

## Women in Acoustics: Honoring Some of Our Heroes

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### Women in Acoustics Named Luncheon Program

This article is the first in a series of articles planned for *Acoustics Today* to highlight relevant issues and activities of the Women in Acoustics (WIA) Committee of the Acoustical Society of America (ASA). In addition to informing Society members about WIA Committee projects, this series is intended to serve as a mechanism to encourage women in the Society and as a means of initiating further discussion among Society members. *Acoustics Today* is joining the WIA Committee in this way to promote the careers of women in acoustics and in STEM.

The ASA WIA Committee fosters a supportive atmosphere within the Society for female and early-career acousticians, with an emphasis on encouraging women to pursue careers in acoustics. At each national meeting of the Society, a WIA luncheon is held, open to all meeting attendees. The luncheon provides fellowship and networking opportunities for women and supporters of women at the meeting. A newer facet of the luncheon is the WIA Named Luncheon Program, which honors prominent women in acoustics who have demonstrated excellence in teaching, research, and/or service to the field. The program was started in 2013 under the committee leadership of Erica Ryherd. Since the program's inception, seven women have received the Named Luncheon Honor. This article presents an overview of their accomplishments, contributions to the field of acoustics, and service to the acoustics community.

### Honored Women



#### *Spring 2013 Honoree Rhona Hellman*

Rhona Hellman (1935-2009) received her PhD in 1998 at Thouku University in Sendai, Japan. An ASA Fellow, Rhona was a distinguished hearing scientist and a preeminent expert in auditory perceptual phenomena, especially loudness. More information on Rhona's many accomplishments and service to the acoustics profession may be found in a previous issue of *Acoustics Today* (Scharf and Zwislocki, 2010; <http://acousticstoday.org/issues/2010AT/Jan2010/index.html#?page=42>).

#### *Spring 2014 Honoree Katherine Safford Harris*



Katherine Safford Harris ("Kathy") conducted pioneering research in electromyography (EMG) studies of speech production. Kathy received a PhD in psychology from Harvard University in 1954. She joined the research staff at the Haskins Laboratories in 1952; Haskins became her lifelong research home. In 1970, Kathy joined the faculty of the City University of New York Graduate School, was named a distinguished professor in 1984, and became professor emerita in 1997. For 20 years, she was the principal investigator on a National Institutes of Health (NIH) Clinical Research Center Grant, directing a large number of investigators and diverse research projects. She has participated on grant review panels as well as serving as a consultant

on task forces and advisory committees for the National Institute on Deafness and Other Communication Disorders.

Kathy joined the ASA the same year she received her PhD and has served the Society in many capacities. She chaired the Speech Communication Technical Committee and has served on the Committee on Medals and Awards, the Honors Committee, and the Committee on Special Fellowships. Kathy was a member of the ASA Executive Council (1980-1983), vice president (1990-1991), and president (2000-2001).

Kathy has been elected a Fellow of four distinguished societies: ASA in 1967, the American Association for the Advancement of Science, the American Speech-Language-Hearing Association, and the New York Academy of Sciences. She was awarded the Silver Medal in Speech Communication in 2005 for research and leadership in speech production and the ASA Gold Medal in 2007 for pioneering research and leadership in speech production and dedicated service to the Society.

Regardless of the research project or the deadline, Kathy has always thought about her students and colleagues as individuals. She has helped her students to think more clearly and then to express those thoughts more clearly but left the credit for their thesis research to them. Even with a major grant deadline looming, she has worried and celebrated with her students and colleagues about issues in their personal lives.

#### **Fall 2014 Honoree Diane Kewley-Port**



Diane Kewley-Port is a pioneer in auditory models of speech processing. She completed a science engineering degree at the University of Michigan in 1964, when few engineering graduates were women. She completed her PhD at the Graduate Center of the City University of New York in 1981. Diane worked at Indiana University as a research scientist while raising her three children before joining the faculty in 1987 in speech and hearing sciences and becoming a full professor in 1999. Diane's research includes psychophysical studies of speech and complex nonspeech sounds with normal and impaired listeners, computer-based speech training aids for improving disordered speech and reducing foreign accents, and microcomputer applications of voice input/output for communication disorders. Now a professor emerita, Diane helped support and mentor more than 50 students through 20 federally funded grants, mostly

from the NIH and the National Science Foundation (NSF). In addition, she is a founding member of a small business, Communication Disorders Technology, Inc.

