiconductor Device Research; European Frequency and Time, and other symposia. Dr. Ballato is an IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society (UFFC-S) AdCom member, and was for many years its Standards Activities Chairman. He is currently UFFC-S President-Elect. He was the Society's Distinguished Lecturer on the topic "Frequency and Time Sources," and received its 1992 Achievement Award for "wide-ranging contributions to the fundamental understanding, in both theory and practice, of piezoelectric materials and their application to

resonators, filters, and frequency control devices, and for his energetic pursuit of IEEE standards.” He received the Society’s Distinguished Service Award in 2001. He also serves as Technical Advisory Group member of the U.S. National Committee of the International Electrotechnical Commission, and as a member of Army and Department of Defense advisory groups.