

# **E-Coustic Solutions**

Noise Control • Sound Measurement • Consultation  
Community • Industrial • Residential • Office • Classroom • HIPPA Oral Privacy  
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Mr. Richard James is the Principal Consultant for E-Coustic Solutions, of Okemos, Michigan. Mr. James is an acoustical engineer with over 35 years of experience addressing community noise for new and existing industrial and commercial facilities. He is a Full Member of the Institute of Noise Control Engineers. He first joined the Institute in 1973. From 1973 through 1983, Mr. James was Vice President and co-owner of Total Environmental Systems. In addition to providing traditional acoustical engineering services, Mr. James directed the development of Sound6. This software permitted modeling of both community noise and noise inside manufacturing facilities. This software was used to assess compatibility with host communities for many new facilities for clients in the automotive, tire and types of manufacturing operations.

Mr. James is the former President of James, Anderson & Associates, Inc., an acoustical consulting firm whose clients included Fortune 100 companies from 1983 until 2006. The company grew from the original two partners to a staff of over 40 acoustical engineers, industrial hygienists and technicians. As President, and Principal Consultant, he and his partner developed partnerships with companies such as: General Motors, Ford, Chrysler, Goodyear Rubber Company, Anheuser Busch and Deer and Company, as well as many smaller firms. Services included consulting on community noise issues for existing plants where complaints led to governmental actions against the firms or site selection and planning for new facilities to determine compatibility of the proposed facility and the existing neighborhood.

Mr. James has personally conducted studies and provided other services for his firm's clients throughout the U.S., Canada, Mexico, and Europe. In 2006, Mr. James and his partner, Robert Anderson, closed James, Anderson and Associates, Inc.. Mr. James now provides his consulting services through his new firm: E-Coustic Solutions (E-CS).

In addition to his consulting interests, Mr. James has served as an Adjunct to Michigan State University's Department of Communicative and Disorders for 20 years. Until 2006, Mr. James was a member of the American National Standards Institute's S12 Committee which has oversight responsibilities for acoustical test methods and procedures used to standardize the work of acousticians and noise control engineers for measuring sound and assessing Land-Use-Compatibility. In 2008, Mr. James, and his collaborator, George Kamperman, prepared a manuscript describing the appropriate noise criteria for use in regulations and permitting guidelines for wind turbine projects to prevent adverse health effects for people living near the footprint of rural/wilderness wind utilities. These guidelines have been used world-wide as the basis for local wind turbine siting guidelines. They were asked by ASA/ANSI to participate in the formal review and comment process on the current draft revision to the IEC 61400-11 standard for measuring wind turbine sound power levels. This international standard is used worldwide to assess the sound data used as input to sound propagation models by the wind project developers. All suggestions submitted by James and Kamperman were adopted by the US ANSI/ASA committee charged with review of the IEC standard.

Since 2006, when the first major wind turbine projects were announced in Michigan, Mr. James has become more involved with this relatively new industrial noise source. His work includes developing siting criteria for county and township governments, conducting acoustical tests of operating wind turbines and pre-construction background sound studies, providing testimony at zoning hearings and public presentations for clients in Michigan, Ohio, Wisconsin, Illinois, West Virginia, and Pennsylvania, other states and countries.

## BIOGRAPHICAL SKETCH

NAME	POSITION TITLE	BIRTHDATE
Richard R. James	Principal Consultant, E-Cooustic Solutions	3/3/48
	Adjunct Instructor, Michigan State University	

### EDUCATION

INSTITUTION	DEGREE	YEAR	FIELD OF STUDY
General Motors Institute, Flint, MI	B. Mech. Eng.	1971	Noise Control Engineering

