

Gold Medal



Judy R. Dubno

2020

The Gold Medal is presented in the spring to a member of the Society, without age limitation, for contributions to acoustics. The first Gold Medal was presented in 1954 on the occasion of the Society's Twenty-Fifth Anniversary Celebration and biennially until 1981. It is now an annual award.

PREVIOUS RECIPIENTS

Wallace Waterfall	1954	David M. Green	1994
Floyd A. Firestone	1955	Kenneth N. Stevens	1995
Harvey Fletcher	1957	Ira Dyer	1996
Edward C. Wentz	1959	K. Uno Ingard	1997
Georg von Békésy	1961	Floyd Dunn	1998
R. Bruce Lindsay	1963	Henning E. von Gierke	1999
Hallowell Davis	1965	Murray Strasberg	2000
Vern O. Knudsen	1967	Herman Medwin	2001
Frederick V. Hunt	1969	Robert E. Apfel	2002
Warren P. Mason	1971	Tony F. W. Embleton	2002
Philip M. Morse	1973	Richard H. Lyon	2003
Leo L. Beranek	1975	Chester M. McKinney	2004
Raymond W. B. Stephens	1977	Allan D. Pierce	2005
Richard H. Bolt	1979	James E. West	2006
Harry F. Olson	1981	Katherine S. Harris	2007
Isadore Rudnick	1982	Patricia K. Kuhl	2008
Martin Greenspan	1983	Thomas D. Rossing	2009
Robert T. Beyer	1984	Jiri Tichy	2010
Laurence Batchelder	1985	Eric E. Ungar	2011
James L. Flanagan	1986	William A. Kuperman	2012
Cyril M. Harris	1987	Lawrence A. Crum	2013
Arthur H. Benade	1988	Brian C. J. Moore	2014
Richard K. Cook	1988	Gerhard M. Sessler	2015
Lothar W. Cremer	1989	Whitlow W. L. Au	2016
Eugen J. Skudrzyk	1990	William M. Hartmann	2017
Manfred R. Schroeder	1991	William A. Yost	2018
Ira J. Hirsh	1992	William J. Cavanaugh	2019
David T. Blackstock	1993		



ENCOMIUM FOR JUDY R. DUBNO

. . . for contributions to understanding age-related hearing loss and for leadership in the acoustics community

ACOUSTICS VIRTUALLY EVERYWHERE • 9 DECEMBER 2020

Judy R. Dubno is an outstanding scientist, mentor, and leader, and her contributions to acoustics and to the Acoustical Society of America (ASA) are remarkable. She has made tremendous contributions both to auditory science and to the community of people working in the field of hearing and acoustics.

Judy Dubno was born and raised in Manhattan and attended New York City public schools. One hint of an early interest in auditory science was a science fair project, in elementary school: she designed and built a color-coded clay model of the outer, middle, and inner ear. Her interest in science was nurtured while attending the Bronx High School of Science, a very competitive, specialized high school in northern New York City, which required an hour-long subway ride. Judy's interest in hearing science also came from her mother, who had a lifelong severe hearing loss in one ear resulting from an early bout of mumps.

Judy received her Ph.D. from the City University of New York (CUNY) Graduate School and University Center. Her major advisor was Harry Levitt and she was also strongly influenced by Gerald Studebaker, James (Mac) Pickett and Irv Hochberg. Her dissertation research involved predicting consonant confusions by individuals with normal and impaired hearing from the acoustic analysis of consonants. She was heavily involved in the development, recording, and analysis of the CUNY Nonsense Syllable Test, which was among the first closed-set tests that generated consonant confusions matrices (from paper and pencil responses), and is still in use today. She assembled hundreds of consonant-vowel and vowel-consonant syllables recorded on audio tape, which were cut and spliced together and labelled with a glass marker on pieces of scotch tape. Then, the pieces of audio tape were taped to the walls all over the lab for "randomization." This is quite different from the fast and accurate digital editing available today.

Judy's doctoral research was part of a large National Institute of Health (NIH)-funded contract to develop and evaluate methods for the automated selection of hearing-aid frequency-gain responses using a wearable master hearing aid, one of the first of its kind in the analog era, and employing an early form of a multivariate adaptive testing strategy. The hearing-aid settings were changed by hand using tiny modules inside the master hearing aid case, which she removed and inserted using tweezers during the experiment to adjust the listening conditions.

