

National Conference on Noise Control Engineering (NOISE-CON 2025)

The Nature of Noise Control

Stowe, Vermont, USA
9 - 11 June 2025

Volume 1 of 2

Editors:

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ISBN: 979-8-3313-2462-9

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NOISE-CON 2025 – Technical Sessions Proceedings

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Session Chairs: Michael Bahtiarian and Carrie Janello

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9:40 AM Tuesday **NC_2025_0032.pdf** DOI: https://doi.org/10.3397/NC_2025_0032

Guidelines for reducing underwater noise from commercial vessels 656

Jesse Spence, Noise Control Engineering LLC

Community Noise - Policy and Noise Metrics

Session Chairs: Emma Butterfield and Andrew Schad

Room: Tamarack DE

9:00 AM Tuesday [NC_2025_0013.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0013

***Identification of Metrics to Assess Community Response to Leisure Sounds* 668**

Dana Lodico, Dudek; T Ryan Haac, Resource Systems Group, Inc

9:20 AM Tuesday [NC_2025_0017.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0017

***Zero Pollution Action Plan - The potential for noise reduction in Germany* 681**

Matthias Hintzsche, German Environment Agency

9:40 AM Tuesday [NC_2025_0065.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0065

***Sounding the alarm in public health: The case for integrating high quality noise exposure into US health studies* 689**

Stephanie Grady, Boston University School of Public Health; Charlotte Roscoe, Environmental Systems and Human Health, Oregon Health & Science University–Portland State University (OHSU–PSU) School of Public Health; Matthew Bozigar, School of Nutrition and Public Health, College of Health, Oregon State University; Carson Mowrer, School of Nutrition and Public Health, College of Health, Oregon State University; Summya Khatoon, Department of Environmental Health, Boston University School of Public Health; Jean M. Costello, Department of Environmental Health, Boston University School of Public Health; Perry Hystad, School of Nutrition and Public Health, College of Health, Oregon State University; Junenette L. Peters, Department of Environmental Health, Boston University School of Public Health

10:00 AM Tuesday [NC_2025_0150.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0150

***A holistic look at noise regulation outcomes on communities* 702**

Andrew Schad, Dudek

TQA Workshop II

Session Chairs: Patricia Davies and Robert Hellweg

Room: Alder/Mountain Birch

11:15 AM Tuesday [Oral Only](#) DOI: -

***The Oregon experience in controlling urban noise through noise regulations* N/A**

Kerrie Standlee, DSA ACOUSTICAL ENGINEERS, INC

11:35 AM Tuesday [Oral Only](#) DOI: -

***2024 TQA Urban Noise – Impact and Control Workshop: panel discussions and recommendations* N/A**

Patricia Davies, Ray W. Herrick Labs., Purdue University

Building Acoustics - Measurements and Modeling

Session Chairs: James Cottrell and Greg Coudriet

Room: Tamarack AB

11:15 AM Tuesday [NC_2025_0094.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0094
Systems Engineering (SE) method for acoustics consultants: introducing SE into complex building projects 708
Jon W. Mooney, Acoustics by JW Mooney llc

11:35 AM Tuesday [NC_2025_0134.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0134
Patented health condition detection device based on noise and how it relates to acoustic engineering 720
Bonnie S. Schnitta, SoundSense; Laila Ghabbour, Tufts University; Supriti Karki, Tufts University; Neelofar F. Tamboli, Tufts University; Alex B. Wardwell, Tufts University; Kalyn T. Muhlenberg, Tufts University

11:55 PM Tuesday [NC_2025_0105.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0105
A multi-resolution SEA methodology for efficient modeling of large industrial spaces 729
Tom Burns, Soundcoat

Transportation - Rail Noise and Vibration

Session Chairs: Tara Cruz and Herbert Singleton

Room: Tamarack C

11:15 AM Tuesday [NC_2025_0081.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0081
A reassessment of light rail transit noise impact based on current conditions using Federal Transit Administration guidelines 736
David Allan Towers, Cross-Spectrum Acoustics Inc.

