



# NOISE AND VIBRATION

CONFERENCE & EXHIBITION  
EVENT GUIDE

June 10-13, 2019  
Grand Rapids, MI



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# NOISE AND VIBRATION CONFERENCE & EXHIBITION

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### EMERGENCY PROCEDURES DURING THE NOISE AND VIBRATION CONFERENCE & EXHIBITION

During the event attendees are to follow the established emergency guidelines of the facility where the emergency occurs. **Based on the location of the incident, report emergencies to the nearest venue representative and/or security personnel if available, or report to the SAE registration area.**

Should a catastrophic event occur, attendees should follow the safety and security instructions issued by the facility at the time of the event. This includes listening for instructions provided through the public address system and following posted evacuation routes if required.

In the event of an emergency or a major disruption to the schedule of events at the event, attendees and exhibitors may call this number to receive further information about the resumption of this event. Updates will also be provided via the SAE website at [www.sae.org](http://www.sae.org).

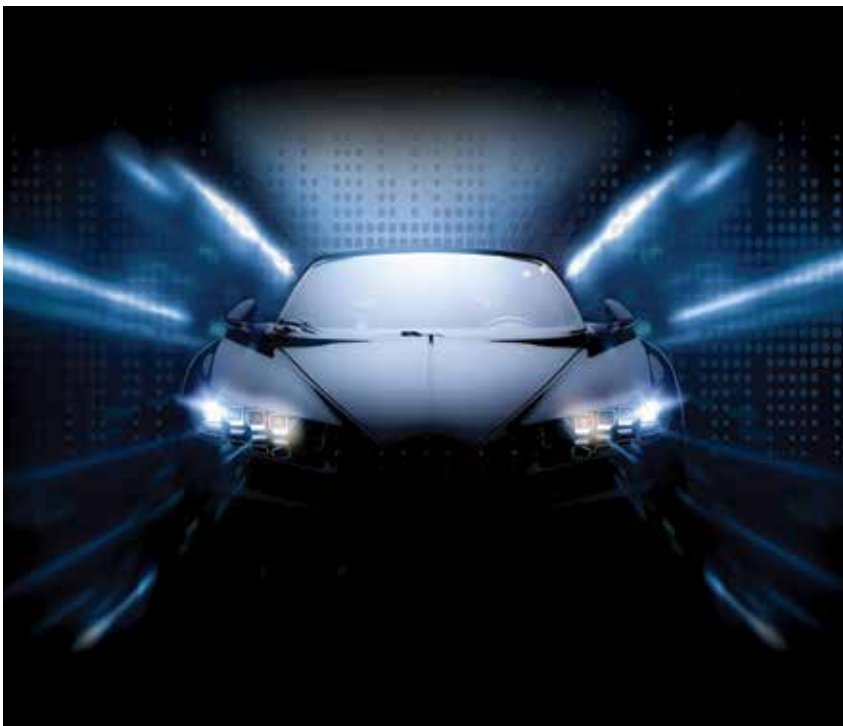
#### SAE EMERGENCY HOTLINE

+1.724.772.4044  
+1.800.581.9295

Attendees are permitted to bring camera equipment onto the show floor. Exhibitors retain the right to restrict photography of their products or displays and such decisions are within the discretion of the exhibitor and are not controlled by SAE International.

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## SAVE THE DATE

### NOISE AND VIBRATION CONFERENCE & EXHIBITION

June 14-17, 2021  
Grand Rapids, MI

# EVENT-AT-A-GLANCE

## June 10 MONDAY

<b>2:40 p.m.-4:10 p.m.</b> -Pass-by Noise Workshop -Hybridization Workshop
<b>4:30 p.m.-6:00 p.m.</b> -Acoustic Materials Workshop -NVH Measurements Workshop

## June 11 TUESDAY

<b>8:00 a.m.-9:00 a.m.</b> Continental Breakfast Exhibit Hall
<b>9:00 a.m.-10:00 a.m.</b> Keynote & Awards Presentations  Keynote: Raymond Kach, Ford Motor Company Ballroom A & B
<b>10:00 a.m.-10:30 a.m.</b> Break Exhibit Hall
<b>10:30 a.m.-12:30 p.m.</b> Technical Sessions
<b>12:30 p.m.-1:30 p.m.</b> Lunch Exhibit Floor
<b>1:30 p.m.-2:30 p.m.</b> Chat with the Experts Exhibit Floor
<b>1:30 p.m.-3:30 p.m.</b> Technical Sessions
<b>3:30 p.m.-4:00 p.m.</b> Break Exhibit Hall
<b>4:00 p.m.-5:00 p.m.</b> Technical Sessions
<b>5:00 p.m.-6:30 p.m.</b> Networking Reception

## June 12 WEDNESDAY

<b>8:00 a.m.-9:00 a.m.</b> Continental Breakfast Exhibit Hall
<b>9:00 a.m.-10:00 a.m.</b> Keynote & Awards Presentations  Keynote: John Maxon, Gulfstream Ballroom A & B
<b>10:00 a.m.-10:30 a.m.</b> Break Exhibit Hall
<b>10:30 a.m.-12:30 p.m.</b> Technical Sessions
<b>12:30 p.m.-1:30 p.m.</b> Lunch Exhibit Floor
<b>1:30 p.m.-2:30 p.m.</b> Chat with the Experts Exhibit Floor
<b>1:30 p.m.-3:30 p.m.</b> Technical Sessions
<b>3:30 p.m.-4:00 p.m.</b> Break Exhibit Hall
<b>4:00 p.m.-6:00 p.m.</b> Technical Sessions & Student Paper Competition
<b>6:00 p.m.-7:30 p.m.</b> -Muffler & Silencer Design Workshop -Sound Quality Workshop -Structure Borne NVH Workshop Sponsored by Altair

## June 13 THURSDAY

<b>8:00 a.m.-8:30 a.m.</b> Continental Breakfast Foyer
<b>8:30 a.m.-9:30 a.m.</b> Keynote & Closing Ceremony  Keynote: Daniel A. Russell, Penn State University Ballroom CD
<b>9:30 a.m.-10:00 a.m.</b> Break Foyer
<b>10:00 a.m.-12:00 p.m.</b> Technical Sessions
<b>12:00 p.m.</b> Conference Concludes & NVC General Committee Wrap-Up Meeting