Diane was elected a Fellow of the ASA in 1993 and has served the Society in many capacities. Diane served as chair of Speech and Communication Technical Committee (2001-2004), a member of the ASA Executive Council (2005-2008), and vice president (2009-2010) and is a member of Strategic Task Force 3: Dissemination of Knowledge and Information. Diane was an associate editor for *The Journal of the Acoustical Society of America* (JASA; 1987-1990).

Diane's former students often express their gratitude for the outstanding training she provided. Diane made sure everyone in the lab was exposed to every aspect of being an academic researcher and had opportunities to present, publish, and network. Her hands-on mentoring style did not end after a student's graduation because she continued to encourage, support, and collaborate as they began their careers.

#### **Spring 2015 Honoree Ellen Livingston**



Since receiving her PhD in mathematics from Washington University in St. Louis, MO, in 1982, Ellen Livingston has had an influential career in the underwater acoustics community. From 1982 to 1985, she was a research analyst in the Undersea Warfare Technology Division of the Naval

Intelligence Support Center in Washington, DC, focusing on antisubmarine warfare (ASW) acoustic modeling and passive sonar signal processing. From 1985 to 1995, Ellen was a research mathematician in the Acoustic Signal Processing Branch of the Naval Research Laboratory in Washington, DC. Her research focused on acoustic propagation modeling, space-time array signal processing, and advanced acoustic data inversion techniques using Arctic, deep-water Pacific, and surf zone experimental data.

In 1996, Ellen transitioned to leadership roles at the Office of Naval Research (ONR). From 1996 to 2009, she served as the ONR Ocean Acoustics Program Manager and Team Lead in Arlington, VA, supporting innovative directions in ocean acoustic research and enabling comprehensive at-sea acoustic experiments. Ellen was an associate director in the London ONR Global from 2010 to 2014. She was responsible for the establishment and development of collaborative research between international and US investigators for ocean sciences and ASW research. Ellen is currently the pro-

gram manager for the University Research Initiatives (URI) at the ONR in Arlington, VA.

Ellen leads with confidence and poise. She has supported women by providing a strong leadership role model and serving as ASA WIA Committee Chair (1998-1999). Ellen has also served the underwater acoustics community in other ways. She ensured that outstanding early-career performers were identified and nominated for the Young Investigator Program (YIP) and Presidential Early Career Awards for Scientists and Engineers (PECASE). She provided merit-based proposal selection and funding in underwater acoustics research, resulting in an increased number of talented women in the program. She was a member of the NATO Scientific Committee of National Representatives in La Spezia, Italy (2005-2009). She was a visiting scientist in the Department of Ocean Engineering at MIT (1992-1993) and is a senior member of the IEEE Oceanic Engineering Society.

**Fall 2015 Honoree Judy R. Dubno**



Judy R. Dubno is a professor and director of the Hearing Research Program in the Department of Otolaryngology-Head and Neck Surgery at the Medical University of South Carolina. Judy earned her PhD from the City University of New York Graduate Center and completed a postdoctoral fellowship at the UCLA School of Medicine. She is a prolific researcher, conducting NIH-supported research focused on human auditory function, with emphasis on the processing of auditory information and the recognition of speech and how these abilities change in adverse listening conditions, with age, and with hearing loss.

She has served as an associate editor and reviewer for *JASA* and at least 10 other scientific journals. Among her many awards are the James Jerger Career Award for Research in Audiology from the American Academy of Audiology and the Carhart Memorial Lecture from the American Auditory Society.

Judy has served on the ASA Executive Council (2004-2007) and as vice president (2010-2011) and president (2014-2015) of the Society. She is also an ASA Fellow. During her years of service to the ASA, she was integrally involved in strategic planning, innovation, and vision mapping for the Society. She has been a strong advocate for women in acoustics and educational outreach missions to ensure a vibrant future for ASA. The ASA School, developed under her shared leadership, recently completed its third session in 2016 and is in the planning stages for the ASA School 2018. The ASA

School is an event where graduate students and early-career acousticians in all areas of acoustics learn and discuss a wide variety of topics related to interdisciplinary acoustical themes while providing opportunities for meeting faculty and fellow students, developing collaborations and professional relationships within acoustics, and mentoring. Judy exhibits exemplary leadership and scholarship, and she is extremely thoughtful and generous in her personal mentorship to members of the Society.

