



Opening Session / Monday Plenary

Session Chair: Patricia Davies

Room: WC

8:00 AM 13-June-2022

Community acceptance of novel aircraft

Mary Ellen Eagan, HMMH

Aircraft Noise

Session Chairs: Conner Campbell, Bisham Sharma

Room: BR-A

9:30 AM 13-June-2022

Experimental investigations on the acoustical performance of open-celled metal foams under grazing flow

Mary Drouin, Spirit AeroSystems; Bisham Sharma, Wichita State University

9:50 AM 13-June-2022

Design, development, and validation of acoustic insulation packages for business and VIP aircraft

Fredrick Vance, Aearo Technologies LLC, a 3M company; Jared Young, Aearo Technologies LLC, a 3M company

10:10 AM 13-June-2022

Modeling acoustic impedance and atmospheric absorption around airports using high-fidelity weather data

Emma Shaw, Penn State Graduate Program in Acoustics; Victor Sparrow, Penn State Graduate Program in Acoustics

10:30 AM 13-June-2022

Hydraulic source ripple and source impedance in 3D acoustic FEM model

Xin Hua, Eaton Corporation; Pratik Patel, Eaton Corporation; Zachary Tuyls, Eaton Corporation

10:50 AM 13-June-2022

Evaluation of nighttime helicopter noise in an urban neighborhood

AnnMarie Hirsh, Babich Acoustics; Jeffrey Babich, Babich Acoustics

11:10 AM 13-June-2022

Navy aircraft sound monitoring study

Micah Downing, Blue Ridge Research and Consulting, LLC; Jonathan Gillis, Blue Ridge Research and Consulting, LLC; Ben Manning, Blue Ridge Research and Consulting, LLC; Josh Mellon, Blue Ridge Research and Consulting, LLC; Matthew Calton, Blue Ridge Research and Consulting, LLC

Airborne and Structureborne Noise and Vibration in Buildings

Session Chairs: Matt Golden, Ethan Brush

Room: BR-B

9:30 AM 13-June-2022

Auralizing comparable structural vibration measurements to inform design decisions

John Strong, Threshold Acoustics; Christopher Springthorpe, Threshold Acoustics

9:50 AM 13-June-2022

Challenges testing high transmission-loss walls in a laboratory

Elliott Dick, North Orbit Acoustic Laboratories; Benjamin Shafer, PABCO Building Products; David Berg, North Orbit Acoustic Laboratories

10:10 AM 13-June-2022

The application of frequency response function methods along with heavy/hard force pulse data in the mitigation of fitness activities

Ethan Brush, Acentech Inc.; Matthew Golden, Pliteq Inc.

10:30 AM 13-June-2022

Effects on repeatability and shape of the force pulse due to shape, height, mass, and angle of heavy/hard weight drops

Matthew Golden, Pliteq; Paul Gartenburg, Pliteq; Faiz Musafere, Pliteq; Jordan Strybos, Intertek

10:50 AM 13-June-2022

Horizontal impact sound transmission measurements

Jeffrey Fullerton, Intertek; Alexander Maurer, Intertek

11:10 AM 13-June-2022

Quantitative comparisons of resilient channel designs in walls and ceilings

Wayland Dong, Veneklasen Associates; John LoVerde, Veneklasen Associates

Signal Processing, Measurements, Sound Reproduction, Diagnostics for Noise and Vibration Engineering

Session Chairs: Yangfan Liu, Yongjie Zhuang

Room: BR-C

9:30 AM 13-June-2022

A multi-stage filter for separating speech from background noise

Curtis Garner, Brigham Young University; Jonathan Blotter, Brigham Young University; Scott Sommerfeldt, Brigham Young University; Tyler Sanders, Brigham Young University

9:50 AM 13-June-2022

An improved two-stage dereverberation method based on bayesian estimation of a speech source

Arun Prakash Singh, Indian Institute of Technology Kanpur; Nachiketa Tiwari, Indian Institute of Technology Kanpur

10:10 AM 13-June-2022

Advancing support for cause-and-effect models by estimating the kurtosis statistic using fractional-octave-band filters

Edward Zechmann, NIOSH

10:30 AM 13-June-2022

Acoustical impacts on hard disk drive dynamics

Charles Oppenheimer, Oppenheimer Consulting LLC; Chris Peterson, Dell Inc.