**TECHNICAL SESSION**

**NETWORKING OPPORTUNITY**

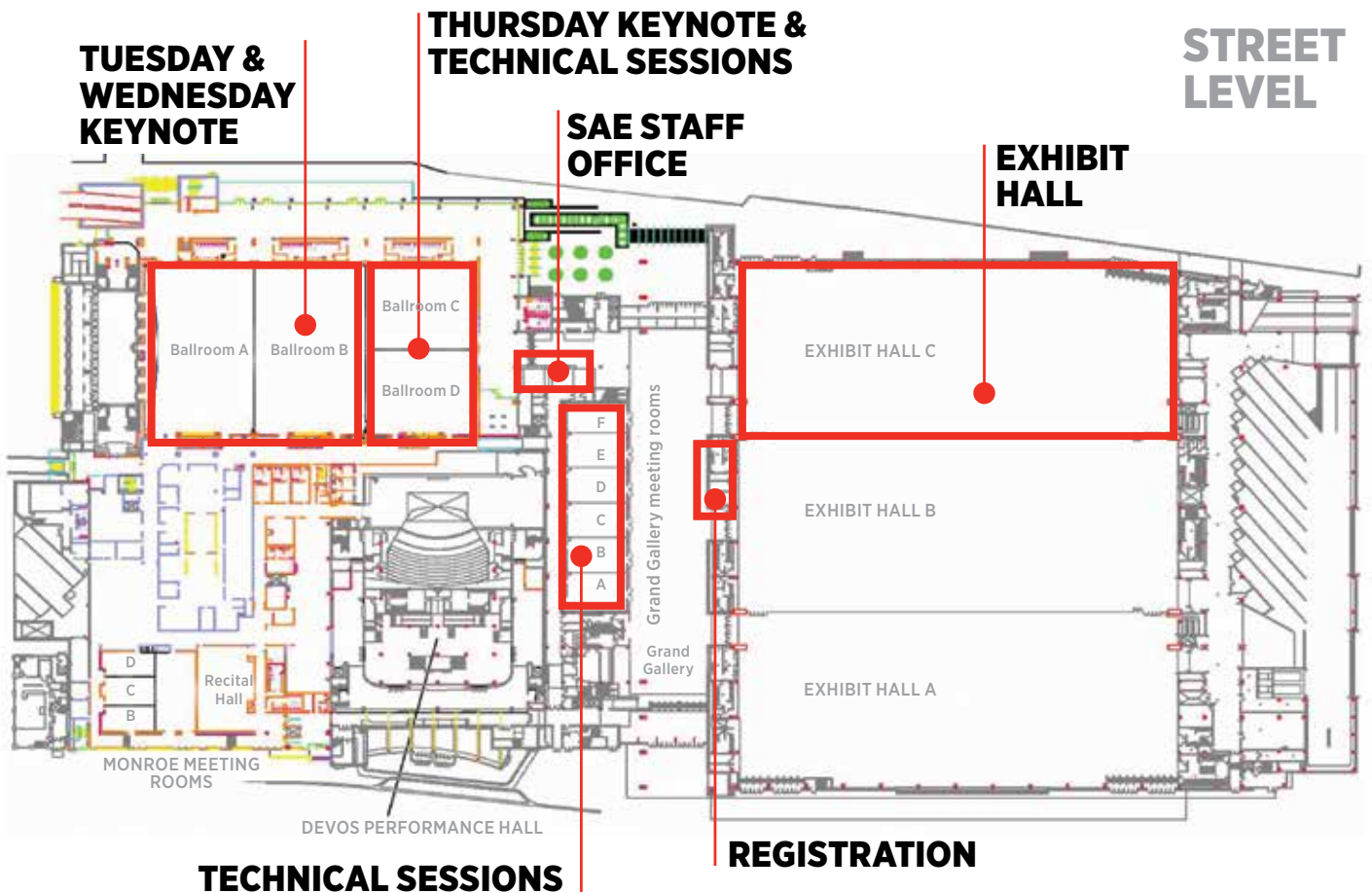
### PROFESSIONAL DEVELOPMENT SEMINARS

- Introduction to NVH Aspects of Hybrid and Electric Vehicles Seminar June 14, 2019  
8:30 a.m. – 4:30 p.m.
- Introduction to Brake Noise, Vibration, and Harshness Seminar June 14, 2019  
8:30 a.m. – 4:30 p.m.
- Effective Decision-Making: A Methodology Approach Seminar June 14, 2019  
8:30 a.m. – 4:30 p.m.

**EXHIBIT HOURS**  
 Tuesday 8:00 a.m.-6:30 p.m.  
 Wednesday 8:00 a.m.-4:00 p.m.

**REGISTRATION HOURS**  
 Monday 1:00 p.m.-5:00 p.m.  
 Tuesday 7:30 a.m.-5:00 p.m.  
 Wednesday 7:30 a.m.-5:00 p.m.  
 Thursday 7:30 a.m.-10:00 a.m.

# CONVENTION CENTER FLOOR PLAN



**SAE INTERNATIONAL**

## GET THE LATEST EVENT INFO

Download the Noise and Vibration Meeting mobile app

- **LEARN** event features, programs and sessions
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- **CONNECT** with speakers, exhibitors and attendees

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# KEYNOTES

## Tuesday

Tuesday, June 11  
9:00 – 10:00 a.m.  
Ballroom AB



Featured Speaker:  
**Raymond Kach**  
Ford Motor Company

Q&A for the Keynotes will be done through the NVC Mobile App. Visit the Q&A icon to ask the Keynotes a question.

## Wednesday

Wednesday, June 12  
9:00 – 10:00 a.m.  
Ballroom AB



Featured Speaker:  
**John Maxon**  
Gulfstream Aerospace Corp.

## Thursday

Thursday, June 13  
8:30 – 9:30 a.m.  
Ballroom CD



Featured Speaker:  
**Daniel A. Russell**  
Pennsylvania State University

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For more details including speaker biographies, please go to [sae.org/nvh](http://sae.org/nvh) or the mobile app

# TECH SESSION DAY AT A GLANCE

	AM	PM	Room No.
<b>MONDAY, JUNE 10</b>			
An Overview on NVH Measurements Made Easy Workshop (WKSP) (NVCWK5)	-	✓	Ballroom D
Engineering for Automotive Pass-by and Minimum Noise Requirements (WKSP) (NVCWK7)	-	✓	Ballroom C
Fundamentals of Acoustical Materials & Vehicle Applications Workshop (WKSP) (NVCWK2)	-	✓	Ballroom C
Hybrid & Electric Vehicles Systems - How to Resolve Issues Relating to System Integration and evaluate multi-attribute Trade-offs like NVH and Drivability (WKSP) (NVCWK8)	-	✓	Ballroom D
<b>TUESDAY, JUNE 11</b>			
Aerodynamic Noise Methods & Applications (Part 1 & 2) (NVC200)	-	✓	Grand Gallery Room D
Body Structure/ Chassis- Interior Noise, Vibration Source, and Tire (Part 1 of 2) (NVC751)	-	✓	Ballroom C
Chat with the Expert- Pranab Saha (NVCCHAT4)	-	✓	Exhibit Hall
Chat with the Experts- Dan Maguire (NVCCHAT7)	-	✓	Exhibit Hall
Chat with the Experts- Thomas Lago (NVCCHAT6)	-	✓	Exhibit Hall
Chat with the Experts-Jim Thompson (NVCCHAT8)	-	✓	Exhibit Hall
Heavy Duty Truck / Off-Highway (NVC450)	✓	-	Grand Gallery Room E
Hybrid and Electric Vehicles (Part 1 & 2) (NVC550)	✓	✓	Ballroom D
Instrumentation: Systems, Sensors and Methods (Part 1 & 2) (NVC652)	✓	✓	Grand Gallery Room B
NVH Challenges of Vehicle Lightweighting (NVC950)	✓	-	Grand Gallery Room D
Powertrain Intake / Exhaust (Part 1 & 2) (NVC180)	✓	✓	Grand Gallery Room F
Rail & Ship (NVC280)	-	✓	Grand Gallery Room E
Science Fair (NVCSCI)	✓	✓	Exhibit Hall
Subjective Response (Part 1 of 2) (NVC480)	-	✓	Grand Gallery Room C
Tuesday Keynote: Raymond Kach, Ford Motor Company (NVCK3)	✓	-	Ballroom AB
Vehicle Engineering NVH Panel (NVC755)	✓	-	Ballroom C
Vehicle/ Body Chassis Analysis (NVC752)	-	✓	Ballroom C



For detailed technical program and speakers, please go to [sae.org/nvh](http://sae.org/nvh) or the NVH Mobile App.