11:35 AM Tuesday [NC_2025_0124.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0124
OOR and Track Defects: Analyzing Transient data with the Wavelet Transform 747
Cuauhtémoc Méndez Suárez, Wilson Ihrig; Silas Bensing, Wilson Ihrig; Luke Watry, Wilson Ihrig

11:55 AM Tuesday [NC_2025_0132.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0132
Reducing rail noise in tunnels, cuts and on viaducts using strategically placed sound absorbers 757
Andrew Weaver, Durisol; Gary Stephen FIGALLO, Ekho Infrastructure Solutions; Lisa Rienstra, Durisol Ltd

12:15 PM Tuesday **Oral Only** DOI: -
MBTA New Transit Vehicle Tests N/A
Scott Noel, Harris Miller Miller & Hanson Inc.; Hayden Jubera, HMMH; Tara Elizabeth Cruz, Harris Miller Miller & Hanson Inc.

Community Noise - Recreation/Outdoor Sports

Session Chairs: Andrew Carballeira and Mark Storm

Room: Tamarack DE

11:15 AM Tuesday [NC_2025_0190.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0190

***Pickleball noise - an update* 771**

James A. Moore, Acentech

11:35 AM Tuesday [NC_2025_0071.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0071

***Is pickle ball noise highly impulsive?* 781**

Naomi Jensen, MD Acoustics; Samuel Hord, MD Acoustics, LLC; Francisco Irarrazabal, MD Acoustics, LLC; Bethany Wu, MD Acoustics

11:55 AM Tuesday [NC_2025_0129.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0129

***Prediction and assessment of impulse noise caused by regular ball impacts in pickleball* 791**

Antonio Notario Tévar, DataKustik GmbH; Wolfgang Probst, DataKustik GmbH

12:15 PM Tuesday [NC_2025_0188.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0188

***Pickleball Paddle And Ball Impact Noise* 798**

Jarret Stiles, University of Kentucky; David W. Herrin, University of Kentucky

Motor Vehicle Noise - General Topics

Session Chairs: Steve Sorenson and Jim Thompson

Room: Sugar Maple/Oak

2:00 PM Tuesday [NC_2025_0011.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0011

***Optimizing tire NVH performance in electric vehicles: A comprehensive approach using benchmarking, simulation, and validation* 804**

Ketan Pua, Mahindra & Mahindra Ltd; Ram Krishan Singh, Mahindra & Mahindra Ltd; Sundaram Raghupathi, Mahindra and Mahindra; Ragasruoban Sundaramoorthy, Mahindra & Mahindra Ltd.; V Vikraman, Mahindra & Mahindra Ltd; Balakrishnan Deivasigamani Purushothaman, Mahindra & Mahindra Ltd

2:20 PM Tuesday [NC_2025_0120.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0120

***Feature Analysis for Gear Growl in Electrified Powertrains* 816**

Joohyun Lee, Purdue University; Yangfan Liu, Purdue University; Patricia Davies, Ray W. Herrick Labs., Purdue University; J. Stuart Bolton, Ray W. Herrick Laboratories

2:40 PM Tuesday [NC_2025_0163.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0163

***Automotive HVAC Blower Blade Pass Noise Sensitivity – A Case Study* 827**

Tudor Ravineala, Valeo; Darius Kurniawan, Valeo; Saad Bennouna, Valeo Thermal Systems

Building Acoustics - Applications of Standards

Session Chairs: Julie Fischer and Jeanette Hesedahl

Room: Tamarack AB

2:00 PM Tuesday [NC_2025_0002.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0002
Are WELL Building Standard S02 sound levels too permissive of low frequency noise? Addressing the LFN in the room 838
Douglas Leafer, Green Building Research Institute (GBRI)

2:20 PM Tuesday [NC_2025_0077.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0077
2021 IBC classroom acoustics - be in the know 845
Iliana Schad, Wave Engineering

2:40 PM Tuesday [NC_2025_0116.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0116
Study of ASTM C423 Repeatability and Reproducibility 853
Kevin Herreman, Owens Corning

Community Noise - General Topics

Session Chairs: Charles Moritz and Erich Thalheimer

Room: Tamarack DE

2:00 PM Tuesday [NC_2025_0101.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0101
Feasibility study for a quiet chicken coop 861
Charles Moritz, Cadillac Products Automotive Company

2:20 PM Tuesday [NC_2025_0010.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0010
Backup Alarms: the noise scourge of construction projects 869
Erich Steffen Thalheimer, WSP USA, Inc.