10:50 AM 13-June-2022

Large-scale anechoic characterization of small caliber firearm impulse noise

Steven Campbell, Ball Aerospace; Alan Wall, Air Force Research Laboratory; Corey Taylor, Owens Corning; Frank Mobley, Air Force Research Laboratory; Reese Rasband, Ball Aerospace

11:10 AM 13-June-2022

Warmstarting the constrained optimal filter design problem for active noise control systems in conic formulation

Yongjie Zhuang, Purdue University; Zhuang Mo, Purdue University; Yangfan Liu, Purdue University

Classic Papers

Session Chairs: Patricia Davies, Gordon Ebbitt

Room: SC

9:30 AM 13-June-2022

Overview of Ffowcs Williams, J. E. and Hawkings, D. L.'s 1969 paper on Sound Generation by Turbulence and Surfaces in Arbitrary Motion

Yidan Cui, Purdue University

9:50 AM 13-June-2022

Overview of Paul Sabine's 1931 paper on A Critical Study of the Precision of Measurement of Absorption Coefficients by Reverberation Methods

Samuel Underwood, Durham School of Architectural Engineering and Construction, University of Nebraska-Lincoln

10:10 AM 13-June-2022

Overview of Jerome E. Manning and Gideon Maidanik's 1964 paper on radiation properties of cylindrical shells

Dazhuang He, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University

10:30 AM 13-June-2022

Overview of Hunt, F.V., Beranek, L.L. and Maa, D.Y.'s 1939 paper on Analysis of Sound Decay in Rectangular Rooms

Jinghe Yu, Purdue University

10:50 AM 13-June-2022

Overview of Jerome E. Manning's 1994 paper on Formulation of SEA parameters using mobility functions

David Neihguk, University of Kentucky

Unmanned Aerial systems

Session Chairs: Siddhartha Krishnamurthy, Jacob Poling

Room: BR-A

1:00 PM 13-June-2022

Validation of acoustic directivity patterns from static and dynamic flight measurements

Frank Mobley, USAF, Airman Systems Directorate; Steven Campbell, Ball Aerospace Inc.

1:20 PM 13-June-2022

Change of community noise and noise impact with changes in air-taxi fleet compositions over a longer period of time

Michael Bauer, Munich Aeroacoustics

1:40 PM 13-June-2022

Preliminary evaluation of transportation noise masking of UAV Noise

Judith Rochat, Cross-Spectrum Acoustics; Herbert Singleton, Cross-Spectrum Acoustics; Keith Yoerg, Cross-Spectrum Acoustics

2:00 PM 13-June-2022

Feasibility study for remote psychoacoustic testing of human response to urban air mobility vehicle noise

Siddhartha Krishnamurthy, NASA; Stephen Rizzi, NASA

2:20 PM 13-June-2022

Noise metrics of the time-varying acoustic far-field of rotors

Woutijn Baars, Delft University of Technology; Edoardo Grande, Delft University of Technology; Daniele Ragni, Delft University of Technology

3:30 PM 13-June-2022

Acoustic measurement practices for UAS and UAM

David Josephson, Josephson Engineering, Inc.

3:50 PM 13-June-2022

Measurement and characterization of multirotor unmanned aerial system noise

Eric Greenwood, The Pennsylvania State University; N. Blaise Konzel, The Pennsylvania State University

Architectural Noise & Vibration Control

Session Chairs: Jeanette Hesedahl, Kevin Herreman

Room: BR-B

1:00 PM 13-June-2022

A different method of partition wall isolation

Kevin Herreman, Owens Corning; Corey Taylor, Owens Corning

1:20 PM 13-June-2022

High-performance steel-framed wall and floor/ceiling assemblies

Mike Raley, PAC International; Benjamin Shafer, QuietRock

1:40 PM 13-June-2022

Alternative to resilient channel

Kevin Herreman, Owens Corning; Corey Taylor, Owens Corning

2:00 PM 13-June-2022

Hybrid experimental-numerical methodology for assessment of the building isolation performance

