Neal F. Viemeister, pioneer in psychoacoustics, Fellow of the Acoustical Society, former associate editor for the *Journal of the Acoustical Society of America* (JASA), and recipient of the Silver Medal in Psychological and Physiological Acoustics, passed away at his home on Bald Eagle Lake in White Bear Lake, MN, on November 3, 2020.

Born in Brooklyn, NY, Neal received his BA in physics from Grinnell College (Grinnell, IA) before joining the lab of Jim Egan at Indiana University (Bloomington) as a graduate student. Through Egan, Neal could trace his academic lineage directly back (via Stevens, Boring, and Titchener) to Wilhelm Wundt, the widely acknowledged “Father of Experimental Psychology.” After a postdoc with David Green at the University of California, San Diego (La Jolla), Neal joined the Psychology Department at the University of Minnesota (Minneapolis) in 1972, where he would build a 40-year career as a world leader in psychoacoustics.

Neal’s contributions span many topics, only a few of which can be highlighted here. One involves intensity perception, where he combined novel empirical psychoacoustics with neural models and theory to tackle the longstanding question of how we can reconcile our wide perceptual dynamic range with the much more limited range of most primary auditory neurons (Viemeister, 1983, 1988).

Another involves our perception of amplitude and frequency modulation. Neal applied principles of linear systems analysis to the auditory system to derive what was termed the temporal modulation transfer function (TMTF), a concept that dominated the field for over two decades after its initial introduction in his highly cited paper (Viemeister, 1979). Neal was also able to solve the puzzle of how longer term auditory integration of sound energy could be reconciled with the relatively short time constants implied by his work on the TMTF within the signal-detection-theory framework established by his former postdoctoral mentor Dave Green (Viemeister and Wakefield, 1991).

A final long-standing interest of his was a perceptual aftereffect known as auditory enhancement. Neal was first to quantify these effects in the early 1980s (Viemeister, 1980), and he periodically revisited the topic, providing important new insights each time, right up to his retirement in 2014 (Byrne et al., 2013).

These contributions advanced science in many areas, but perhaps his greatest contributions came through the mentorship of his students and postdocs and his intense love for science and the scientific method that he exuded in all his interactions with his many friends and colleagues in his lifelong scientific home, the Acoustical Society of America.

He is survived by his beloved wife Ginny Kirby, daughter Katie, and granddaughter Grace.

**Selected Publications by Neal F. Viemeister**


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