# TECH SESSION DAY AT A GLANCE

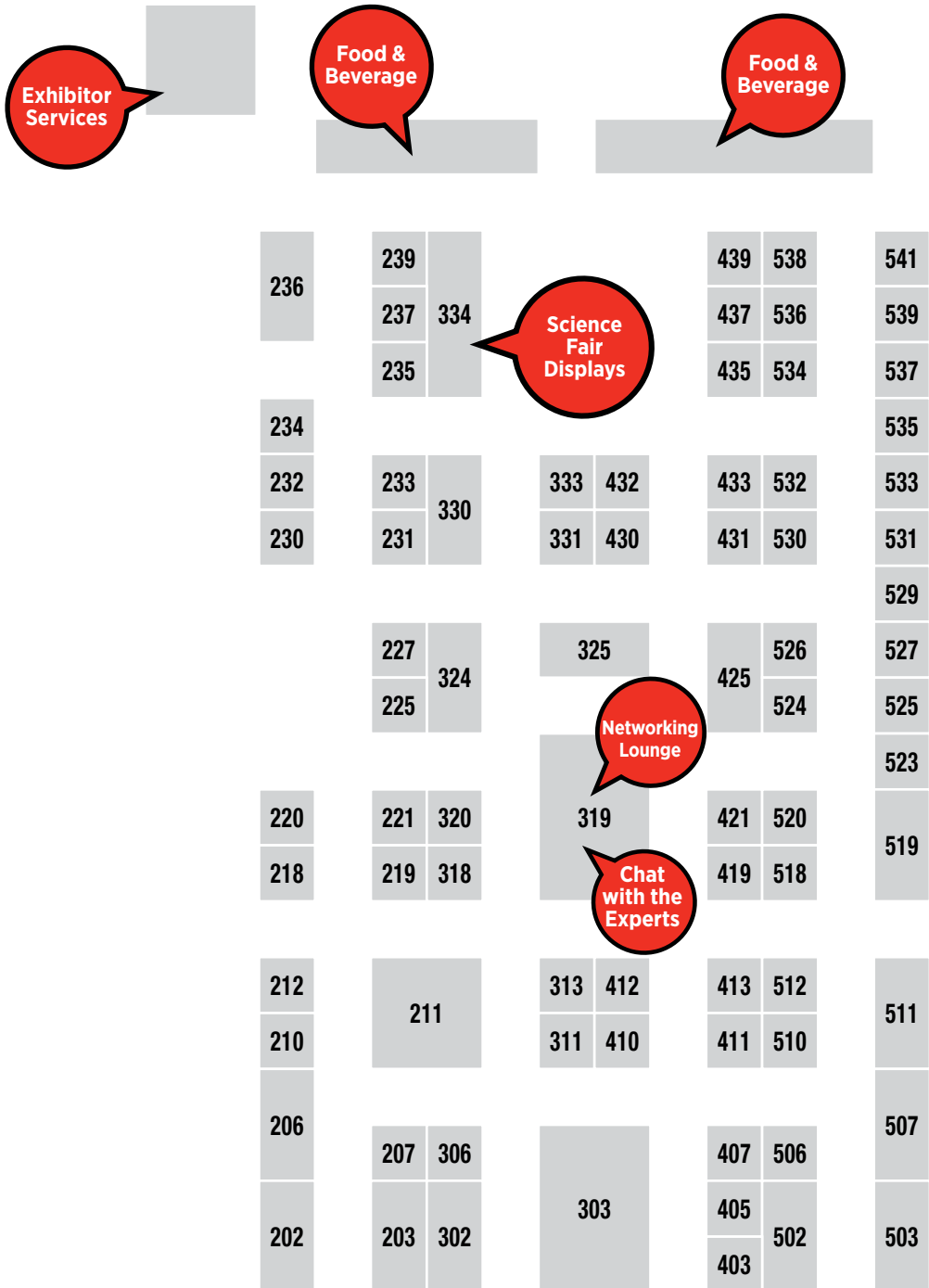
	AM	PM	Room No.
<b>WEDNESDAY, JUNE 12</b>			
Acoustics and Vibration Methods (NVC350)	✓	-	Grand Gallery Room B
Active Sound Enhancement / Cancellation Methods & Applications (NVC100)	-	✓	Ballroom D
Body Structure/ Chassis- Interior Noise, Vibration Source, and Tire (Part 2 of 2) (NVC751)	✓	-	Ballroom C
Chat with the Experts - Greg Goetchius (NVCCHAT5)	-	✓	Exhibit Hall
Chat with the Experts - Patricia Davies (NVCCHAT2)	-	✓	Exhibit Hall
Chat with the Experts - Peter Johnson (NVCCHAT3)	-	✓	Exhibit Hall
Chat with the Experts- Wade Bray (NVCCHAT1)	-	✓	Exhibit Hall
Engine & Installed Components (NVC150)	✓	-	Grand Gallery Room F
Fundamentals and Insights of Sound Quality Engineering Workshop (WKSP) (NVCWK4)	-	✓	Ballroom D
Fundamentals of Structure Borne NVH Workshop (WKSP) (NVCWK1)	-	✓	Ballroom C
Materials (Part 1 & 2) (NVC850)	-	✓	Grand Gallery Room D
Powertrain Systems (NVC151)	-	✓	Grand Gallery Room F
Student Paper Competition (Group 1) (NVCSTP1)	-	✓	Grand Gallery Room C
Student Paper Competition (Group 2) (NVCSTP2)	-	✓	Grand Gallery Room E
Student Paper Competition (Group 3) (NVCSTP3)	-	✓	Grand Gallery Room F
Subjective Response (Part 2 of 2) (NVC480)	✓	-	Grand Gallery Room C
System NVH Approach - Influence of Coupled Parts (NVC580)	✓	-	Grand Gallery Room D
The Fundamentals of Muffler and Silencer Design Workshop (WKSP) (NVCWK3)	-	✓	Grand Gallery Room F
Transmission & Driveline (Part 1 & 2) (NVC680)	-	✓	Ballroom C
Wednesday Keynote: The Sound of Synergy - John Maxon, Gulfstream Aerospace Corp. (NVCK1)	✓	-	Ballroom AB
<b>THURSDAY, JUNE 13</b>			
Aircraft Interior Noise (NVC300)	✓	-	Grand Gallery Room E
Diesel (NVC900)	✓	-	Grand Gallery Room F
Materials (Parts 3 of 3) (NVC850)	✓	-	Grand Gallery Room D
Thursday Keynote: Making Acoustics and Vibration Concepts Accessible Through the Use of Animations- Daniel Russell, Penn State University (NVCK2)	✓	-	Ballroom CD
Transmission & Driveline (Part 3 of 3) (NVC680)	✓	-	Ballroom C
Vibro Acoustic Analysis (NVC355)	✓	-	Grand Gallery Room B



For detailed technical program and speakers, please go to [sae.org/nvh](http://sae.org/nvh) or the NVH Mobile App.