Hamid Masoumi, CDM Stravitec; Bradley Hunt, CDM Stravitec

3:30 PM 13-June-2022

Evaluation and optimization of acoustics of a multipurpose room to improve speech intelligibility

Peter Oyekola, Tennessee Technological University; William Rogers, Tennessee Technological University; James Fedorka, Tennessee Technological University; Nathaniel Colemon, Tennessee Technological University; Nathan Woodard, Tennessee Technological University; Mehedi Al-Barkat, Tennessee Technological University; Mohan Rao, Tennessee Technological University

3:50 PM 13-June-2022

Case study: Compilation of doorwall designs for speech privacy

William Rosentel, TEECOM; Peter Holst, TEECOM

4:10 PM 13-June-2022

Investigation of an alternative force input method for impact sound rating

Edwin Yazbec, Michigan Technological University; Matt Specht, Michigan Technological University; Dylan Kiefer, Michigan Technological University; Ryan Harrington, Michigan Technological University; Jacob Marchi, Michigan Technological University; Sunit Girdhar, Michigan Technological University; Dr. James DeClerk, Michigan Technological University; Dr. Andrew Barnard, Penn State University

Simulation, General Modeling and Model Validation

Session Chairs: Tim Wu, Chad Musser, Luca Alimonti

Room: BR-C

1:00 PM 13-June-2022

A novel multi-gradient direction FxLMS algorithm with output constraint for active noise control

Yabing Cheng, Jilin University; Pingyu Ge, Jilin University; Shuming Chen, Jilin University; Chao Li, Jilin University; Yao Jiang, Jilin University

1:20 PM 13-June-2022

Testing listeners' ability to localize virtual sources using sparse loudspeaker arrays and comparison with spherical-head model predictions

Nathaniel Wells, Brigham Young University - Department of Physics & Astronomy; Tyler Sanders, Brigham Young University - Department of Mathematics; Scott Sommerfeldt, Brigham Young University - Department of Physics & Astronomy; Blotter Jonathan, Brigham Young University - Department of Mechanical Engineering

1:40 PM 13-June-2022

Numerical modeling of noise and vibration due to discharge in hermetic compressors

Dazhuang He, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University; Yangfan Liu, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University; Davide Ziviani, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University

2:00 PM 13-June-2022

Efficient simulations for the democratization of duct transmission loss analysis

Karim Hamiche, Siemens Digital Industries Software; Aamir Marvi, Ford Motor Company

2:20 PM 13-June-2022

Noise propagation and attenuation in L-shape duct with flow

Masaaki Mori, CYBERNET SYSTEMS CO., LTD.

2:40 PM 13-June-2022

Validation studies of a homogenized ribbed-panel model in an SEA context

Abderrazak Mejdji, ESI GROUP; Luca Alimonti, ESI GROUP; Chad Musser, ESI GROUP

3:30 PM 13-June-2022

Electric machine noise and vibration prediction and validation through test

Keyu Chen, BorgWarner; Marcus Hartwig, BorgWarner; Shahram Amoozegar, BorgWarner

3:50 PM 13-June-2022

Highlights of aeroacoustic tests of a metal spacecraft cabin ventilation fan prototype

David Stephens, NASA GRC; Jonathan Goodman, NASA GRC; Rebecca Buehrle, NASA GRC; Arman Mirhashemi, NASA GRC; Lisa Koch, NASA GRC; Tony Shook, NASA GRC; Daniel Sutliff, NASA GRC; Christopher Allen, NASA JSC; Christopher Matty, NASA JSC

Student Paper Competition - Part 1

Session Chairs: Andrew Barnard, Steve Sorenson, Jim Thompson, Keyu Chen, David Herrin, Mike Bahtiarian

Room: SC

1:00 PM 13-June-2022

The application of tuned mass dampers to the Tire Pavement Test Apparatus to minimize the impact of rig resonance

