

TECHNICAL PAPERS AND PRESENTATIONS IN ACOUSTICS

Journals and Transactions

- *A Data Analysis Approach to Understand the Value of a Damping Treatment for Vehicle Interior Sound*, Charles T. Polce III, Pranab Saha, James A. Groening and Ray Schappert, *SAE Journal of Passenger Cars – Mechanical Systems*, Vol. 112, 2004.
- *A Design Study to Determine the Impact of Various Parameters on Door Acoustics*, Pranab Saha, Paul J. Roman, Charles T. Polce III, Taner Onsay and Hugues Nelisse, *SAE Journal of Passenger Cars – Mechanical Systems*, Vol. 112, 2004.
- *Feasibility of a Standardized Test Procedure for Random Incidence Sound Absorption Tests Using a Small Size Reverberation Room*, Jerry Veen and Pranab Saha, *SAE Journal of Passenger Cars – Mechanical Systems*, Vol. 112, 2004.
- *A Graduated Assessment of a Sprayable Waterborne Damping Material as a Viable Acoustical Treatment*, Pranab Saha and Akbar S. Hussaini, *SAE Journal of Passenger Cars – Mechanical Systems*, Vol. 112, 2004.
- *Understanding Laboratory Versus In-Vehicle Performance of Sprayable and Sheet Applied Damping Materials*, Gary H. Nakkash, Anthony P. Visintainer, and Pranab Saha, *SAE Transactions~Journal of Passenger Cars – Mechanical Systems*, Vol. 110, 2002.
- *Application of Noise Control and Heat Insulation Materials and Devices in the Automotive Industry*, Timothy Hirabayashi, David McCaa, Robert Rebandt, Phillip Rusch, and Pranab Saha, *SAE Transactions~Journal of Passenger Cars – Mechanical Systems*, Vol. 104, 1996.
- *The Thought and Reasoning Behind Developing SAE J1637 - Vibration Damping Test Method*, Pranab Saha and John Chahine, *SAE Transactions~Journal of Passenger Cars – Mechanical Systems*, Vol. 102, 1994.
- *Sound Absorption Study for Automotive Carpet Materials*, Pranab Saha and Robert N. Baker, *SAE Transactions*, Vol. 96, 1988.
- *Effects of Environmental Variables on Truck Noise Emission and Noise Propagation to Test Microphones*, John F. Hemdal, Robert N. Baker, and Pranab Saha, *Journal of Acoustical Society of American*, Vol. 76, No 4, pp 1150-1160, October 1984.
- *Geometrical Theory of Diffraction by an Open Rectangular Box*, Pranab Saha and Allan D. Pierce, *Journal of Acoustical Society of America*, Vol. 75, No 1, pp. 46-49, January 1984.
- *Prediction of Far Field Sound Radiation from Transformers*, Gerald R. Usry, Pranab Saha, W. James Hadden, Jr., and Allan D. Pierce, *IEEE Transactions on Power Apparatus and Systems*, Vol. PAS-99, No. 1, pp. 358-364, January/February 1980.

