



Ira Dyer, an educator, scholar, leader, sailor, opera buff, and beloved husband, father, and grandfather, died peacefully at his home on October 9, 2016, at the age of 91. A physicist, Ira's distinguished career in acoustics spanned over six decades. His seminal research had a profound impact in the fields of

aeroacoustics, structural acoustics, and underwater acoustics. He was a consummate educator and mentor for many students who are now prominent scientists. Ira served as head of the Department of Ocean Engineering at the Massachusetts Institute of Technology (MIT) for 10 years, as president of the Acoustical Society of America (ASA), and on numerous committees, blue ribbon panels, and advisory boards for many government agencies and research companies.

After serving in the Army Air Corps during World War II, Ira studied at MIT and received his PhD in physics in 1954. In 1949, he married Betty Schanberg.

After his graduate studies, Ira joined Bolt, Beranek and Newman, Inc. (BBN). Leo Beranek would later say that Ira was one of the three most important people responsible for the success of BBN. In one of his first projects, in 1951, Ira designed, built, and tested an ultrasonic brain scanner, and Ira himself was the first person to undergo an ultrasonic brain scan. He later led others at the BBN Applied Research Division in investigating all aspects of sound and vibration in ships, submarines, aircraft, and spacecraft.

In 1971, Ira accepted positions at MIT as head of the Department of Naval Architecture and Marine Engineering and director of the Sea Grant Program. He led the department into new areas of ocean engineering, which emphasized the ocean environment. Later, he was awarded the Weber-Shaughness Chair. His expertise and graduate course in ocean acoustics were legendary.

Ira published many seminal contributions in *The Journal of the Acoustical Society of America* (JASA). His article on the

scintillation of ocean ambient noise is still often cited today (see publication list below). Beginning in 1978, Ira led and participated in six Arctic field programs. Ira was the first to image the entire Arctic basin with acoustics and provided evidence of a seamount range. He and his students developed a taxonomy of ice noise events for understanding Arctic noise. In the 1990s, his research on structural acoustics influenced contemporary submarine designs and submarine sonars.

Ira was a Fellow of the ASA and the Institute of Electrical and Electronic Engineers and a member of the National Academy of Engineering. In 1960, he was awarded the ASA Lindsay Medal and in 1996 the ASA Gold Medal. Ira's joy was in challenging conventional thinking and being challenged by colleagues and students to continuously learn and acquire knowledge. If one of his students would say, "The data doesn't agree with the theory," Ira would wag his finger and say, "No, no... the theory does not agree with the data!" Meetings with Ira are still recalled with gusto. He took great pleasure in family and friends. He will be deeply missed.

Selected Articles by Ira Dyer

- Dyer, I. (1959). Response of plates to a decaying and convecting random pressure field. *The Journal of the Acoustical Society of America* 31, 922-928. doi:10.1121/1.1907817.
- Dyer, I. (1970). Statistics of sound propagation in the ocean. *The Journal of the Acoustical Society of America* 48, 337-345. doi:10.1121/1.1912133.
- Dyer, I. (1973). Statistics of distant shipping noise. *The Journal of the Acoustical Society of America* 53, 564-570. doi:10.1121/1.1913359.
- Dyer, I. (1984). Song of sea ice and other Arctic Ocean melodies. In Dyer, I., and Chryssostomidis, C. (Eds.), *Arctic Technology and Policy*. Hemisphere Publishing, Washington, DC, pp. 11-37.

Written by:

Peter N. Mikhalevsky,

Email: peter.n.mikhalevsky@leidos.com, Leidos

Arthur B. Baggeroer, *Email:* abb@boreas.mit.edu

Departments of Mechanical and Electrical Engineering,
MIT

Philip Abbot, *Email:* abbot@oasislex.com

Ocean Acoustical Services and Instrumentation Systems
(OASIS), Inc.