Kyosung Choo, Purdue University; Won Hong Choi, Purdue University; J. Stuart Bolton, Purdue University; Matthew Black, Ford Motor Company; Sangbeom Woo, Purdue University

1:20 PM 13-June-2022

Surrogate modeling of open-celled metal foam sound absorbers with stepwise property gradients

Manish Mahajan, Wichita State University; Amulya Lomte, Wichita State University; William Johnston, Wichita State University; Bhisham Sharma, Wichita State University

1:40 PM 13-June-2022

Constructing a physics-guided machine learning neural network to predict tonal noise emitted by a propeller

Arthur Wiedemann, Virginia Polytechnic Institute and State University; Christopher Fuller, Virginia Polytechnic Institute and State University; Kyle Pascioni, National Aeronautics and Space Administration

2:00 PM 13-June-2022

A study of noise reduction in McCrone Micronizing Mill using sound enclosure treatment

Gavin Dies, Tennessee Technological University; Mohan Rao, Tennessee Technological University

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2:40 PM 13-June-2022

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3:30 PM 13-June-2022

Predicting and visualizing duct borne noise with building information modeling software

Samuel Underwood, Durham School of Architectural Engineering and Construction, University of Nebraska-Lincoln; Lily Wang, Durham School of Architectural Engineering and Construction, University of Nebraska-Lincoln

3:50 PM 13-June-2022

A simple four-pole solution with FEM/BEM validation to estimate the effectiveness of compact resonators in large silencers

H. Zhou, University of Kentucky; T. W. Wu, University of Kentucky; P. Wang, University of Kentucky; J. P. Engel, University of Kentucky

4:10 PM 13-June-2022

Modeling the acoustic behavior of stepwise gradient porous structures

Amulya Lomte, Student; Bhisham Sharma, Assistant Professor

4:30 PM 13-June-2022

Prediction of flow properties of granular porous materials for acoustic applications

Bharath Kenchappa, Department of Mechanical Engineering, North Carolina A&T State University, Greensboro, North Carolina 27411, United States; Kunigal Shivakumar, Department of Mechanical Engineering, North Carolina A&T State University, Greensboro, North Carolina 27411, United States

Renewable Energy and Infrastructure
Session Chairs: Rob O'neal, Mark Bastasch, Ken Kaliski
Room: WC

1:00 PM 13-June-2022

Battery energy storage system facility implementation noise control and sound abatement considerations

Mark Storm, Dudek; Jonathan Leech, Dudek

1:20 PM 13-June-2022

Sound emissions in solar and battery energy storage projects

Kenneth Kaliski, RSG; Robert O'Neal, Epsilon Associates; Mark Bastasch, Jacobs Engineering

1:40 PM 13-June-2022

Standardizing wind turbine sound predictions

Mark Bastasch, Jacobs

2:00 PM 13-June-2022

A proposed method for measuring noise from wind farms for the purpose of determining compliance with applicable limits and the comparison of results to ISO 9613-2 predictions

Justin Bowers, Hankard Environmental; Michael Hankard, Hankard Environmental; Jeff Cerjan, Hankard Environmental

2:20 PM 13-June-2022

Verification of sound modeling results for a wind energy project

Robert O'Neal, Epsilon Associates, Inc.; Mark Bastasch, Jacobs; Clint Cyr, Epsilon Associates, Inc.

2:40 PM 13-June-2022

Computational investigation into the effect of material properties on aeroacoustics based damage detection from wind turbine blades

Caleb Traylor, University of Massachusetts Lowell; Murat Inalpolat, University of Massachusetts Lowell

Railroad and Road Transportation Noise

Session Chairs: Herb Singleton, Dana Lodico

Room: WC

3:30 PM 13-June-2022

Wayside noise measurements of diesel multiple unit rail vehicles in revenue service

David Towers, Cross-Spectrum Acoustics Inc.

3:50 PM 13-June-2022

Dynamic mechanical analysis of rubber based products in under ballast mat rail applications

Colin Bradley, Pliteq Inc.; Josh Havin, Pliteq Inc.; Faiz Musafere, Pliteq Inc.

