



William J. Cavanaugh, pioneering architectural acoustician, passed away of natural causes on July 14, 2019, at the age of 90. Bill changed the world as we hear it; he was at the forefront of a broad spectrum of research and consulting in architectural acoustics for over 60 years. His service and

contributions to the science and art of acoustics have been deep and pervasive.

Bill earned his architecture degree from the Massachusetts Institute of Technology (MIT; Cambridge) in 1951 and was then ordered to active duty in the US Army Corps of Engineers in 1953. After his service, Bill joined the acoustical consulting firm of Bolt Beranek and Newman (BBN) in 1954 and began teaching acoustics classes at the MIT School of Architecture and other institutions. He and Greg Tocci started the acoustical consulting firm of Cavanaugh Tocci Associates, near Boston, in 1977.

Bill consulted on thousands of projects of all building types, requiring skillful interaction with architects, engineers, and clients as well as the public. Insights and research based on his projects have been the source of most of his contributions to the acoustical community at large.

Areas of Bill's contributions to acoustics and their practical application that are worth special consideration include masking, outdoor venue sound propagation, cinema sound quality, professional societies, and teaching and mentoring.

Bill was the lead author on the seminal paper (Cavanaugh et al., 1962) that had the daring and the scientific evidence to suggest that adding appropriate background sound could improve acoustical privacy, leading to the entire industry of masking systems and making open plan offices viable. Speech privacy remains a high priority, especially with recent federal mandates for healthcare facilities.

Bill's interest in the challenges of neighbors' complaints of sound from outdoor amphitheaters led to and has continued to influence the entire field of concert sound-monitoring systems, associated methods for improved community relations, and the development of acoustic criteria for outdoor concert venues.

Bill's extensive examination and testing of movie theaters across the country led to improved sound isolation and noise reduction in performance spaces in general and have positively affected the exploding home entertainment industry.

Bill helped found and grow the National Council of Acoustical Consultants (NCAC) and the Institute of Noise Control Engineering (INCE) and served as president of each. He was awarded the NCAC C. Paul Boner Medal for Distinguished Contributions to the Acoustical Consulting Profession in 1983 and the inaugural NCAC/INCE Laymon N. Miller Award for Excellence in Acoustical Consulting in 2015.

Bill's inspirational teaching at various college architectural programs led many students to become future clients, and some even became acousticians. He originated the series of ASA books that began with *Halls for Music Performance* and contributed to many other publications.

Bill's service to the ASA included as a member of the Executive Council, chair of the Technical Committee on Architectural Acoustics, and work on many other committees. Bill was awarded the ASA Distinguished Service Citation in 1994, the ASA Wallace Clement Sabine Award in December 2006, and the ASA Gold Medal in 2019.

Ginny, his loving wife of 57 years who passed in 2010, his five children, and his grandchildren and great-grandchildren were the loves of his life.

The NCAC Newsletter published a Bill Cavanaugh tribute issue, available at ncac.com/resources/bill-cavanaugh.

Selected Publications by William J. Cavanaugh

Cavanaugh, W., Farrell, W., Hirtle, P., and Watters, B. (1962). Speech privacy in buildings. *The Journal of the Acoustical Society of America* 34, 475-492.

Cavanaugh, W., Talaske, R., and Wetherill, E. (Eds.). (1982). *Halls for Music Performance: Two Decades of Experience, 1962–1982*. American Institute of Physics for The Acoustical Society of America, New York.

Cavanaugh, W., and Wilkes, J. (Eds.). (2010). *Architectural Acoustics: Principles and Practice*, 2nd ed. John Wiley and Sons, Inc., New York.

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