# EXHIBIT FLOOR PLAN



# EXHIBITOR LIST

Company	Booth	Company	Booth	Company	Booth
3M .....	203				
<b>A</b>		<b>F</b>		<b>N</b>	
ACS Industries Inc .....	435	FEV North America Inc .....	313	Novastar Solutions .....	325
Advanced Test Equipment Rentals.....	532	Freudenberg Performance Materials .....	519	NVHEM Lab - Kettering Univ.....	235
Airboss Flexible Products .....	231	<b>G</b>		<b>O</b>	
Altair Engineering .....	233	GRAS Sound & Vibration NA .....	411	OROS Inc.....	419
American Acoustical Products Inc.....	538	GRFT .....	227	<b>P</b>	
ANSYS Inc.....	324	<b>H</b>		Paracoat Products Ltd.....	405
ANV LLC.....	520	Harves USA Corporation .....	529	PCB Piezotronics .....	503
Ascend Performance Materials.....	430	HEAD acoustics, Inc.....	502	Polytec Inc.....	330
Autoneum North America Inc.....	236	<b>I</b>		Precision Textiles LLC.....	220
AVL Powertrain Engineering Inc .....	210	IMV America Inc.....	232	<b>R</b>	
<b>B</b>		<b>J</b>		Romax Technology .....	437
BASF Corporation .....	524	Janesville .....	533	Roush Industries Inc .....	320
Beta CAE Systems USA Inc.....	311	JTL America, Inc. ....	537	<b>S</b>	
BlackBerry QNX .....	535	<b>K</b>		Scantek, Inc.....	534
Bruel & Kjaer North America.....	303	Kistler Instrument Corp .....	531	Siemens PLM Software.....	211
BSWA.....	318	Kluber Lubrication North America LP .....	333	SIKA Automotive.....	425
<b>C</b>		Kolano and Saha Engineers Inc.....	331	Sinus Messtechnik GmbH.....	510
CDH Detroit Inc. ....	221	<b>L</b>		<b>T</b>	
Chemours .....	410	LDS Test and Measurement LLC.....	302	TE Connectivity.....	433
Continental Contitech .....	525	<b>M</b>		Thermotron Industries .....	431
Crystal Instruments.....	306	m+p International Inc .....	413	Trelleborg.....	225
<b>D</b>		Material Sciences Corporation .....	527	Trialon Corporation.....	439
Dassault Systemes Simulia Corp .....	403	MB Dynamics Inc .....	523	<b>U</b>	
dBVibroAcoustics .....	219	Michigan Technological University .....	237	UFP Technologies Inc .....	212
DEWESoft LLC .....	512	Microflown Technologies.....	412	University of Kentucky .....	239
Dytran Instruments Inc .....	518	Momentive.....	432	<b>V</b>	
<b>E</b>		Monadnock Non-Wovens LLC .....	230	Vibrant Technology.....	530
E-A-R Thermal Acoustic Systems .....	207	MSC Software .....	506	VIBRATION RESEARCH .....	507
Eckel Industries Inc .....	206	Muller - BBM VibroAkustik Systeme Inc.....	202	Vispiron/Rotec .....	421
Element Materials Technology.....	218			Vorwerk Autotec GmbH .....	526
ESI North America.....	511				
ETS-Lindgren Inc .....	407				

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# EXHIBITOR PROFILE

Exhibitor Directory text is published as submitted by exhibiting companies.

## 3M COMPANY

Booth **203**

### STUDENT AWARD SPONSOR

3 M Ctr Bldg 224-6NE-45  
Saint Paul, MN 55144  
United States

[3M.com/paintprotectionfilm](http://3M.com/paintprotectionfilm)

3M Acoustic Management Solutions has spent decades helping effectively managing noise, vibration and harshness (NVH) in automotive designs without adding weight. Thinsulate™ products continue improving sound insulation and absorption nearly anywhere on the vehicle, including engine-side and other high-temperature applications. 3M™ Engineered Damping Material delivers comparable performance to traditional constrained layer damping material, at half the weight.

## ACS INDUSTRIES INC

Booth **435**

1 New England Way  
Lincoln, RI 02865  
United States

[acsindustries.com](http://acsindustries.com)

ACS Industries, Inc. is a global OEM/Tier 1 supplier of hot & cold end exhaust components to the automotive & commercial vehicle markets. ACS production locations are in Monterrey Mexico, Turda Romania and Shanghai China and are IATF 16949 certified. The main products include wire mesh for NVH, gaskets & DPF/GPF supports.

## ADVANCED TEST EQUIPMENT RENTALS

Booth **532**

10401 Roselle St  
San Diego, CA 92121  
United States

[watecorp.com](http://watecorp.com)

Advanced Test Equipment Rentals (ATEC) is a leading provider of vibration analyzers, laser doppler vibrometers, sound level meters and shaker test systems. ATEC offers affordable rentals for cutting-edge products from manufacturers like Bruel & Kjaer, Polytec, Vibralign and LabWorks, and has crafted rental solutions for the automotive and aerospace industries since 1981.

## AIRBOSS FLEXIBLE PRODUCTS

Booth **231**

2600 Auburn Ct  
Auburn Hills, MI 48326  
United States

[airbossofamerica.com](http://airbossofamerica.com)

AirBoss Flexible Products is a leading supplier of molded and mold-bonded rubber parts in the North American automobile industry. For more than 30 years, we have applied engineering talent and the latest molding technologies to solve vibration problems for top automakers.

## ALTAIR ENGINEERING

Booth **233**

### CONFERENCE SUPPORTER

1820 E Big Beaver Rd  
Troy, MI 48083  
United States

[altair.com](http://altair.com)

Altair is a global technology company that provides software and cloud solutions in the areas of product development, high performance computing (HPC) and data intelligence. Altair enables organizations across broad industry segments to compete more effectively in a connected world while creating a more sustainable future. To learn more, please visit our website.

## AMERICAN ACOUSTICAL PRODUCTS INC

Booth **538**

311 Hopping Brook Rd  
Holliston, MA 01746  
United States

[aapusa.com](http://aapusa.com)

American Acoustical Products designs and manufactures noise and vibration control products to solve your most demanding applications challenges. We offer solutions for hundreds of applications across industries including transportation, HVAC, industrial enclosures, military, medical, construction, power generation, compressor, and consumer electronics/appliances.

## ANSYS INC

Booth **324**

2600 ANSYS Dr  
Canonburg, PA 15317  
United States

[ansys.com](http://ansys.com)

ANSYS is the global leader in engineering simulation. We help the world's most innovative companies deliver radically better products to their customers. By offering the best and broadest portfolio of engineering simulation software, we help them solve the most complex design challenges and engineer products limited only by imagination.

## ANV LLC

Booth **520**

PO Box 1255  
Prior Lake, MN 55372  
United States

[anvllc.com](http://anvllc.com)

ANV LLC is the US distributor for the CAE line of Acoustic Cameras and the SINUS Spectrum Analyzers. We will be showing the very affordable and portable self-contained SoundCam and the new SINUS small and portable NoisePad, 4 channel Spectrum Analyzer. Stop by and try the SoundCam and NoisePad for yourself.

# EXHIBITOR PROFILE

## ASCEND PERFORMANCE MATERIALS

Booth **430**

Travis St, Ste 900  
Houston, TX 77002  
United States

[ascendmaterials.com](http://ascendmaterials.com)

Ascend Performance Materials is the world's largest fully integrated manufacturer of nylon 6,6 resin.