4:10 PM 13-June-2022

Design-build case study project neon NDOT

Scott Noel, Harris Miller Miller & Hanson Inc.; Jessica Goza-Tyner, Nevada Department of Transportation

4:30 PM 13-June-2022

Measurements of train vibration impacts on vibration sensitive facilities

Blong Xiong, Colin Gordon Associates

4:50 PM 13-June-2022

A possible mitigation measures for urbanized residential care homes for elderly (RCHE) – acoustic window with natural ventilation

Man Sum Lam, Allied Environmental Consultants Limited; May Hang Grace Kwok, Allied Environmental Consultants Limited; Siu Ming Cheung, Allied Environmental Consultants Limited; Joanne Wai Yin Ng, Allied Environmental Consultants Limited; Wing Yee Tang, Allied Environmental Consultants Limited

Tuesday Morning Plenary

Session Chair: Jeff Fullerton

Room: WC

8:00 AM 14-June-2022

Surprises in acoustics and psychoacoustics

Eric Heller, Harvard University

Artificial Intelligence in Acoustics

Session Chairs: Bhisham Sharma, Conner Campbell

Room: BR-A

10:30 AM 14-June-2022

Speedup of FTMM (finite-size transfer matrix method) calculations through machine learning techniques

Tom Burns, Soundcoat

10:50 AM 14-June-2022

Surrogate modeling of open-celled metal foam sound absorbers with stepwise property gradients

Manish Mahajan, Wichita State University; Amulya Lomte, Wichita State University; William Johnston, Wichita State University; Bhisham Sharma, Wichita State University

11:10 AM 14-June-2022

Constructing a physics-guided machine learning neural network to predict tonal noise emitted by a propeller

Arthur Wiedemann, Virginia Polytechnic Institute and State University; Christopher Fuller, Virginia Polytechnic Institute and State University; Kyle Pascioni, National Aeronautics and Space Administration

Measurements and Standards

Session Chairs: Seth Bard, David Nelson

Room: BR-B

10:30 AM 14-June-2022

Review of concepts relating to measurement quality

Elliott Dick, North Orbit Acoustic Laboratories

10:50 AM 14-June-2022

Applying Lean Construction principles to noise mitigation design

Laura Fennema, Parklane Mechanical Acoustics

11:10 AM 14-June-2022

An angle-error model for enveloping surface sound power measurements

Seth Bard, IBM

Vibro-Acoustics and Structure-Borne Noise

Session Chairs: Kristin Cody, Victor Sparrow

Room: BR-C

10:30 AM 14-June-2022

Finding damping loss factor using circle-fit method on Nyquist diagrams.

Ricardo De Alba Alvarez, Blachford Acoustics Group; Malcolm Kelly, Blachford Acoustics Group; Colin Hale, Blachford Acoustics Group; Pete Marinelli, Blachford Acoustics Group

10:50 AM 14-June-2022

Studying footfall vibration criteria in a changing market and the effects on structural design

Caitlin Ormsbee, Cerami & Associates

11:10 AM 14-June-2022

Application of stockbridge type tuned mass damper on the chillers for mitigating the Tonal structure-borne noise in Hotel Guest Room under the Chiller Plant Room

Neo Cheung, AECOM; Jackel Law, AECOM; Yu Tin Tang, AECOM

Student Paper Competition - Part 2

Session Chairs: Andrew Barnard, Steve Sorenson, Jim Thompson, Keyu Chen, David Herrin,

Mike Bahtiarian

Room: SC

10:30 AM 14-June-2022

Modeling acoustic impedance and atmospheric absorption around airports using high-fidelity weather data

Emma Shaw, Penn State Graduate Program in Acoustics; Victor Sparrow, Penn State Graduate Program in Acoustics

10:50 AM 14-June-2022

Numerical modeling of noise and vibration due to discharge in hermetic compressors

Dazhuang He, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University; Yangfan Liu, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University; Davide Ziviani, Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University

11:10 AM 14-June-2022

Testing listeners' ability to localize virtual sources using sparse loudspeaker arrays and comparison with spherical-head model predictions