2:40 PM Tuesday [NC_2025_0165.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0165
Investigating the correlation between the acoustic performance of solid and louvered acoustic screens for outdoor applications 876
Viken Koukounian, Parklane Mechanical Acoustics

Experimental Techniques - General Topics

Session Chair: Stephen Hambric

Room: Alder/Mountain Birch

4:00 PM Tuesday [NC_2025_0015.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0015

***Exploration of OINR testing method by vehicle-mounted loudspeaker* 886**

Matthew Stephen Foster, Phoenix Noise & Vibration

4:20 PM Tuesday [NC_2025_0007.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0007

***Multiple Microphone Miracles – Rejecting Unwanted Data from Your Measurements* 900**

Stephen Hambric, Hambric Acoustics, LLC; Andrew Taggart, PCB Piezotronics; Chad Walber, Michigan Tech

4:40 PM Tuesday [NC_2025_0100.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0100

***Diffuse field sound absorption measurement uncertainty: A comparative study of chamber sizes and air absorption correction* 910**

Charles Moritz, Cadillac Products Automotive Company; Julien Biboud, Mecanum Inc.

5:00 PM Tuesday [NC_2025_0186.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0186

***Measurement of perforate insertion loss with bias flow* 924**

Jarret Stiles, University of Kentucky; David W. Herrin, University of Kentucky

5:20 PM Tuesday [NC_2025_0153.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0153

***Experimental Study of the Vibro-Acoustic Behavior of Liquid Applied Spray Damping (LASD) Coated Steel Panels* 935**

David Neihguk, Blachford Inc; Sam Suh, Blachford Inc; David W. Herrin, University of Kentucky

Information Technology - General Topics

Session Chairs: Seth Bard and Charles Oppenheimer

Room: Sugar Maple/Oak

4:00 PM Tuesday [NC_2025_0029.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0029

***Using hard disk drive surrogates* 944**

Charles Oppenheimer, Oppenheimer Consulting

4:20 PM Tuesday [NC_2025_0063.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0063

***Standardization of the Sottek Hearing Model-based fluctuation strength calculation algorithm* 952**

Roland Sottek, HEAD acoustics GmbH

4:40 PM Tuesday [NC_2025_0085.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0085
***Ecma standardization plan: modular instrumentation for acoustic measurements* 963**
Charles Oppenheimer, Oppenheimer Consulting

5:00 PM Tuesday [NC_2025_0156.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0156
***Method of Workload Generation for Rack Enclosed Systems with Open Source Tools* 970**
Colin E. Masterson, IBM Corp.

5:20 PM Tuesday [NC_2025_0027.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0027
***New ECMA-425 statistical background correction standard* 982**
Charles Oppenheimer, Oppenheimer Consulting

Building Acoustics - Wood Construction

Session Chairs: Julie Fischer and Jeanette Hesedahl

Room: Tamarack AB

4:00 PM Tuesday [NC_2025_0170.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0170
***Noise Mitigation Strategies For Vertical Sound Transmission in Buildings with Wooden Floor* 990**
Ayobami Christianah Dunmoye, Morgan State University; Oludare Adegbola Owolabi, Morgan State University; Adeolu Victor Banjo, MORGAN STATE UNIVERSITY; Tolulope Iyanuoluwa Abiri, Morgan State University; Isaac Damilare Dunmoye, University of Georgia; David Olusogo Owolabi, Morgan State University

4:20 PM Tuesday [NC_2025_0075.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0075
***Acoustics in buildings with mass timber floor/ceiling assemblies: theory, practice and acoustical solutions.* 1000**
Michael Brown, RWDI

4:40 PM Tuesday [NC_2025_0037.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0037
***Enhancing the vibration performance of mass timber floors: Effects of non-structural components* 1011**
Omer Tigli, McNamara Salvia Structural Engineers; Sajad Hormozabad, McNamara Salvia Structural Engineers

Perception and Effects of Noise - General Topics

Session Chairs: Andrew Christian and Patricia Davies

Room: Tamarack C

4:00 PM Tuesday [NC_2025_0090.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0090

