

## OUR AUTHORS



**George Fox Lang**, the author of our Editorial, is an independent consultant and the Associate Editor of this magazine. In his own words, he is “a mechanical engineer by education, an electronics engineer by instinct, a mathematician of necessity and a writer by inclination and passion.” He has written more than 30 books of the sort no one reads: instrument instruction manuals. He has also authored an unpublished novel and a long

list of “how-to” articles for professional and hobby magazines. Lang was founder and president of Fox Technology Corporation, producers of his Modal Investigator™ and other electronic testing instruments. He holds ASE and BSME degrees from the University of New Haven and six U.S. Patents.



“Noise Control Insights and Guidelines” was co-authored by **Alicia Larsen**, **Benjamin Markham**, **Jeffrey Zapfe**, and **James Barnes**, all of Acentech, Cambridge, MA.

Zapfe is a principal consultant and president of Acentech. His expertise is in the area of vibration, structural dynamics, vibration-sensitive facilities and equipment, and vibration isolation. His work includes the analysis of structures at the

design stage as well as the measurement, analysis and mitigation of vibration in completed buildings. He received his B.S. and M.S. in engineering science from the University of Toronto, and his Ph.D. in aerospace engineering from Pennsylvania State University.



Markham brings a passion for acoustics to his role as principal consultant and director of Acentech’s architectural acoustics group. His projects involve architectural acoustics, mechanical systems noise and vibration control, and environmental acoustics consulting for performance spaces and other commercial, residential, and civic facilities. In addition to his consulting work, he teaches acoustics at the architecture schools at MIT, Cornell, and Har-

vard. He has an avid interest in acoustical models and auralization. He received his B.S. in civil and environmental engineering from Princeton University, and his M.S. in architectural acoustics from Rensselaer Polytechnic Institute.



As a principal consultant at Acentech, Barnes concentrates on noise and vibration control, with an emphasis on resolving community and workplace noise problems in the power industry. Over the past 35 years, he has managed and technically supervised hundreds of projects covering the energy, transportation, manufacturing, and processing markets. His projects have encompassed interior and

community noise and vibration control studies for existing sources, prediction of construction and operation noise levels, and ambient sound studies for proposed industrial sites and transportation corridors. He received both his B.S. and M.S. degrees in mechanical engineering from Cornell University.



Larsen’s acoustics consulting projects include many different building types, including multifamily residential buildings, schools, fitness facilities, factories, performance venues, and offices. She has special interests in providing sound and vibration isolation for mixed-use buildings, community noise issues, and acoustical measurement and analysis. She earned her B.S. from Columbia University’s School of Engineering and Applied Science and her M.S. in architectural engineering from the University of Nebraska.



**Svend Gade and Henrik Herlufsen** coauthored “35 Years of Structural Measurements at Brüel & Kjær.” This year Brüel & Kjær will celebrate its 75th anniversary and at the same time both Henrik and Gade can celebrate their 37½ ( $\frac{1}{2} \times 75$  or  $2 \times 37\frac{1}{2} = 75$ ) years anniversary at B&K. A bit of a coincidence.

Gade joined B&K in Nærum, Denmark, in 1980, where he is now working as an application specialist at Sound & Vibration Measurement A/S. He is also an associate professor at the Brüel & Kjær University. His responsibilities include digital signal analysis, sound intensity, sound power, modal analysis, signature analysis, machine diagnostics, array acoustics (acoustic holography and beamforming) and sound quality. He has presented more than 150 papers at conferences across the globe and has written more than 50 articles, including 20 articles in *Sound & Vibration*. He holds a M.S. from



the Danish Technical University in Copenhagen.

Herlufsen earned a M.S. in electronics and physics from the Technical University of Denmark and joined B&K in 1980, where he is an application specialist in digital signal and system analysis in the fields of acoustics, vibration and structural analysis.



The article titled “Health Effects from Wind Turbine Low Frequency Noise & Infrasound” was co-written by **George F. Hessler Jr.**, **Geoff Leventhall**, **Bruce Walker** and **Paul Schomer**.

Hessler has more than 50 years of continuous experience in engineering acoustics that began after receiving a bachelor of science degree in mechanical engineering from the Johns Hopkins University in Baltimore, MD. He started as a senior project engineer designing countless

major noise abatement systems for power facilities. He then joined a subsidiary of Pratt & Whitney Aircraft in Hartford, CT, a leading

supplier of aero-derivative gas turbines used in the power and petroleum industries. He became chief, mechanical, structural and acoustics engineer and was responsible for all acoustical aspects for dozens of yearly sites for gas turbine power plants in the U.S. and abroad. He was directly responsible for developing many state-of-the-art ultraquiet acoustic plant designs. He founded Hessler Associates, Inc., in 1976, offering general acoustical consulting services, but the mainstay of the firm's 40 years of operation has always been in the power and facilities industries.