Nathaniel Wells, Brigham Young University - Department of Physics & Astronomy; Tyler Sanders, Brigham Young University - Department of Mathematics; Scott Sommerfeldt, Brigham Young University - Department of Physics & Astronomy; Blotter Jonathan, Brigham Young University - Department of Mechanical Engineering

1:00 PM 14-June-2022

Computational investigation into the effect of material properties on aeroacoustics based damage detection from wind turbine blades

Caleb Traylor, University of Massachusetts Lowell; Murat Inalpolat, University of Massachusetts Lowell

1:20 PM 14-June-2022

Simulation of perforations using distance-based linearized Navier-Stokes-Fourier

Xin Yan, University of Kentucky; David Herrin, University of Kentucky; Nikhil Ghaisas, Hexagon

1:40 PM 14-June-2022

A finite difference approach for predicting acoustic behavior of the poro-elastic particle stacks

Zhuang Mo, Ray W. Herrick Laboratories, Purdue University; Guochenhao Song, Ray W. Herrick Laboratories, Purdue University; J. Stuart Bolton, Ray W. Herrick Laboratories, Purdue University

Mufflers and Silencers

Session Chairs: Tamer Elnady, David Herrin

Room: WC

10:30 AM 14-June-2022

Investigation of mid-frequency prediction using combined pressure acoustics and power-based methods

Mina Nashed, Ain Shams University; Tamer Elnady, Ain Shams University; Mats Åbom, Royal Institute of Technology

10:50 AM 14-June-2022

An experimental study of flow-induced noise from perforated pipes

Seth Donkin, University of Kentucky; David Herrin, University of Kentucky

11:10 AM 14-June-2022

Simulation of perforations using distance-based linearized navier-stokes-fourier

Xin Yan, University of Kentucky; David Herrin, University of Kentucky; Nikhil Ghaisas, Hexagon

Vehicle Noise and Vibration

Session Chairs: Jonathan Chen, Pranab Saha, Keyu Chen

Room: BR-A

1:00 PM 14-June-2022

Automotive OEM acoustics - the ideal application for carbon neutral solutions

Richard Brouckaert, Cascade Engineering

1:20 PM 14-June-2022

Auralization of road noise CAE simulation results for interactive sound quality evaluations

Rabah Hadjit, HBK; Fredrik Sjogren, Hexagon; Athanasios Poulos, Hexagon; Cyril de Walque, Hexagon

1:40 PM 14-June-2022

Quantification of the noise control benefit realized by installing an aerodynamic fairing to a passenger vehicle

Dan Hemme, BAi, LLC

2:00 PM 14-June-2022

Dynamic force measurement to assess NVH performance of electric motors

Song He, General Motors Company; William Omell, General Motors Company; Michael Gandham, General Motors Company

2:20 PM 14-June-2022

Tire test stand measurements for blocked forces identification and tire noise auralization

Rabah Hadjit, HBK; Bret Engels, HBK; Markus Brandstetter, Hexagon; Athanasios Poulos, Hexagon

2:40 PM 14-June-2022

The application of tuned mass dampers to the Tire Pavement Test Apparatus to minimize the impact of rig resonance

Kyosung Choo, Purdue University; Won Hong Choi, Purdue University; J. Stuart Bolton, Purdue University; Matthew Black, Ford Motor Company; Sangbeom Woo, Purdue University

HVAC and Building System Noise and Vibration Control

Session Chairs: Jeff Fullerton, Dan LaForgia

Room: BR-B

1:00 PM 14-June-2022

Case study of office noise and vibration annoyance due to building water pumps for HVAC equipment

Richard Ruhala, Kennesaw State University; Laura Ruhala, Kennesaw State University

1:20 PM 14-June-2022

Breakout from HVAC ductwork

Jerry Lilly, JGL Acoustics, Inc.; Jerry Lilly, JGL Acoustics, Inc.