***A Method to Simulate Printer Noise for Use in Psychoacoustic Tests* 1021**

Jinghe Yu, Purdue University; Yangfan Liu, Purdue University; Patricia Davies, Ray W. Herrick Labs., Purdue University; J. Stuart Bolton, Ray W. Herrick Laboratories

4:40 PM Tuesday [NC_2025_0171.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0171

***The Impact of Residual Background Noise on the Learning Curve of Civil Engineering Students in Laboratory Environments at an HBCU* 1035**

Adeolu Victor Banjo, MORGAN STATE UNIVERSITY; Oludare Adegbola Owolabi, Morgan State University; Tolulope Iyanuoluwa Abiri, Morgan State University; Ayobami Christianah Dunmoye, Morgan State University; Grace Yemisi Balogun, Morgan State University

5:00 PM Tuesday [NC_2025_0182.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0182

***Noise to Silence: A Comparative Study of Black University Students Transitioning from High to Low Noise Environments* 1047**

Grace Yemisi Balogun, Morgan State University; Oludare Adegbola Owolabi, Morgan State University; Oluwafemi Samuel Ifesanmi, Morgan State University; Adeolu Victor Banjo, MORGAN STATE UNIVERSITY

Prediction and Modeling - AI/Machine Learning

Session Chair: Tyler Dare

Room: Tamarack DE

4:00 PM Tuesday [NC_2025_0092.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0092

***AI in acoustics: exploring practical approaches for working professionals* 1059**

Nicholas Pietrusinski, TEECOM; Robby Deem, TEECOM; McLean Pierce, TEECOM

4:20 PM Tuesday [NC_2025_0061.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0061

***Evaluation of machine learning performance on source separated passive acoustic recordings* 1071**

Carter Allen Paprocki, Penn State Graduate Program in Acoustics; Andrew Barnard, Penn State; Kristin Cody, Naval Nuclear Labs; Tyler Dare, The Pennsylvania State University; Peter Newman, University of Vermont; Derrick Taff, Penn State; Morgan Crump, Penn State

4:40 PM Tuesday [NC_2025_0195.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0195

***Enhancing Construction Noise Monitoring with AI and Machine Learning* 1084**

Rayan Shamas, GZA - Digital Technology Solutions

5:00 PM Tuesday [NC_2025_0158.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0158

***Predicting the Impact of Climate Change on Aircraft Noise Propagation in the National Airspace System (NAS)* 1095**

Abiola Olayinka Ajala, Morgan State University; Oludare Adegbola Owolabi, Morgan State University; Sarah Halleluyah Adeyemi, MORGAN STATE UNIVERSITY; Olorunfunmi Samuel Shobowale, Morgan state University; Opeyemi Taiwo Adeniran, MORGAN STATE UNIVERSITY; Kofi Nyarko, Morgan State University

5:20 PM Tuesday [NC_2025_0213.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0213

***Acoustics Resonance Spectrometry (ARS) for Advanced Streaming Prognostics of Drivetrain System* 1106**

Matthew Gerdes, Oracle Corporation; Yawen Wang, The University of Texas at Arlington; Guang Wang, Oracle Corporation; Xinqi Wei, The University of Texas at Arlington; Levi Rios, The University of Texas at Arlington

Plenary Panel Discussion

Moderator: Garret Keizer

Room: Tamarack Ballroom

8:30 AM Wednesday **Oral Only** DOI: -

***The Future of Peace and Quiet* N/A**

Panelists: Judy Rochat, Reuben Peckham, and Les Blomberg

Young Professional Presentations

Session Chairs: Edward Duncan

Room: Alder/Mountain Birch

10:30 AM Wednesday **Oral Only** DOI: -

***Noise barriers and wildlife crossing research* N/A**

Ryan Barretta, Connecticut Department of Transportation; Anna LaRose, Connecticut Department of Transportation

10:45 AM Wednesday **Oral Only** DOI: -

***Challenges and opportunities conducting noise and vibration measurements of rail frogs across multiple types of rail, vehicles, and diverse existing conditions.* N/A**

Paul Joseph Campbell, Cross-Spectrum Acoustics

11:00 AM Wednesday **Oral Only** DOI: -

***Advanced Acoustic Pressure and Structural Vibration Analysis in Ballast Water Tanks: Investigating the Impact of External Excitations on Noise Propagation in Dynamic Marine Environments Using NX and MATLAB* N/A**