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Conference Presentations

- *Thoughts behind Developing SAE Standard J2883 - Random Incidence Sound Absorption Tests Using a Small Reverberation Room*, Pranab Saha, Jerry R. Veen, Jian Pan, presented at the 2009 SAE Noise and Vibration Conference, May 18-21, 2009, St. Charles, Illinois.
- *A Correlation between Oberst Bar and Center Point Damping Results*, Jon M. Dowling and Pranab Saha, presented at the 2009 SAE Noise and Vibration Conference, May 18-21, 2009, St. Charles, Illinois.
- *Thoughts behind Developing a Small Reverberation Room based Sound Absorption Test method for the Automotive Industry*, Pranab Saha, Jian pan, Jerry R. Veen, presented at the Noise-Con Conference 2008, July 28-30, 2008, Dearborn, Michigan.
- *Impact of Measurement Variations of Vibration damping Properties of Materials*, Jon M. Dowling and Pranab Saha, presented at the Noise-Con Conference 2008, July 28-30, 2008, Dearborn, Michigan.
- *Random Incidence Sound Absorption Measurement of Automotive Seats in Small Size Reverberation Rooms*, Jian Pan, Pranab Saha, Jerry R. Veen, SAE Paper 2007-01-2194, presented at the 2007 SAE Noise and Vibration Conference, May 14-17, 2007, St. Charles, Illinois.
- *Destination: Quality Product from Start to Finish*, Pranab Saha, presented at the 2005 Noise-Con and ASA Meeting, October 18, 2005, Minneapolis, Minnesota.
- *Development of a Small Size Reverberation Room Standardized Test Procedure for Random Incidence Sound Absorption Testing*, Jerry R. Veen, Jian Pan and Pranab Saha, SAE Paper 2005-01-2284, presented at the 2005 SAE Noise and Vibration Conference, May 16-19, 2005, Traverse City, Michigan.
- *A Development to Improve the Acoustical Performance of a Dash System*, Pranab Saha, Dhaval B. Jain and Jorg Linke, SAE Paper 2005-01-2515, presented at the 2005 SAE Noise and Vibration Conference, May 16-19, 2005, Traverse City, Michigan.
- *Predicting the Acoustical Performance of Weak Paths in a Sound Package System*, Dhaval B. Jain and Pranab Saha, SAE Paper 2005-01-2520, presented at the 2005 SAE Noise and Vibration Conference, May 16-19, 2005, Traverse City, Michigan.
- *A Data Analysis Approach to Understand the Value of a Damping Treatment for Vehicle Interior Sound*, Charles T. Polce III, Pranab Saha, James A. Groening and Ray Schappert, SAE Paper 2003-01-1409, presented at the 2003 SAE Noise and Vibration Conference, May 5-9, 2003, Traverse City, Michigan.
- *A Design Study to Determine the Impact of Various Parameters on Door Acoustics*, Pranab Saha, Paul J. Roman, Charles T. Polce III, Taner Onsay and Hugues Nelisse, SAE Paper 2003-01-1430, presented at the 2003 SAE Noise and Vibration Conference, May 5-9, 2003, Traverse City, Michigan.

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- *Feasibility of a Standardized Test Procedure for Random Incidence Sound Absorption Tests Using a Small Size Reverberation Room*, Jerry Veen and Pranab Saha, SAE Paper 2003-01-1572, presented at the 2003 SAE Noise and Vibration Conference, May 5-9, 2003, Traverse City, Michigan.
- *A Graduated Assessment of a Sprayable Waterborne Damping Material as a Viable Acoustical Treatment*, Pranab Saha and Akbar S. Hussaini, SAE Paper 2003-01-1588, presented at the 2003 SAE Noise and Vibration Conference, May 5-9, 2003, Traverse City, Michigan.
- *Automotive Noise and Vibration Control Practices in the New Millennium*, Barry Wyerman, Mike Dinsmore, Pranab Saha, Bob Baker, Anita Carey and Rod Hardi, SAE Paper 2003-01-1589, presented at the 2003 SAE Noise and Vibration Conference, May 5-9, 2003, Traverse City, Michigan.
- *Application of Noise Control Materials to Trucks and Buses*, Pranab Saha, SAE Paper 2002-01-3063, presented at the 2002 SAE International Truck and Bus Meeting & Exposition, November 18-20, 2002, Detroit, Michigan.
- *A Tool for Predicting Interior Sound Package Treatment in a Truck*, Pranab Saha, Thomas J. Henry, John Chahine, and Gregory T. Demrose, SAE Paper 2001-01-2807, presented at the 2001 SAE International Truck & Bus Meeting & Exposition, November 12-14, 2001, Chicago, Illinois.
- *Future Trends in the Automotive Sound Package Industry*, Pranab Saha, presented at the 141st Meeting of the Acoustical Society of America, June 5, 2001, Chicago, Illinois.
- *Understanding Laboratory Versus In-Vehicle Performance of Sprayable and Sheet Applied Damping Materials*, Gary H. Nakkash, Anthony P. Visintainer, and Pranab Saha, SAE Paper 2001-01-1465, presented at the 2001 SAE Noise and Vibration Conference, April 30-May 3, 2001, Traverse City, Michigan.
- *Development of Quiet Sound Package Treatments for Class 8 Trucks*, Charles T. Moritz, Jeff A. Kleckner, and Pranab Saha, SAE Paper 2001-01-1541, presented at the 2001 SAE Noise and Vibration Conference, April 30-May 3, 2001, Traverse City, Michigan.
- *A Novel Method and Product to Damp Cylindrical Articles: Constrained Layer Damping Tubing*, Lawrence D. Schwartz, Roger J. Pinnington, and Pranab Saha, SAE Paper 1999-01-1676, presented at the 1999 SAE Noise and Vibration Conference, May 18-20, 1999, Traverse City, Michigan.
- *Improving Interior Acoustics using Headliners*, Pranab Saha and John Chahine, presented at the Automotive and Transportation Interiors Expo Conference, May 20, 1998, Detroit, Michigan.
- *Recycling of Automotive Seat Foam: Acoustics of Post Consumer Rebond Seat Foam for Carpet Underlayment Application*, Claudia M. Duranceau, Gerald R. Winslow, and Pranab Saha, SAE Paper 980094, presented at the 1998 SAE International Congress and Exposition, February 23-26, 1998, Detroit, Michigan.