1:40 PM 14-June-2022

Predicting and visualizing duct borne noise with building information modeling software

Samuel Underwood, Durham School of Architectural Engineering and Construction, University of Nebraska-Lincoln; Lily Wang, Durham School of Architectural Engineering and Construction, University of Nebraska-Lincoln

2:00 PM 14-June-2022

Scaled down measurement of HVAC duct insertion loss and comparison to simulation

Caoyang Li, University of Kentucky; David Herrin, University of Kentucky

2:20 PM 14-June-2022

A simple four-pole solution with FEM/BEM validation to estimate the effectiveness of compact resonators in large silencers

H. Zhou, University of Kentucky; T. W. Wu, University of Kentucky; P. Wang, University of Kentucky; J. P. Engel, University of Kentucky

2:40 PM 14-June-2022

Outdoor unit split fan noise prediction using a hybrid lighthill analogy method

Ali Nikparto, Carrier Corporation; Alexis Talbot, Hexagon; Asad Sardar, Carrier Corporation; Clement Roy, Hexagon

Environmental Noise

Session Chairs: Mark Storm, Karl Peterman

Room: BR-C

1:00 PM 14-June-2022

Cryptocurrency mining noise: The cost of progress?

Erich Thalheimer, WSP USA, Inc.

1:20 PM 14-June-2022

Novel approach to noise mitigation: a case study demonstrating a collaborative approach between noise consultant and noise solution supplier for economical and practical implementation

Jagannath Rajasekaran, Parklane Solutions Inc

1:40 PM 14-June-2022

Rooftop acoustic barrier design without the need for roof penetrations

Michael Bolduc, Parklane Mechanical Acoustics; Jagannath Rajasekaran, Parklane Mechanical Acoustics

2:00 PM 14-June-2022

Controlling noise from tunnel ventilation fans

Karl Peterman, Vibro-Acoustics; Dan LaForgia, Vibro-Acoustics

2:20 PM 14-June-2022

Revitalising soundscape of 'holy cross' sacred grove - baradi, goa: acoustic environment's affective and metaphysical heritage

Menino Allan S.M. Peter Tavares, Research Head, Conservation Acoustics and Revitalising Soundscapes

2:40 PM 14-June-2022

Establishing the appropriate maximum sound pressure levels in absence of a noise ordinance for a residential community near an indoor firing range.

Mark Bartus II, Babich Acoustics LLC; Jeffrey Babich, Babich Acoustics LLC

3:00 PM 14-June-2022

Underwater shipping noise impacts to marine life: a global issue

Michael Bahtiarian, Acentech

Alternate mitigation to reduce highway traffic noise

Session Chairs: Paul Burge, Karel Kubick

Room: WC

1:00 PM 14-June-2022

Traffic noise reduction attributed to roadside vegetation: ohio case study

Ben Sperry, Ohio University; Elizabeth Myers, Ohio University; Sarah Maracz, Ohio University; Judy Rochat, Cross-Spectrum Acoustics; Karel Cubick, ms consultants

1:20 PM 14-June-2022

Acoustically soft ground as a highway traffic noise reduction strategy

Judith Rochat, Cross-Spectrum Acoustics; Karel Cubick, ms consultants

1:40 PM 14-June-2022

Solid safety barriers as a highway traffic noise reduction strategy

Karel Cubick, ms consultants, inc.; Judith Rochat, Cross-Spectrum Acoustics, Inc.

Construction noise and vibration

Session Chairs: Paul Burge, Karel Kubick

Room: WC

2:00 PM 14-June-2022

Noise mitigation strategies for vacuum excavators

Keith Yoerg, Cross-Spectrum Acoustics; Shannon McKenna, Cross-Spectrum Acoustics

2:20 PM 14-June-2022

Managing construction vibrations near sensitive facilities

Ethan Brush, Acentech Inc.; Marc Newmark, Acentech Inc.

2:40 PM 14-June-2022

Using updated roadway construction noise model acoustical noise data for simplified construction noise predictions.