After receiving her Ph.D., Judy moved to Los Angeles to take an NIH-funded postdoctoral fellowship position at the University of California Los Angeles (UCLA) School of Medicine in the Division of Head and Neck Surgery, where Don Dirks and Don Morgan were significant mentors and role models. Los Angeles is where she met her husband, John, in 1985. Judy joined the faculty at UCLA, taught otolaryngology residents, and conducted research until 1991, when she moved to the Medical University of South Carolina (MUSC) in Charleston, where she remains today.

Judy's research, especially, after she joined the research group at MUSC, focused on the effects of hearing loss and age on the perception of speech and other sounds. The detailed examination of confusion matrices conducted as part of her dissertation research revealed much more about the difficulties faced by hearing-impaired people than overall error scores. This approach paved the way for many others, and the analysis of patterns of speech-sound confusions is now commonplace. Judy also led a series of seminal studies examining the specific types of acoustic cues and listening situations that lead to problems for hearing-impaired and older people. For example, she examined the role of the spatial separation of target and background sounds and the ability to benefit from amplitude fluctuations in background sounds. In her work, Judy has always been careful to try to separate the effects of age and hearing loss, whereas these effects have often been confounded by other researchers. A particularly important contribution has been Judy's leadership of a 30-year longitudinal study of age-related hearing loss and an exceptional team of research colleagues, and its work on the classification of audiograms and the use of

this system to assess the underlying nature of hearing disorders. In particular, her work has been well-described in the many publications she has authored and co-authored in highly respected auditory journals. This research has been highly influential and we anticipate that its importance will increase over the coming years.

Judy has mentored a very large number of undergraduate and graduate students, post-doctoral fellows, medical-school residents, and junior faculty. Her teaching and mentoring style is nothing short of outstanding, and was recognized by her university with a mentoring award. All you have to do is talk to one of her former students or post-docs to understand what an exceptional person she is. Among those she has mentored are many who are now well-established in auditory research and teaching positions.

The excellence of Judy's research has been recognized by the many grants that she has received from NIH (continuously since 1981) and other bodies and by numerous awards. She has been elected as a Fellow of the ASA, the American Speech-Language-Hearing Association (ASHA), and the International Collegium of Rehabilitative Audiology. She received the Editor's Award from the *Journal of Speech and Hearing Research* in 1996; the Editor's Award from the journal *Ear and Hearing* in 2009; the James Jerger Career Award for Research in Audiology in 2011; the Carhart Memorial Lectureship of the American Auditory Society in 2012; Honors of the Association from ASHA, its highest award, in 2019; and the Governor's Award for Excellence in Science from the South Carolina Governor, in 2018.

We turn now to a consideration of Judy's contributions to the acoustics community. While many people can be considered "good citizens" in this respect, Judy's contributions can be regarded as exceptional, and certainly way above what most people do. She has been an editor or guest editor of six journals, she has served as the President of the Association for Research in Otolaryngology (ARO), and has served on many committees of the ARO. She has served as an officer and committee member in other scientific societies including the American Otological Society and the American Speech-Language-Hearing Association, served on four boards/committees for the National Academies of Sciences, Engineering, and Medicine, and was elected to the Collegium Oto-Rhino-Laryngologicum Amicitiae Sacrum and the International Collegium of Rehabilitative Audiology. She has also served as ASA's member society Director on the Board of Directors of the American Institute of Physics (of which ASA is a member society) and is currently its Corporate Secretary.

More recently, Judy has been participating in research and public service to support improved accessibility and affordability of hearing health care, especially hearing aids, and to enact the necessary changes in federal policies and legislation. This began in 2009 with a partnership with Amy Donahue (then at National Institute on Deafness and Other Communication Disorders) and Lucille Beck at the Veterans Administration. Judy served on a National Academies committee on this topic and is now a member of the Lancet Commission that is addressing the global burden of hearing loss.

Finally, we turn to Judy's huge contributions to the ASA. She has served on 22 committees of the Society. She was co-chair of the Vision 2020 Retreat (2011-2012), co-organizer of the ASA School in 2012, 2014, 2016, and 2018, and co-chair of ASA's first Strategic Leadership for the Future conference (2014-2015). She served as Vice President of the ASA, 2010-2011, and President, 2014-2015. She is currently the Society's Treasurer, a post carrying great responsibility that she has been fulfilling with considerable skill and dedication. In all of her service to the ASA, she has been efficient, thorough, effective, knowledgeable, empathetic, tactful, and friendly. All of those who have worked with her will attest to the fine qualities of her leadership.

Overall, the evidence is very clear that Judy Dubno amply merits the award of the Gold Medal of the ASA for her contributions to research, education, the auditory community and to the ASA itself. We congratulate her most warmly on the award of the Gold Medal of the Acoustical Society of America.

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