## AUTONEUM NORTH AMERICA INC

Booth **236**

29293 Haggerty Rd  
Novi, MI 48377  
United States

[autoneum.com](http://autoneum.com)

Autoneum is globally leading in acoustic and thermal management for vehicles. The Company develops and produces multifunctional, lightweight components and systems for interior floor and engine bay as well as the underbody. Customers include almost all automobile manufacturers in Europe, North & South America, Asia and Africa.

## AVL POWERTRAIN ENGINEERING INC

Booth **210**

47519 Halyard Dr  
Plymouth, MI 48170  
United States

[avl.com](http://avl.com)

AVL is the world's largest independent company for development, simulation and testing technology of powertrains for passenger cars, trucks and large engines. One of AVL's business areas is Advanced Simulation Technologies, which develops simulation software focusing on design and optimization of powertrain systems covering all phases of the development process.

## BASF CORPORATION

Booth **524**

1609 Biddle Avenue  
Wyandotte, MI 48192  
United States

[automotive.basf.com](http://automotive.basf.com)

BASF is the #1 chemical supplier to the automotive industry. BASF supplies and develops functional materials and solutions that enable vehicles to be built more efficiently with a lower environmental impact, whatever powertrain technology they use. BASF's product range includes plastics, coatings, catalysts, automotive fluids as well as battery materials.

## BETA CAE SYSTEMS USA INC

Booth **311**

29800 Middlebelt Rd Ste 100  
Farmington Hills, MI 48334  
United States

[ansa-usa.com](http://ansa-usa.com)

BETA CAE Systems is an engineering services company that distributes & supports the industry leading ANSA & META software. ANSA is a CAE pre-processing tool for CFD & FE Analysis, for full-model build, from CAD to solver input file in one integrated environment. META is a post-processor for analyzing results from FLUENT, STAR CCM, CFD++, ANSYS, NASTRAN, ABAQUS, LS-DYNA, PAMCRASH & other solvers.

## BLACKBERRY QNX

Booth **535**

1001 Farrar Rd  
Ottawa, Ontario K2K 0B3  
Canada

[qnx.com](http://qnx.com)

BlackBerry QNX, is a leading supplier of safe, secure, and trusted operating systems, development tools, and professional services for connected embedded systems. Global leaders such as Ford, Audi, Cisco, General Electric, Lockheed Martin, and Siemens depend on BlackBerry QNX technologies for their safety certified and/or mission-critical applications.

## BRUEL & KJAER NORTH AMERICA INC

Booth **303**

3079 Premiere Pkwy Ste 120  
Duluth, GA 30097  
United States

[bksv.com](http://bksv.com)

Explore the next generation of mobility noise, vibration and harshness testing solutions from the merger of HBM and Brüel & Kjær. HBM offers a wide variety of mobile/rugged and universal data acquisition systems plus Prensica software featuring nCode for signal processing, acoustics and vibration analysis. Brüel & Kjær offers best-in-class solutions to NVH challenges for the sound and vibration industry through a comprehensive engineering services team. On 1 January 2019, Brüel & Kjær and HBM merged their activities into a new company called HBK - Hottinger, Brüel & Kjær." We have merged

## BSWA

Booth **318**

Xicheng District  
1002-1003 North Ring Ctr 18 Yumin Rd  
Beijing 100029  
China

[bswa-tech.com](http://bswa-tech.com)

Established in 1998, BSWA Technology Co., Ltd. is an acoustical company covering the businesses of: - Manufacturing the world class measurement microphones and accelerometers. - Manufacturing the world class sound level meters of both Class 1 and Class 2. - Developing sound and vibration measurement devices and system. - Designing and building anechoic chambers. - Acoustical and vibration consulting. BSWA will exhibit the following products: - Microphones and Accelerometers - Sound Level Meters - Material Testing System - Impedance Tube System - Microphone Array System - Binaural Recording & Playback System Based on iPhone - Real Time Analyzers

# EXHIBITOR PROFILE

## CDH DETROIT INC.

Booth **221**

7 W Square Lake Rd  
Bloomfield Hills, MI 48302  
United States

**cdh-ag.com**

CDH is an expanding engineering consultancy with offices in Germany, Japan and the USA. As specialists in applied finite element analysis, CDH combines 30 years of structural analysis know-how with the latest in CAE technology. With over 60 simulation engineers worldwide, CDH provides international expertise in virtual vehicle development.

## CHEMOURS KRYTON™ PERFORMANCE LUBRICANTS

Booth **410**

1007 Market St  
Wilmington, DE 19898  
United States

**krytox.com**

Krytox™ Lubricants Can Help Solve Your Customer's NVH Complaints. Inside vehicle or aircraft interiors, different materials come into contact with each other. Examples include metal on plastic, leather on leather, and weather stripping. Movement between these surfaces often results in a series of noises. With a small amount applied, Krytox™ performance lubricants can permanently eliminate these noises.

## CONTINENTAL CONTITECH

Booth **525**

1791 Harmon Rd  
Auburn Hills, MI 48326  
United States

**continental-corporation.com**

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers, safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2018, Continental generated preliminary sales of €44.4 billion and currently employs around 244,000 people in 60 countries and markets.

## CRYSTAL INSTRUMENTS

Booth **306**

**SILVER SPONSOR**

2370 Owen St  
Santa Clara, CA 95054  
United States

**crystalinstruments.com**

Founded in 1996, Crystal Instruments (CI) is a leading manufacturer of dynamic measurement, signal analysis, and vibration testing equipment. Crystal Instruments is headquartered in Santa Clara, California, the center of Silicon Valley. Currently, CI products are distributed in over 40 countries around the world.

## DASSAULT SYSTEMES SIMULIA CORPORATION

Booth **403**

1301 Atwood Ave  
Johnston, RI 02919  
United States

**3ds.com/simulia**

Dassault Systèmes SIMULIA reveals the world we live in through realistic simulation of product, nature & life. We provide high-value end-to-end industry processes for digital engineering that employ state-of-the-art connected multidisciplinary-multiscale simulation applications. For more information visit our website.

## DBVIBROACOUSTICS

Booth **219**

Husinecka 10  
Prague 13000  
Czech Republic

**dBVibroAcoustics.com**

We offer Acoustics Simulation Consulting Services, Noise & Vibration Modelling Guidance, Training, Workshop, Technology Transfer, Retainer Services, Worldwide Services in Aerospace, Automotive, Marine and Rail, Top International Vibro-Acoustics Expertise, Unique creative approach to predictive simulation

## DEWESOFT LLC

Booth **512**

10730 Logan St  
Whitehouse, OH 43571  
United States

**dewesoft.com**

DEWESoft, the next evolution in data acquisition instrumentation, offers a full suite of hardware for field and lab data acquisition applications. Scalable from four to thousands of channels, our instruments are available as small USB/EtherCat devices, stand-alone battery-powered systems, or rack-mounted configurations. Powered by our DEWESoft X software, we acquire and control many multi-domain test sets that may include analog in/out, digital in/out, video, and much more.

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United States

**dytran.com**

Founded in 1980, Dytran Instruments, Inc. specialized at its inception in piezoelectric accelerometers, dynamic force sensors, pressure transducers and impulse hammers.