Leventhall's career has been split between academic and consultant work. As an academic at London University, he supervised 30 Ph.D. students to completion of their theses in acoustics. In past years, he has been invited to sit on three committees concerned with the effects of noise on health. Two of these were for the UK government, the third was for the AWEA-CanWEA report on effects of wind turbine noise. He has initiated two international

series of conferences: Low Frequency Noise and the International Meetings on Wind Turbine Noise. He has been practicing as an independent consultant for the past 25 years, working mainly on low-frequency noise and infrasound, active control of noise and wind turbine noise.



Walker received a M.S. degree in Physics at UCLA in 1971, under emeritus professors Vern O. Knudsen and Leo Delsasso. Following a four-year stint in architectural acoustics and noise control with Goodfriend Assoc. and Purcell Noppe Assoc., he returned to UCLA and completed a Ph.D. in acoustical engineering under Andrew Charwat and William Meecham. He has been active in wind turbine noise consulting and research since

the mid 1980s and was a member of the original AWEA Acoustic Standards Committee. He has also been principal investigator on NASA-sponsored research into active noise cancellation in turbofan engines and has worked with NASA researchers on the Space Shuttle return to flight, assessing launch vehicle acoustic loads and evaluating future aircraft configurations relative to noise emissions. He developed the virtual rotating microphone array under an Aero-Acoustics Research Consortium grant in 2006-2007.



Schomer has more than 45 years of extensive experience, publications, and patents in the areas of environmental noise and its assessment, human and community response to noise, instrumentation and methodology for the measurement and monitoring of noise, sound propagation, and acoustical measurements of building parameters. He is a consultant to industry and government and a research leader in acoustics. His recognition by his peers as an international leader

in the area of environmental noise is demonstrated by his chapters in reference books, his more than 45 refereed publications, his leadership in standards' organizations and professional societies, and his awards and honors. He is also standards director emeritus for the Acoustical Society of America.

**Peter Avitabile**, the author of "Beware the Top-10 Issues of Modal



Testing," is currently a professor of mechanical engineering at the University of Massachusetts Lowell and co-director of the Structural Dynamics and Acoustic Systems Laboratory and president of the Society for Experimental Mechanics. He has more than 40 years of experience in design and analysis using FEM and experimental techniques, including experimental modal analysis. His main area of research is structural dynamics,

specializing in the areas of modeling, testing and correlation of analytical and experimental models along with advanced applications for developing structural dynamic models. He has contributed more than 200 technical papers in the area as well as his "Modal Space" article series in *Experimental Techniques* magazine published by the Society for Experimental Mechanics.



**John S. Mitchell** wrote the article titled "Vibration Measurement to Condition-Based Management. Closing in on a Century of Continuous progress." Following eight years in the U.S. Navy, primarily on diesel and nuclear submarines, Mitchell embarked on a professional career now approaching 50 years. During that time he held a wide range of executive, managerial, and technical positions associated with the reliability, maintenance and condition assessment of physical assets.

For the last 25 years, he has been a strong and visible advocate for developing and implementing business, technical, and operating strategies for operational excellence, physical asset management, reliability and maintenance improvement. Mitchell has authored more than 100 technical papers and articles and has delivered numerous presentations and workshops throughout the world, all stressing the necessity and business value created by optimal processes, technology, organizational structure and relationships. In semi retirement, he provides mentoring and coaching for companies committed to improving operational productivity and effectiveness; gaining greatest sustainable value from operations.

Mitchell authored the books *The Physical Asset Management Handbook*, currently in fourth edition, and *An Introduction to Machinery Monitoring and Analysis*. His most recent book, *Operational Excellence, Journey to Creating Sustainable Value*, was published in 2015. He is a graduate of the U.S. Naval Academy, Annapolis, MD.



The article "The Making of a Great Company – How Spectral Dynamics Came to Be" was written by **Tony Keller** who is in his 48th year of working for Spectral Dynamics. After receiving a B.E.E. degree from Manhattan College in New York City, he accepted a position at the White Sands Proving Ground in New Mexico in 1958. He says he "just had to get into the Missile business!" By "luck of the draw," he was assigned to the vibration test lab. Most of the

instrumentation in the lab was from Brüel & Kjær. So whenever Tony had a question about some feature or specification, he would contact his "local" B&K Applications Engineer, Jack Mowry, who happened to be in Cleveland. Tony says he always got a clear and detailed answer from Jack.