### RESEARCH AND PROFESSIONAL EXPERIENCE:

Richard R. James has been actively involved in the field of noise control since 1969, participating in and supervising research and engineering projects related to control of occupational and community noise in industry. In addition to his technical responsibilities as principal consultant, he has developed noise control engineering and management programs for the automotive, tire manufacturing, and appliance industries. Has performed extensive acoustical testing and development work in a variety of complex environmental noise problems utilizing both classical and computer simulation techniques. In 1975 he co-directed (with Robert R. Anderson) the development of SOUND™, an interactive acoustical modeling computer software package based on the methods that would be later codified in ISO 9613-2 for pre and post-build noise control design and engineering studies of in-plant and community noise. The software was used on projects with General Motors, Ford Motor Company, The Goodyear Tire & Rubber Co., and a number of other companies for noise control engineering decision making during pre-build design of new facilities and complaint resolution at existing facilities. The SOUND™ computer model was used by Mr. James in numerous community noise projects involving new and existing manufacturing facilities to address questions of land-use compatibility and the effect of noise controls on industrial facility noise emissions. He is also the developer of ONE\*dB<sup>(tm)</sup> software. He was also a co-developer (along with James H. Pyne, Staff Engineer GM AES) of the Organization Structured Sampling method and the Job Function Sound Exposure Profiling Procedure which in combination form the basis for a comprehensive employee risk assessment and sound exposure monitoring process suitable for use by employers affected by OSHA and other governmental standards for occupational sound exposure. Principal in charge of JAA's partnership with UAW, NIOSH, Ford, and Hawkwa on the HearSaf 2000™ software development CRADA partnership for world-class hearing loss prevention tools.

- 1966-1970 Co-operative student: General Motors Institute and Chevrolet Flint Metal Fabricating Plant.
- 1970-1971 GMI thesis titled: "Sound Power Level Analysis, Procedure and Applications". This thesis presented a method for modeling the effects of noise controls in a stamping plant. This method was the basis for SOUND™.
- 1970-1972 Noise Control Engineer-Chevrolet Flint Metal Fabricating Plant. Responsible for developing and implementing a Noise Control and Hearing Conservation Program for the Flint Metal Fabricating Plant. Member of the GM Flint Noise Control Committee which drafted the first standards for community noise, GM's Uniform Sound Survey Procedure, "Buy Quiet" purchasing specification, and guidelines for implement-ing a Hearing Conservation Program.
- 1972-1983 Principal Consultant, Total Environmental Systems, Inc.; Lansing, MI. Together with Robert R. Anderson formed a consulting firm specializing in community and industrial noise control.
- 1973-1974 Consultant to the American Metal Stamping Association and member firms for in-plant and community noise.
- 1973 Published: "Computer Analysis and Graphic Display of Sound Pressure Level Data For Large Scale Industrial Noise Studies", Proceedings of Noise-Con '73, Washington D.C.. This was the first paper on use of sound level contour 'maps' to represent sound levels from computer predictions and noise studies.
- Nov. 1973 Published: "Isograms Show Sound Level Distribution In Industrial Noise Studies", Sound&Vibration Magazine
- 1975 Published: "Computer Assisted Acoustical Engineering Techniques", Noise-Expo 1975, Atlanta, GA which advanced the use of computer models and other computer-based tools for acoustical engineers.
- 1976 Expert Witness for GMC at OSHA Hearings in Washington D.C. regarding changes to the "feasible control" and cost-benefit elements of the OSHA Noise Standard. Feasibility of controls and cost-benefit were studied for the GMC, Fisher Body Stamping Plant, Kalamazoo MI.
- 1977-1980 Principal Consultant to GMC for the use of SOUND<sup>(tm)</sup> computer simulation techniques for analysis of design, layout, and acoustical treatment options for interior and exterior noise from a new generation of assembly plants. This study started with the GMAD Oklahoma City Assembly Plant. Results of the study were used to refine noise control design options for the Shreveport, Lake Orion, Bowling Green plants and many others.
- 1979-1983 Conducted an audit and follow-up for all Goodyear Tire & Rubber Company's European and U.K. facilities for community and in-plant noise.