Solomon Ochuko Ologe, University Polytechnic of Catalonia BARCELONATEC; Amir Alizadeh Shiraz, University Polytechnic of Catalonia, Barcelona

11:15 AM Wednesday **Oral Only** DOI: -

***Review of airship noise observations and literature* N/A**

Hugo Rost, Resource Systems Group

11:30 AM Wednesday **Oral Only** DOI: -

***An experimental approach to increase protected area visitors' awareness of the natural soundscape and boost visitor well-being* N/A**

Katharina Bremser, Kansas State University; Leah Coffey, Kansas State University; Brian Peterson, Kansas State University; Sarah Jackson, Kansas State University; Lauren Ferguson, University New Hampshire; Layla Hood, Kansas State University; Justus Rucker, Kansas State University

Building Acoustics - Leisure, Fitness & Other

Session Chair: Justin Reidling

Room: Tamarack AB

10:30 AM Wednesday [NC_2025_0020.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0020
***Structure-borne Noise and Vibration from a Gondola Lift Terminal* 1122**
Ben Saunders, WSP USA Inc; Patrick Romero, Aetna

10:50 AM Wednesday [NC_2025_0111.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0111
***Quantifying the practical suitability of locally reactive fitness floor build ups.* 1134**
Wilson Byrick, Pliteq Inc.; Joshua Derek Julian, Pliteq Inc.

11:10 AM Wednesday [NC_2025_0187.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0187
***Heavy Weight Drop Sound Isolation in Fitness Centers* 1146**
Luke Acoustics Saxelby, Saxelby Acoustics LLC

11:30 AM Wednesday [NC_2025_0053.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0053
***Testing vibration levels on floors in a chemistry laboratory building* 1153**
Steven E. Marshall, Retired

11:50 AM Wednesday [NC_2025_0115.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0115
***Transforming Classrooms and Offices to Quantum Computing Labs: Renovating an Existing University Building to a Low Vibration Facility* 1159**
Ethan Brush, Acentech Incorporated

Community Noise - General Topics II

Session Chairs: Connor Burke and Jacob Poling

Room: Tamarack DE

10:30 AM Wednesday [NC_2025_0044.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0044
***From detection to resolution: a case-study of a comprehensive approach to managing mining noise impacts on communities* 1168**
Pierre-Claude Ostiguy, Soft dB; Roderick Mackenzie, Soft dB; Patrick Lavoie, Eldorado Gold; Magdeleine Sciard, Soft dB

10:50 AM Wednesday [NC_2025_0068.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0068
***Facility and Community Collaboration on Solving a Noise Problem* 1175**

Marc Wallace, Tech Environmental Inc.; David Coate, David Coate Consulting; Patricia T. Rosa, Tech Environmental Inc.

11:10 AM Wednesday [NC_2025_0167.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0167
CFD modeling of design impacts on aerodynamic, acoustic and thermal performance of noise control solutions for air-cooled chillers **1186**

Viken Koukounian, Parklane Mechanical Acoustics; Hamid Mortazavi, Parklane Mechanical Acoustics

11:30 AM Wednesday [NC_2025_0089.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0089
Modeling methods and measurements of noise emissions from utility-scale energy storage facilities **1192**

Justin Bowers, Hankard Environmental, Inc.; Michael Hankard, Hankard Environmental, Inc.; Lessa Cerio, Hankard Environmental, Inc.; Spencer Thomas, Hankard Environmental, Inc.

11:50 AM Wednesday [NC_2025_0192.pdf](#) DOI: https://doi.org/10.3397/NC_2025_0192
Acoustical consulting challenges in designing new power facilities **1208**

James Douglas Barnes, Acentech; Alexander D. Odom, Acentech; Michael Bahtiarian, Acentech

Additional Papers

Spatial Localization of Sound Transmission Deficiencies using the Sound Field Scanning Method **1215**

Thomas Rittenschober, Antoine Decloux

Calibration of the Exterior Effects Room for Psychoacoustic Testing at the NASA Langley Research Center **1227**

Tyler Tracy, Stephen A. Rizzi, Andrew Christian, Aric Aumann