Paul Burge, AECOM; Roger Wayson, AECOM; Cole Martin, AECOM

Tuesday Afternoon Plenary

Session Chair: David Copley

Room: WC

3:30 PM 14-June-2022

Measuring sound with mobile apps: challenges and opportunities

Benjamin Faber, Faber Acoustical, LLC

Industrial Noise

Session Chairs: David Herrin, Tamer Elnady

Room: BR-A

9:30 AM 15-June-2022

Panel contribution analysis combined with scale modeling for assessing equipment noise

D. W. Herrin, University of Kentucky; Gong Cheng, University of Kentucky

9:50 AM 15-June-2022

Mitigation assessment of complex noise sources – an acoustical camera approach

Samuel Pendyala, WSP USA, Inc.; Jacob Poling, WSP USA, Inc.

10:10 AM 15-June-2022

Case study: power facility noise measurement surveys before and after new equipment installation

Mike Greene, Dudek; Connor Burke, Dudek

10:30 AM 15-June-2022

A study of noise reduction in McCrone Micronizing Mill using sound enclosure treatment

Gavin Dies, Student; Mohan Rao, Professor

10:50 AM 15-June-2022

Sound level measurement accessories

Corey Fuzak, Solar Turbines Incorporated

11:10 AM 15-June-2022

Determination and utilization of blocked forces

David Herrin, University of Kentucky; Keyu Chen, University of Kentucky

Case Studies in Building Acoustics

Session Chairs: Cristina Myar, Mandy Kachur

Room: BR-B

9:30 AM 15-June-2022

The boom in life science development and its impacts on community noise

Marc Wallace, Tech Environmental, Inc.; Matthew Riegert, Tech Environmental, Inc.; Patricia Rosa, Tech Environmental, Inc.

9:50 AM 15-June-2022

A case study in building HVAC systems noise control for the air-conditioning retrofit of a historic theatre

Nathan Sevener, Soundscape Engineering

10:10 AM 15-June-2022

Coordination issues for concrete floating floors; san francisco conservatory of music bowes center, case study

Cristina Miyar, Acousthetics; Anthony Shou, Kirkegaard

10:30 AM 15-June-2022

Compilation of restaurant acoustics data logged in Omaha, Nebraska

Samuel Underwood, Durham School of Architectural Engineering and Construction, University of Nebraska – Lincoln; Lily Wang, Durham School of Architectural Engineering and Construction, University of Nebraska – Lincoln

10:50 AM 15-June-2022

Case study- modeling restaurant noise in a 4-story atrium with adjacent offices

Rachel Parlock, NV5

11:10 AM 15-June-2022

Rainfall noise simulation and mitigation

David Nelson, Nelson Acoustics

Acoustic Materials and Passive Noise Control Systems

Session Chairs: J. Stuart Bolton, Gordon Ebbitt

Room: BR-C

9:30 AM 15-June-2022

Progress on developing a new SAE damping standard for the ground vehicle industry

Pranab Saha, Kolano and Saha Engineers, Inc.

9:50 AM 15-June-2022

Acoustic and structural damping properties of fibrogranular composites made of jute and crumb rubber

Amiya Mohanty, Indian Institute of Technology Kharagpur; Raja Kumar, Indian Institute of Technology Kharagpur

10:10 AM 15-June-2022

Additive manufacturing of ceramic porous structures for acoustical applications

David Nevarez-Saenz, Wichita State University; Ted Adler, Wichita State University; Wei Wei, Wichita State University; Bhisham Sharma, Wichita State University

10:30 AM 15-June-2022

Prediction of flow properties of granular porous materials for acoustic applications

Bharath Kenchappa, Department of Mechanical Engineering, North Carolina A&T State University, Greensboro, North Carolina 27411, United States; Kunigal Shivakumar, Department of Mechanical Engineering, North Carolina A&T State University, Greensboro, North Carolina 27411, United States

10:50 AM 15-June-2022

A finite difference approach for predicting acoustic behavior of the poro-elastic particle stacks

Zhuang Mo, Ray W. Herrick Laboratories, Purdue University; Guochenhao Song, Ray W. Herrick Laboratories, Purdue University; J. Stuart Bolton, Ray W. Herrick Laboratories, Purdue University

11:10 AM 15-June-2022

Modeling the acoustic behavior of stepwise gradient porous structures

Amulya Lomte, Student; Bhisham Sharma, Assistant Professor