# EXHIBITOR PROFILE

## E-A-R THERMAL ACOUSTIC SYSTEMS

Booth 207

7911 Zionsville Rd  
Indianapolis, IN 46268  
United States  
[earglobal.com](http://earglobal.com)

Aearo Technologies LLC, a 3M company, provides noise, vibration and thermal management solutions. Application development includes material design, modeling, verification and validation testing, engineering and manufacturing. The E-A-R Acoustic Technology Center completes our project management by providing a comprehensive array of design and test services, diagnostic testing and solution validation.

## ECKEL INDUSTRIES INC

Booth 206

100 Groton Shirley Rd  
Ayer, MA 01432  
United States  
[eckelusa.com](http://eckelusa.com)

With expertise in creating optimal sound environments, Eckel has been at the forefront of acoustic analysis and design since 1952. Headquartered in Ayer, Massachusetts, Eckel helped to create the world's first Anechoic Chamber and since then has pioneered chamber design for use in a wide array of applications.

## ELEMENT MATERIALS TECHNOLOGY

Booth 218

27485 George Merrelli Dr  
Warren, MI 48092  
United States  
[element.com](http://element.com)

Element Materials Technology provides a comprehensive range of materials and product qualification testing, consulting, certification and calibration services to the global Transportation & Industrials; Fire & Building Products; Oil and Gas & Infrastructure; and Aerospace sectors. We ensure materials and products are safe, quality, compliant, and fit for purpose.

## ESI NORTH AMERICA

Booth 511

32605 W 12 Mile Rd Ste 350  
Farmington Hills, MI 48334  
United States  
[esi.group.com](http://esi.group.com)

ESI VA One is a single environment for vibro-acoustics analysis and design. It allows engineers to perform accurate predictive noise and vibration design assessments early in the design cycle to meet product performance objectives.

The VA One environment is accessed from a common user interface, which covers the full frequency spectrum through a set of seamlessly coupled and proven modeling methods. ESI employs over 1200 high-level specialists worldwide covering more than 40 countries. For more information visit our website.

## ETS-LINDGREN INC

Booth 407

1301 Arrow Point Drive  
Cedar Park, TX 78613  
United States  
[ets-lindgren.com](http://ets-lindgren.com)

ETS-Lindgren is the global leader in the design, manufacture, and installation of acoustic chambers and enclosures. Our product line includes anechoic, hemi-anechoic, reverberation, predictable field, adjustable field, and small device chambers for all precision, engineering, and survey grade measurements. For more information, visit us at [www.ets-lindgren.com](http://www.ets-lindgren.com).

## FEV NORTH AMERICA INC.

Booth 313

4554 Glenmeade Lane  
Auburn Hills, MI 48326  
United States  
[fev.com/en/usa.html](http://fev.com/en/usa.html)

FEV specializes in all aspects of NVH from benchmarking and target setting, to vehicle integration and fleet testing. In addition to passenger cars, our NVH activities cover off-road, heavy-duty and industrial applications.

## FREUDENBERG PERFORMANCE MATERIALS

Booth 519

3500 Industrial Dr  
Durham, NC 27704  
United States  
[freudenberg-pm.com/en](http://freudenberg-pm.com/en)

Freudenberg Performance Materials is a leading global manufacturer of technical textiles offering differentiated value propositions to a broad range of markets and applications such as Apparel, Automotive, Building Materials, Hygiene, Medical, Shoe and Leather goods as well as Specialties. Our automotive portfolio includes lightweight underbody systems, acoustics, carpet backings and more.

## GRAS SOUND & VIBRATION NORTH AMERICA

Booth 411

2234 E Enterprise Pkwy  
Twinsburg, OH 44087  
United States  
[gras.us](http://gras.us)

GRAS is the leading global provider of rugged NVH microphones that you can rely on for repeatable measurements, the first time and every time. From standard microphones to customized sensors, GRAS has the right products to help develop tomorrow's vehicles today. Visit our website for more information.

# EXHIBITOR PROFILE

## GRFT

Booth **227**

2788 Remico St SW  
Wyoming, MI 49519  
United States

[grft.com](http://grft.com)

GRFT offers a complete line of Polyurethane Solutions, from slab stock Foam Fabrication to specialized Molded (Cast) Foam chemistries, including a complete line of High-Resilience, Fire-Resistant, Acoustical, Integral Skin and Viscoelastic flexible polyurethanes, and Rigid Structural polyurethane products.

## HARVES USA CORPORATION

Booth **529**

39555 Orchard Hill Pl Ste 600  
Novi, MI 48375  
United States

[harvesusa.com](http://harvesusa.com)

HARVES is a Japanese manufacturer of special lubricants used in automobiles. DRYSURF is the name of HARVES liquid type lubricant. The solvent volatilizes instantaneously when applied to the material to be processed, forming a uniform and micron-thick lubrication film. DRYSURF will be good for replacement of greases, sometimes felt pad.

## HEAD ACOUSTICS, INC.

Booth **502**

6964 Kensington Road  
Brighton, MI 48116  
United States

[head-acoustics.com](http://head-acoustics.com)

HEAD acoustics offers test system to evaluate the noise and vibration performance of a range of products, especially based on the operators' perception and expectations. HEAD acoustics unique listen-analyze-filter capabilities allow engineers to use their own hearing to assist with isolating annoying attributes of product sounds to ensure the optimal countermeasures are put in place.

## IMV AMERICA INC

Booth **232**

2400 E Katella Ave Ste 800  
Anaheim, CA 92806  
United States

[imv-usa.com](http://imv-usa.com)

IMV was established in 1957 and specializes in design and manufacturing of high quality and highly reliable Japanese environmental testing products used in a variety of applications such as: Industrial, Automotive, Aviation, Seismic and Package products. IMV shakers range from 67lbf to 79,000lbf in single, multi-axis, 4 post to 6 DOF configurations.

## JANESVILLE

Booth **533**

29200 Northwestern Hwy Ste 400  
Southfield, MI 48034  
United States

[janesvilleacoustics.com](http://janesvilleacoustics.com)

Janesville is a leading provider of fiber based recyclable/bio-degradable lightweight, acoustical and thermal product in North America. Value propositions include material science for natural and PET fiber based products, rapid prototyping, Acoustical product development, converting plastic to lighter weight fiber solutions, and diverse manufacturing footprint to support OEM's and TI's.

## JTL AMERICA, INC.

Booth **537**

12250 Belden Ct.  
Livonia, MI 48150  
United States

[jtlamerica.com](http://jtlamerica.com)

JTL America is an ISO 17025 accredited testing laboratory specializing in vibration, mechanical and inspection in Livonia, MI. We offer Thermal Vibration, Sine/Dwell/Cycling, Random and Sine on Random. When you choose JTL, you get a partner you can depend on. Please visit us in our booth #537!

## KISTLER INSTRUMENT CORP

Booth **531**

30280 Hudson Dr.  
Novi, MI 48377  
United States

[kistler.com](http://kistler.com)

Kistler offers a comprehensive product line of accelerometers and associated instrumentation developed with over 60 years of experience utilizing a choice of technologies depending upon the particular application. The Kistler technology provides exceptional thermal accuracy and stability over a wide temperature range, an ideal solution for many powertrain applications.

## KLUBER LUBRICATION NORTH AMERICA LP

Booth **333**

32 Industrial Dr  
Londonderry, NH 03053  
United States

[klueber.com](http://klueber.com)

Noise free operation and top-quality haptics are always the target when it comes to Automotive interior design. Our focus at Klüber Lubrication is not only on the elimination of wear, but also on the elimination of unwanted noise. Please stop by our booth #333 to learn more.

