ACOUSTICAL SOCIETY OF AMERICA Silver Medal in Psychological and Physiological Acoustics 2021: Ruth Y. Litovsky

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Citation: The Journal of the Acoustical Society of America **150**, A231 (2021); doi: 10.1121/10.0006806
View online: https://doi.org/10.1121/10.0006806
View Table of Contents: https://asa.scitation.org/toc/jas/150/4
Published by the Acoustical Society of America

ACOUSTICAL SOCIETY OF AMERICA

Silver Medal in

Psychological and Physiological Acoustics

Ruth Y. Litovsky

2021

The Silver Medal is presented to individuals, without age limitation, for contributions to the advancement of science, engineering, or human welfare through the application of acoustic principles, or through research accomplishment in acoustics.

PREVIOUS RECIPIENTS

Lloyd A. Jeffress	1977	Neal F. Viemeister	2001
Ernest Glen Wever	1981	Brian C. J. Moore	2002
Eberhard Zwicker	1987	H. Steven Colburn	2004
David M. Green	1990	William A. Yost	2006
Nathaniel I. Durlach	1994	Roy D. Patterson	2015

von Békésy Medal

The von Békésy Medal is presented to an individual, irrespective of nationality, age, or society affi liation, who has made an outstanding contribution to the science of psychological and physiological acoustics, as evidenced by publication of research results in professional journals or by other accomplishments in the field.

PREVIOUS RECIPIENTS

Jozef J. Zwislocki	1985
Peter Dallos	1995
Murray B. Sachs	1998
William S. Rhode	2010
M. Charles Liberman	2012

CITATION FOR RUTH Y. LITOVSKY

… for contributions to understanding binaural hearing and the perceptual consequences of providing bilateral cochlear implants

SEATTLE, WASHINGTON • 1 DECEMBER 2021

If you asked random members of the hearing science community to name the people who elevate the field through their both their science and their leadership, Ruth Y. Litovsky would undoubtedly be near the top of the list. And that is the key to Ruth. She has made important contributions scientifically, without question; but she also has worked tirelessly throughout her career to create an equitable, welcoming, and well-functioning auditory science community. She sets high standards for herself and her trainees, while also helping every individual to achieve their best work. She contributes both her extraordinary organizational gifts and her warm personality so that the Acoustical Society of America (ASA) – and sister scientific organizations – run smoothly, and better.

Scientifically, Ruth's work has revealed fundamental insights into the perceptual capabilities of human listeners. She has studied sound localization, source separation, intelligibility, development, and the precedence effect. More recently, her work has expanded to explore the impact of experience and critical periods on perception. Not only important in basic science, her work is also of great clinical significance, especially in the area of cochlear implants. She has a long record of influential publications, including the definitive review paper on "the precedence effect," published in the *Journal of the Acoustical Society of America* (JASA) in 1999 and a plethora of studies on spatial hearing in both normal-hearing listeners and listeners with cochlear implants. Over the course of the last three decades, she has consistently identified critical gaps in our knowledge and then developed creative experiments addressing those gaps.

Ruth's academic trajectory followed a focused path. As an undergraduate at Washington University in St. Louis, she earned a bachelor's degree in Psychology and a Master's in Neuropsychology. She moved to Amherst, Massachusetts for her Ph.D. in Developmental Psychology under Rachel Keen (formerly Clifton), where the lab demonstrated that the precedence effect exhibits interesting dynamics, an observation that has guided thinking in the field ever since. Importantly, it was this work that brought Ruth to the ASA community: it was the topic of both her first ASA presentation in the spring of 1989 and her first JASA publication, three years later. Driven by a desire to learn more about the mechanisms underlying psychoacoustic phenomenon, she then did postdoctoral work at the University of Wisconsin with Professor Tom Yin. She moved to Boston in 1994 to continue her research in spatial hearing as a Research Associate at Boston University, the Massachusetts Institute of Technology, and the Eaton-Peabody Lab of the Massachusetts Eye and Ear Infirmary. She moved to the University of Wisconsin - Madison in 2001 to join the faculty of the Department of Communication Sciences and Disorders, where she established her own productive, independent laboratory and rose through the professorial ranks to her current position of Department Chair.

Roughly at the time that she moved to Wisconsin, she turned her attention to cochlear implants. This choice has had a profound impact not only on Ruth's career, but on the research community. The shift brought Ruth's deep knowledge of spatial hearing to the field at a time when bilateral implants were unusual and underappreciated. She quickly carved out a niche, first demonstrating that bilateral implants provided perceptual benefits, and later probing the mechanisms supporting these benefits. At the same time, she built a parallel line of research on the development of spatial hearing in typical children. Ultimately, these two lines of work came together in studying spatial hearing in children with bilateral cochlear implants, and later, developmental aspects of spatial hearing in both children and adults using cochlear implants.

Ruth has achieved wide recognition for her scientific achievements and her sustained record of research excellence. She is a highly sought-after speaker with over 100 keynote

and invited talks to date. She was elected a Fellow of the ASA in 2009 and received a Fulbright Scholar award in 2014 to support a sabbatical in Australia.

Many scientists with scientific contributions as fundamental and important as Ruth's achieved this fame by focusing strictly on their own careers. However, the energy and passion that Ruth puts into her science is matched by her commitment to diversity, equity, and inclusion (DEI), as well as mentorship. She has long been a strong advocate of DEI efforts, even before the recent increase in awareness of these issues and has helped ASA (and other parts of the hearing community) adopt best practices to address systemic problems. She has established numerous mentoring programs within every organization of which she is a part. In her own laboratory, she has trained many graduate students and postdocs, and has excelled in helping them excel; many are now independent scientists, adding to her legacy.

One of the key factors informing Ruth's approach to mentoring is that she has, from the start, balanced the demands of family and work with grace. In fact, it is a good bet that anyone who met Ruth in the mid-1990s can conjure an image of her at some reception talking with senior leaders in the field about spatial hearing, all while toddler Leora clutched her leg and baby Micah balanced at her hip (Gaby, the youngest, came a little later). As she would be the first to tell you, she could never have done it without the support and equal efforts of her husband David Baum. But she also has been open about not just the joys, but also the challenges of juggling being a mother and a scientist and a wife. By example, she has served as a role model to those around her. Moreover, she has worked to normalize being dedicated to both family and to science and has been instrumental in creating policies and procedures that help young parents be successful, such as providing childcare benefits to conference attendees.

Ruth has also been selfless in her more general service to the profession, taking on leadership both scientifically and administratively in the ASA as well as other organizations. Within the Acoustical Society, she has been elected to the P&P Technical Committee an astonishing four times, starting in 2001 (serving 12 out of 19 years), served as an Associate Editor for JASA for 13 years (2006-2019), and organized numerous special sessions. The field of hearing science, and ASA more generally, are better for Ruth being such an engaged, energetic, and positive presence.

BARBARA G. SHINN-CUNNINGHAM
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