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- *Acoustical Materials for Automotive Interiors - Understanding the Practice*, Pranab Saha, presented at the Manufacturing Trends in Automotive Interiors Conference of Society of Manufacturing Engineering, September 10-11, 1997, Novi, Michigan.
- *Acoustical Drain Plugs in Body Cavity Sealer “Baffles”*, Pranab Saha and David Jones, SAE Paper 971908, presented at the 1997 SAE Noise and Vibration Conference, May 20-22, 1997, Traverse City, Michigan.
- *Acoustical Study of Cavity Fillers for Vehicle Applications*, Anthony P. Visintainer and Pranab Saha, SAE Paper 971931, presented at the 1997 SAE Noise and Vibration Conference, May 20-22, 1997, Traverse City, Michigan.
- *Sound Package Materials in Automobiles*, Pranab Saha and John Chahine, presented at the 1996 ASME International Mechanical Engineering Congress and Exposition, November 18-22, 1996, Atlanta, Georgia.
- *On the Development and Application of Automotive Sound Package Materials*, Pranab Saha and John Chahine, presented at the 131st Meeting of Acoustical Society of America, May 13-17, 1996, Indianapolis, Indiana.
- *Proper Standards for Evaluating the Acoustics of Automotive Materials*, Pranab Saha, presented at the Automotive and Transportation Expo Conference, May 8, 1996, Detroit, Michigan.
- *The Need of a Standardized Acoustical Evaluation Method for Body Cavity Fillers*, Pranab Saha, to be presented at the 1995 International Body Engineering Conference, October 31-November 2, 1995, Detroit Michigan.
- *Empirically Predicting the Sound Transmission Loss of Double-Wall Sound Barrier Assemblies*, Richard E. Wentzel and Pranab Saha, SAE Paper 951268, 1995 SAE Noise and Vibration Conference, May 16-18, 1995, Traverse City, Michigan.
- *Acoustic Consideration of Passthroughs in Automobiles*, Pranab Saha, John Chahine, Matthew P. Kriss, and Robert S. Thomas, 1994 International Body Engineering Conference, September 26-29, 1994, Detroit, Michigan.
- *Textiles Used as Acoustical Materials*, Pranab Saha, Inside Automotives 94 Conference, May 9-11, 1994, Ypsilanti, Michigan.
- *Advanced Techniques for Automobile Noise Study - Where is it Heading?*, Pranab Saha, 1993 International Body Engineering Conference, September 20-23, 1993, Detroit Michigan.
- *Acoustical Performance Testing of Automotive Weatherseals*, Pranab Saha and Richard A. Kolano, SAE Paper 931270, presented at the 1993 SAE Noise and Vibration Conference, May 10-13, 1993, Traverse City, Michigan.