**Spring 2016 Honoree Donna Neff**



Donna Neff is currently professor emerita, retiring in 2014 after nearly 30 years as a researcher at the Boys Town National Research Hospital (BTRNH) in Omaha, NE. Stationed near Omaha while serving in the US Air Force, she obtained a BS and MA in psychology from the University of

Nebraska at Omaha in the late 1970s. During that time, the BTRNH was built, and Donna was hired as one of the first research assistants while completing her PhD in experimental psychology from the University of Nebraska-Lincoln (1983). After a postdoctoral fellowship in the Laboratory of Psychophysics at Harvard University in Boston, she returned to the BTRNH as a staff scientist and lab head in psychoacoustics, combining science with raising three children through some flexible scheduling and not much sleep. Donna's research has made important contributions to our understanding of the difficulties both adults and children can have in complex listening environments, especially those that are unpredictable. Her work on the effects of signal uncertainty was groundbreaking at the time and continues to be a focus of current psychoacoustics research.

Donna was named an ASA Fellow in 1996 and has served the ASA in many capacities. In 1996, she was elected as the first woman chair of the Psychological and Physiological Acoustics (P&P) Technical Committee. Over the years, she has also served on the WIA Committee; the Membership Committee for P&P; Rules and Governance; standards working groups; subcommittees on membership, societal growth, and improving meetings; and a vision task force and chaired the Committee on Innovation. Donna was elected to the Executive Council (2000-2003) and served as vice president (2005-2006).

Donna has been a role model for women students and early career acousticians. In retirement, one of her projects is working on her pilot's license for sailplanes, where once again she is the only woman among a large group of men.



Back when she was a young woman in the Air Force, women could not be pilots or navigators, so Donna is pleased to return to that goal these many years later.

### Fall 2016 Honoree Mardi Hastings



Mardi Hastings is the first woman to receive a PhD in mechanical engineering from the Georgia Institute of Technology, which she did in 1987 with a specialty in acoustics. Her research interests are focused on the generation, propagation, and biological effects of anthropogenic sound in the marine environment. Mardi retired as a professor from the Georgia Institute of Technology in 2014 and is now a part-time consultant in acoustics. During her career, Mardi worked in academia, the federal government, and industry positions as she endeavored to balance her career with her family and raising her daughter. She has advised 35 graduate students, published over 70 technical articles, and coauthored the book *Principles of Marine Bioacoustics* (Springer-Verlag, 2008).

In addition to her professional activities, Mardi has devoted a significant amount of time to serving the acoustics community. An ASA Fellow since 1996, Mardi served as an associate editor for *JASA* (2006-2015), on the ASA Technical Council (2000-2003) as chair of the Animal Bioacoustics TC, on the ASA Executive Council (2003-2006), and as president (2011-2012). Mardi is former member of the Board of Directors of the Institute of Noise Control Engineering and past chair of the American Society of Mechanical Engineers (ASME) Noise Control and Acoustics Division. She served on the National Research Council Study Panel on the Potential Impacts of Ambient Noise on Marine Mammals, the Barotrauma Blue Ribbon Panel for the State of California, and most recently on the National Academy of Sciences Standing Committee on Offshore Science and Assessment.

Mardi's honors include a NSF Presidential Young Investigator Award, a Federal Highway Administration Environmental Excellence Award for her work on the effects of pile-driving sound in San Francisco Bay (corecipient), and the Per Brüel Gold Medal for Noise Control and Acoustics from the ASME.

### Conclusion

The stories of these amazing women are an inspiration for us all, and we are grateful for their research, mentorship, and service to the Society. We plan to continue the WIA Named

Luncheon Program at future ASA meetings, and we welcome suggestions for other commendable women in acoustics whom we could consider for the honor. To nominate an honoree, please attend an open WIA Committee meeting, which occurs during each national ASA meeting.

### Acknowledgments

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### Biosketches

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**Lauren M. Ronsse** is the chair of the Acoustical Society of America Women in Acoustics Committee. She obtained her PhD in engineering with a focus on acoustics from the University of Nebraska-Lincoln. She worked as an assistant professor of acoustics at Columbia College Chicago and as a postdoctoral research associate at the US Army Engineer Research and Development Center Construction Engineering Research Laboratory. She is currently taking a pause in her professional career to focus on caring for her energetic little boy.



**Tracianne B. Neilsen**, currently a part-time professor at Brigham Young University, earned her doctorate from the University of Texas at Austin. She began her career in underwater acoustics and, after taking a break when she had three young children, now continues research in modeling noise from high-performance jets and rockets. She loves helping students engage in the learning process, teaching or mentoring them on research projects. She also enjoys acoustics outreach, organizing the Listen Up! And Get Involved! Workshop held at the meetings of the Acoustical Society of America for local Girl Scout troops (available on Twitter: @tbnbyu).

### References

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Scharf, B., and Zwislocki, J. (2010). Passings: Rhona Hellman, 1935-2009. *Acoustics Today* 6(1), 39.