## KOLANO AND SAHA ENGINEERS INC

Booth **331**

3559 Sashabaw Rd  
Waterford, MI 48329  
United States

[kandse.com](http://kandse.com)

K&SE, an independent professional engineering consulting company with an accredited laboratory, specializing in acoustics, noise, and vibration in various fields including the mobility industry and architectural acoustics. Specialties include source diagnostics, sound package development, laboratory qualification, evaluating components/materials, offering K&STLE KaBIN® - a qualified small reverberation room and anechoic chamber.

# EXHIBITOR PROFILE

## LDS TEST AND MEASUREMENT LLC BRUEL & KJAER NORTH AMERICA

Booth **302**

3079 Premiere Pkwy Ste 120  
Duluth, GA 30097  
United States

**bksv.com**

Explore the next generation of mobility noise, vibration and harshness testing solutions from the merger of HBM and Brüel & Kjær. HBM offers a wide variety of mobile/rugged and universal data acquisition systems plus Prensicia software featuring nCode for signal processing, acoustics and vibration analysis. Brüel & Kjær offers best-in-class solutions to NVH challenges for the sound and vibration industry through a comprehensive engineering services team. On 1 January 2019, Brüel & Kjær and HBM merged their activities into a new company called HBK – Hottinger, Brüel & Kjær. "We have merged.

## MATERIAL SCIENCES CORPORATION

Booth **527**

6855 Commerce Blvd  
Canton, MI 48187  
United States

**materialsciencescorp.com**

Material Sciences Corporation is a metal processor focused on innovative acoustic and light-weighting technologies for applications demanding quiet structures. MSC is the industry leader and pioneer of acoustic metal laminates including commercialization of the first stamped automotive body-in-white application. Our extensive knowledge of Noise & Vibration coupled with our acoustic test labs in Canton, Michigan have resulted in full-service support for our customers.

## MB DYNAMICS INC

Booth **523**

25865 Richmond Rd  
Cleveland, OH 44146  
United States

**embassyglobalpr.com**

MB Dynamics are leading industry experts in the design, manufacture and supply of vibration test systems and equipment, including buzz, squeak and rattle (BSR), electric power steering, and suspension component test systems; modal exciters and amplifiers; automated vibration calibration systems; dynamic controllers; suspension component test systems; and test engineering services.

## MICHIGAN TECHNOLOGICAL UNIVERSITY

Booth **237**

1400 Townsend Dr  
Houghton, MI 49931  
United States

**mtu.edu**

Michigan Technological University offers BS, MS, and PhD degrees in many fields, including noise, vibration, and harshness. We offer online courses for professional development and research contracting support.

## MICROFLOWN TECHNOLOGIES Booth **412**

PO Box 2205  
Arnhem 6802 CE  
Netherlands

**microflown.com**

Microflown Technologies is well known for its unique acoustic particle velocity sensor that provides a special and direct way to comprehensively understand sound. The innovative vibro-acoustic solutions offer the industry new possibilities for sound and vibration testing, from product development to quality control of products.

## MOMENTIVE

Booth **432**

260 Hudson River Rd  
Waterford, NY 12188  
United States

**momentive.com**

Momentive is a global manufacturer of advanced silicone materials. Our specialty silicone adhesives, elastomers and coatings provide unique damping, bonding, sealing and protective properties. Momentive has created unique materials for damping and bonding applications in harsh environments supported by dedicated technical experts.

## MONADNOCK NON-WOVENS LLC Booth **230**

PO Box 295  
5110 Park Court  
Mount Pocono, PA 18344  
United States

**mnwovens.com**

Monadnock Non-Wovens LLC has manufactured meltblown, 100% polypropylene nonwovens for noise reduction and filtration for over 10 years. Monadnock HPAM® High Performance Acoustic Media products deliver high sound absorption at low weight with fine fiber cores and acoustical scrims on both faces. Made with Green-e certified 100% renewable electricity (RECs).

## M+P INTERNATIONAL INC

Booth **413**

271 Grove Ave Ste G  
Verona, NJ 07044  
United States

**mpihome.com/en**

Product designers and test engineers throughout the world trust m+p international for reliable noise and vibration testing solutions.

## MSC SOFTWARE

Booth **506**

4675 Macarthur Ct Ste 900  
Newport Beach, CA 92660  
United States

**mscsoftware.com**

MSC Software is a global leader in helping product manufacturers to advance their engineering methods with simulation software and services. Academic institutions, researchers, and students employ MSC's technology to expand individual knowledge as well as expand the horizon of simulation. MSC Software employs 1,300 professionals in 20 countries. Visit our website.



# EXHIBITOR PROFILE

## MULLER - BBM VIBROAKUSTIK SYSTEME INC

Booth 202

3891 Ranchero Dr Ste 30  
Ann Arbor, MI 48108  
United States

[PAKbyMBBM.com](http://PAKbyMBBM.com)

Müller-BBM VibroAkustik Systeme is one of the world's leading suppliers of vibroacoustic measurement technology, focused on the acquisition, analysis, evaluation and management of physical data for every stage of the product life-cycle.

## NOVASTAR SOLUTIONS

Booth 325

35200 Plymouth Rd  
Livonia, MI 48150  
United States

[novastar.net](http://novastar.net)

Headquartered in Livonia, MI, Novastar Solutions has been supporting customers in design, analysis, prototyping, testing and manufacturing for over 20 years. Organizations in need of IT life cycle management, design hardware and software, 3D printing, and test equipment calibrations turn to Novastar.

## NVHEM LAB - KETTERING UNIVERSITY

Booth 235

1700 University Ave  
Flint, MI 48504  
United States

[newb.kettering.edu/wp/nvhem](http://newb.kettering.edu/wp/nvhem)

The NVHEM Lab focuses on research related to analytical and experimental topics in structural and acoustic systems. The main goal of NVHEM is to develop, apply, and improve measurement techniques and simulation procedures to better understand these systems.

## OROS INC

Booth 202

Oros Americas Inc  
250 Monroe Ave NW Ste 400  
Grand Rapids, MI 49503  
United States

[oros.com](http://oros.com)

Visit the OROS, Inc. booth to see the latest in NVH instrumentation and analysis. From acoustic holography to sound quality to transfer path analysis, OROS, Inc. offers the full spectrum of solutions for your automotive NVH needs. Application experts will be on hand to discuss your requirements. Whether you're in the lab, in-vehicle or on the production floor, OROS, Inc. has you covered.

## PCB PIEZOTRONICS

Booth 503

3425 Walden Ave  
Depew, NY 14043  
United States

[pcb.com](http://pcb.com)

PCB is a designer and manufacturer of microphones, vibration, pressure, force, torque, load, and strain sensors, and the pioneer of ICP® technology used by design engineers and predictive maintenance professionals worldwide for test, measurement, monitoring, and control requirements in automotive, aerospace, industrial, R&D, military, educational, commercial, and OEM applications.