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- *Automotive Testing Requirements in the Design of a Reverberation Chamber*, Richard A. Kolano, William S. Beggs, and Pranab Saha, SAE Paper 931290, presented at the 1993 SAE Noise and Vibration Conference, May 10-13, 1993, Traverse City, Michigan.
- *The Thought and Reasoning Behind Developing SAE J1637 - Vibration Damping Test Method*, Pranab Saha and John Chahine, SAE Paper 931320, presented at the 1993 SAE Noise and Vibration Conference, May 10-13, 1993, Traverse City, Michigan.
- *Evaluating Acoustical Performance of Expandable Sealant Materials*, Pranab Saha and Robert D. Myers, SAE Paper 930336, presented at the 1993 SAE International Congress and Exposition, March 1-5, 1993, Detroit, Michigan.
- *Materials for Interior Acoustics in an Automobile*, Pranab Saha, American Society of Body Engineers, Vol 20, No 2, Fall 1992.
- *Standardization of a Damping Test Procedure for Automotive Applications*, Pranab Saha and John Chahine, Inter-Noise 92, July 20-22, 1992, Toronto, Ontario.
- *Design and Construction of a Reverberation Chamber for Automotive Testing*, Richard A. Kolano and Pranab Saha, Inter-Noise 92, July 20-22, 1992, Toronto, Ontario.
- *Importance of Sealants for Interior Noise Control of Automobiles*, Pranab Saha and Robert D. Myers, SAE Paper 920412, presented at the 1992 SAE International Congress & Exposition, February 24-28, 1992, Detroit, Michigan.
- *Rationale for a Standardized Vibration Damping Test Procedure for Automotive Applications*, John Chahine and Pranab Saha, SAE Paper 920406, presented at the 1992 SAE International Congress & Exposition, February 24-28, 1992, Detroit, Michigan.
- *Study on Test and Product Variations of Noise Reduction Capabilities of Headliners*, Pranab Saha and Tushar Patel, SAE Paper 911092, presented at the 1991 SAE Noise and Vibration Conference, May 1991, Traverse City, Michigan.
- *Vibration Damping Performance - What We Should Know About It*, John Chahine and Pranab Saha, Damping 89 Conference, February 8-10, 1989, West Palm Beach, Florida.
- *Sound Absorption Study for Automotive Carpet Materials*, Pranab Saha and Robert N. Baker, SAE Paper 870988, presented at the 1987 SAE Noise & Vibration Conference, Traverse City, Michigan.
- *The Use of Spreadsheet Programs for Noise Control Problems*, Pranab Saha, Acoustical Society of America, IIIth Meeting, May 2-16, 1986, Cleveland, Ohio.
- *An Overview: Effects of Environmental Variables on Measurement of Vehicle Noise*, James A. Groening and Pranab Saha, Acoustical Society of American, 108th Meeting, October 8-12, 1984, Minneapolis, Minnesota.