- 1981-1985 Section Coordinator/Speaker, Michigan Department Of Public Health, "Health in the WorkPlace" Conference.
- 1981 Published: "A Practical Method For Cost-Benefit Analysis of Power Press Noise Control Options", Noise-Expo 1981, Chicago, Illinois
- 1981 Principal Investigator: Phase III of Organization Resources Counselors (ORC), Washington D.C., Power Press Task Force Study of Mechanical Press Working Operations. Resulted in publishing: "User's Guide for Noise Emission Event Analysis and Control", August 1981
- 1981-1991 Consultant to General Motors Corporation and Central Foundry Division, Danville Illinois in community noise citation initiated by Illinois EPA for cupola noise emissions. Resulted in a petition to the IEPA to change state-wide community noise standards to account for community response to noise by determining compliance using a one hour  $L_{eq}$  instead of a single not-to-exceed limit.
- 1983 Published: "Noise Emission Event Analysis-An Overview", Noise-Con 1983, Cambridge, MA
- 1983-2006 Principal Consultant, James, Anderson & Associates, Inc.; Lansing, MI. (JAA), Together with Robert R. Anderson formed a consulting firm specializing in Hearing Conservation, Noise Control Engineering, and Program Management.
- 1983-2006 Retained by GM Advanced Engineering Staff to assist in the design and management of GM's on-going community noise and in-plant noise programs.
- 1984-1985 Co-developed the 1985 GM Uniform Plant Sound Survey Procedure and Guidelines with James H. Pyne, Staff Engineer, GM AES.
- 1985-Present **Adjunct Instructor, Michigan State University, Department of Communicative Sciences and Disorders**
- 1986-1987 Principal Consultant to Chrysler Motors Corporation, Plant Engineering and Environmental Planning Staff. Conducted Noise Control Engineering Audits of all manufacturing and research facilities to identify feasible engineering controls and development of a formal Noise Control Program.
- 1988-2006 Co-Instructor, General Motors Corporation Sound Survey Procedure (Course 0369)
- 1990 Developed One\*dB<sup>(tm)</sup>, JAA's Occupational Noise Exposure Database manager to support Organizational structured sampling strategy and Job Function Profile (work-task) approach for sound exposure assessment.
- 1990-1991 Co-developed the 1991 GM Uniform Plant Sound Survey Procedure and Guidelines with James H. Pyne, Staff Engineer, GM AES. Customized One\*dB<sup>(tm)</sup> software to support GM's program.
- 1990-2006 Principal Consultant to Ford Motor Company to investigate and design documentation and computer data management systems for Hearing Conservation and Noise Control Engineering Programs. This included bi-annual audits of all facilities.
- 1993-2006 GM and Ford retain James and JAA as First-Tier Partners for all non-product related noise control services.
- 1993 Invited paper: "An Organization Structured Sound Exposure Risk Assessment Sampling Strategy" at the 1993 AIHCE
- 1993 Invited paper: "An Organization Structured Sound Exposure Risk Assessment Database" at the Conference on Occupational Exposure Databases, McLean, VA sponsored by ACGIH
- 1994-2001 Instructor for AIHA Professional Development Course, "Occupational Noise Exposure Assessment"
- 1996 Task Based Survey Procedure (used in One\*dB<sup>(tm)</sup>) codified as part of ANSI S12.19 Occ. Noise Measurement
- 1995-2001 Coordinate JAA's role in HearSaf 2000<sup>tm</sup> CRADA with NIOSH, UAW, Ford, and HAWKWA
- 1997-Present Board Member, Applied Physics Advisory Board, Kettering Institute, Flint Michigan
- 2002-2006 Member American National Standards Accredited Standards (ANSI) Committee S12, Noise
- 2005-Present Consultant to local communities and citizens groups on proper siting of Industrial Wind Turbines. This includes presentations to local governmental bodies, assistance in writing noise standards, and formal testimony at zoning board hearings and litigation.
- 2006 Founded E-Coustic Solutions
- 2008 Paper on "Simple guidelines for siting wind turbines to prevent health risks" for INCE Noise-Con 2008, co-authored with George Kamperman, Kamperman Associates.
- 2008 Expanded manuscript supporting Noise-Con 2008 paper titled: "The "How To" Guide To Siting Wind Turbines To Prevent Health Risks From Sound"

**PROFESSIONAL AFFILIATIONS/MEMBERSHIPS**

Research Fellow - Metrosonics, Inc.

National Hearing Conservation Association (past)

American National Standards S12 Working Group (past)

American Industrial Hygiene Association (past)

Institute of Noise Control Engineers (Full Member)