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- *On Factors Affecting Truck Noise Emission*, Pranab Saha, James A. Groening, Robert N. Baker, and John F. Hemdal, Inter-Noise 84, December 3-5, 1984, Honolulu, Hawaii.
- *Interpolation Techniques for Sound Propagation from a Flat Vibrating Surface*, Pranab Saha and Allan D. Pierce, Acoustical Society of America, 106th Meeting, November 7-11, 1983, San Diego, California.
- *Truck Noise and How it Varies with Environmental Changes*, James A. Groening, Robert N. Baker, Pranab Saha, and John F. Hemdal, Air Pollution Control Association, 73rd Meeting, June 22-27, 1980, Montreal, Quebec.
- *The Effect of Environmental Variables on Truck Noise Emission*, Robert N. Baker, Pranab Saha, and John F. Hemdal, Inter-Noise 80, December 8-10, 1980, Miami, Florida.
- *Developing a Small Sample Facility for Testing Automotive Acoustical Materials at Low Frequencies*, Pranab Saha, and Charles W. Davis, SAE Paper 820755, presented at the SAE Passenger Car Meeting, June 7-10, 1982, Troy, Michigan 1982.
- *Power Transformer Noise - Generation, Propagation and Control - A Review*, Pranab Saha, American Society of Mechanical Engineers Winter Annual Meeting, November 15-20, 1981, Washington, D.C.
- *Theory of Sound Radiation from Electric Transformers* Pranab Saha, Allan D. Pierce, Gerald R. Usry, and W. James Hadden, Dr., American Society of Mechanical Engineers, 1978, New York, Winter Annual Meeting, Fluid Transients and Acoustics in the Power Industry; December 1978, New York.
- *Application of the Geometrical Theory of Diffraction for Predicting Far-Field Radiation Patterns from a Vibrating Rectangular Box-like Structure*, Pranab Saha, Allan D. Pierce, and W. James Hadden, Jr., Acoustical Society of America, 95th Meeting, May 16-19, 1978, Providence, Rhode Island.
- *Prediction of Machinery Noise Radiation Using the CHIEF Algorithm*, Pranab Saha, W. James Hadden, Jr., and Gerald R. Usry, Acoustical Society of America, 94th Meeting, December 12-16, 1977.

Other Publications

- *Is Automotive Sound Quality Just in the Ear of the Beholder?*, Pranab Saha, Editorial, published in Sound and Vibration, April 2007.
- *Standardized Test Procedures for Small Reverberation Rooms*, Jerry Veen, Jian Pan and Pranab Saha, published in Sound and Vibration, December 2005.
- *Are We Doing it Right?*, Editorial, published in Sound and Vibration, March 2003.
- *Do we Know What We are Doing*, Editorial, published in Sound and Vibration, April 2001.

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- *Automotive Noise and Vibration Control Treatments*, Timothy Hirabayashi, David J. McCaa, Robert G. Rebandt II, Phillip Rusch, and Pranab Saha, published in *Sound and Vibration*, April 1999.
- *Sound Transmission Loss Prediction of Double-Wall Barrier Assemblies*, Richard E. Wentzel and Pranab Saha, published in *Sound and Vibration*, May 1997.
- *The Testing of Vibration Damping Materials*, Pranab Saha and John Chahine, published in *Sound and Vibration*, May 1995.
- *Sealants as Barriers and Dampers*, Pranab Saha and Robert D. Myers, *Noise & Vibration Worldwide*, February 1992.

Other Presentations:

- *Vehicle NVH – What does this mean to us and where are we heading*, Pranab Saha, a webinar presentation made at the SAE India Student Convention at Amrita University, Coimbatore, India, October 6, 2009
- *Component Measurements*, Pranab Saha, presented at the Acoustical Materials Workshop, 2007 SAE Noise and Vibration Conference, May 14-17, 2007, St. Charles, Illinois.
- *Application of Sound Package Materials for Automotive Acoustics*, Pranab Saha, presented at the Wayne State University Mechanical Engineering Department Seminar Series, April 4, 2008, Wayne State University, Detroit, Michigan.
- *Importance of Sound Package Materials in Addressing Automotive Acoustics*, Pranab Saha, presented at the U of M Dearborn College of Engineering and Computer Science, Seminar Series Winter 2007, March 16, 2007, University of Michigan-Dearborn, Michigan.
- *Automotive Acoustics*, Pranab Saha, presented at the Rotary International – Ortonville Rotary Club, Michigan, January 2006.
- *Noise and Vibration in the Automotive Industry Emphasis on Sound Package Materials*, Pranab Saha, presented at the NIU Graduate Colloquium Program, February 25, 2004, Northern Illinois University, DeKalb, Illinois.
- *Acoustical Materials – How are we using them? Examples from Automotive Applications*, Pranab Saha, presented at the ASA Upper Midwest Chapter Meeting, February 19, 2002, Minneapolis, Minnesota.
- *Elastomers for Silencing Automotive Sound*, Pranab Saha, presented at the Detroit Rubber Group, March 20, 1997, Livonia, Michigan.