## PARACOAT PRODUCTS LTD

Booth 405

Near Sikandarpur Metro Station  
307-308, DLF City Ct M. G. Rd  
Gurgaon, Haryana 122018  
India

[paracoat.com](http://paracoat.com)

PCP is a supplier for Concept2 Delivery for NVH & Interior Components for the Auto/White good Industry since 1984 with products like- Insulations-Dash/Outer/Hood, Carpets, Splash Shields, Stone Guards, Noiselite, Heat Shields, Engine Covers, EPP Parts, Floor Mats, Dampeners-Melt Sheets/Anti Vibration Pads/Stiffeners etc based in India and Thailand.

## POLYTEC INC

Booth 330

16400 Bake Pkwy  
Irvine, CA 92618  
United States

[polytec.com](http://polytec.com)

Polytec is the world's leading manufacturer of non-contact vibration and noise measurement systems, from single-point measurements to completely scanned areas, rotational, out-of-plane, in-plane, and 3D motion. Productivity-enhancing automotive applications include modal analysis, finite element correlation, valve train testing, quality control, noise source identification, dynamics on hot or delicate surfaces and wind tunnel measurements.

## PRECISION TEXTILES LLC

Booth 220

200 Maltese Dr  
Totowa, NJ 07512  
United States

[precisiontextiles-usa.com](http://precisiontextiles-usa.com)

Precision Textiles is a pioneer in the production, design & distribution of chemically-bonded, thermally-bonded, needlepunch, spun-laced/high-loft nonwovens and fusible coatings. Superior automotive interior components offering paramount performance in the industry. Industry-compliant insulation, shape support, reinforcement, facing & acoustic barrier solutions, custom-tailored to your manufacturing needs. ISO 9001:2015 Certified

# EXHIBITOR PROFILE

## ROMAX TECHNOLOGY

Booth **437**

1050 Wilshire Dr Ste 280  
Troy, MI 48084  
United States

**Romaxtech.com**

Romax Technology are a global leader in software, analysis and services for gearbox, bearings and driveline systems. Providing unique solutions to key industries including EV, automotive, aerospace, bearings, wind, off road, rail and marine worldwide. Offering award-winning solution for electrical and conventional driveline systems, Romax supports many of the world's top auto manufacturers and suppliers helping them get better quality products to the market faster and at lower cost, without compromising on design and development accuracy.

## ROUSH INDUSTRIES INC

Booth **320**

12011 Market St  
Livonia, MI 48150  
United States

**Roush.com/NVH**

Make Roush your partner for NVH products and engineering services to revolutionize your product line! Roush provides customers with cutting-edge, FAST-RESPONSE, price-competitive products and engineering services. Leveraging multiple disciplines from NVH development and CAE analysis to prototype and production manufacturing, Roush will make your products quieter, smoother, and more appealing. Roush.com/NVH.

## SCANTEK, INC.

Booth **534**

6430 Dobbin Rd. Ste C  
Columbia, MD 21045  
United States

**scantekinc.com**

Scantek, Inc. is a leading company in sound and vibration instrumentation sales, rental, and calibration. Scantek sells, services, and rents the finest products and provides expert application support.

## SIEMENS PLM SOFTWARE

Booth **211**

5800 Granite Pkwy Ste 600  
Plano, TX 75024  
United States

**new.siemens.com/global/en.html**

Siemens PLM Software is a world-leading provider of product lifecycle management (PLM) software. We help companies make great products by optimizing their lifecycle processes, from planning and development through manufacturing and support.

## SIKA AUTOMOTIVE

Booth **425**

30800 Stephenson Highway  
Madison Heights, MI 48071  
United States

**sikaautomotive.com**

Sika's acoustic systems are proven, highly effective solutions designed to meet OEM weight and acoustic targets. SikaBaffle® and SikaSeal® products control airborne noise by sealing vehicle body cavities while SikaDamp® products reduce body panel vibration. SikaReinforcer® products are designed to strengthen and stiffen vehicle body sections to improve overall NVH. For more information, please visit our website.

## SINUS MESSTECHNIK GMBH

Booth **510**

Foepplstrasse 13  
Leipzig 04347  
Germany

**soundbook.de**

SINUS Messtechnik GmbH from Germany offers a complete range of innovative measuring instruments for acoustics and vibration. In addition to handheld level meters, mobile multi-channel analyzers and software for measurements and analysis from our own production, we offer high-quality measuring microphones and accessories for complete solutions for industry, research institutions and universities. For more information visit our website.

## TE CONNECTIVITY

Booth **433**

1050 Westlakes Dr  
Berwyn, PA 19312  
United States

**te.com/usa-en/home.html**

TE Connectivity (TE) is one of the largest connectivity and sensor companies in the world, with innovative sensor solutions that help customers transform concepts into smart, connected creations. Our sensors are vital to the next generation of data-driven technology. TE offers an unmatched portfolio of intelligent and high-performing sensor solutions.

## THERMOTRON INDUSTRIES

Booth **431**

291 Kollen Park Dr  
Holland, MI 49423  
United States

**thermotron.com**

Thermotron's electrodynamic vibration test equipment meets a variety of testing applications for industries around the globe with superior acceleration, velocity, force, and shock performance. Thermotron is a turnkey manufacturer for vibration test systems including the shaker, head expander, sliptable, trunnion, fixtures, software, and control system. Visit us at Booth 431.

# EXHIBITOR PROFILE

## TRELLEBORG DAMPING SOLUTIONS

Booth **225**

15701 Centennial Dr  
Northville, MI 48168  
United States

[rubore.com/en/products-applications/nvh-laminates](http://rubore.com/en/products-applications/nvh-laminates)

Trelleborg Damping Solutions is the world leader in the production and development of brake noise and vibration damping solutions for automotive and industrial applications. We are part of the Trelleborg Group, which is the world leader in engineered polymer solutions that seal, damp and protect critical applications in demanding environments.

## TRIALON CORPORATION

Booth **439**

1477 Walli Strasse  
Burton, MI 48509  
United States

[trialon.com](http://trialon.com)

Trialon Corporation is your Complete, Single Source Testing/Validation Service Partner. Our testing services include Environmental Simulation, EMC/Electrical, and Thermal Vibration/Shock Testing. Trialon has the resources to meet your timing needs, with over 80 environmental chambers and 10 vibration systems. Trialon laboratories are ISO/IEC 17025.

## UFP TECHNOLOGIES INC

Booth **212**

3831 Patterson Ave SE  
Grand Rapids, MI 49512  
United States

[ufpt.com](http://ufpt.com)

UFP Technologies is a producer of custom-engineered structural, acoustical, and thermal components for the automotive industry. Utilizing a vast array of foams, natural fibers, nonwoven fabrics, and adhesives we provide innovative solutions that improve vehicle acoustics, safety, and functionality while reducing weight, complexity and cost. IATF 16949 and ISO 9001 certified.

## UNIVERSITY OF KENTUCKY

Booth **239**

151 Ralph G Anderson Bldg  
Lexington, KY 40506  
United States

[engr.uky.edu/vac](http://engr.uky.edu/vac)

The University of Kentucky has been the home to the Vibro-Acoustics Consortium for the past 23 years. The Consortium is funded by over 20 Industry sponsors who support the applied research of the students. Areas of specialization include numerical acoustic simulation, mufflers and silencers, acoustic materials, transfer path analysis, scale modeling, and many other topics.

## VIBRANT TECHNOLOGY

Booth **530**

2515 Yosemite St  
Denver, CO 80238  
United States

[vibetech.com](http://vibetech.com)

Vibrant Technology is a leader in developing tools for post processing vibration and acoustic test data. The primary product of Vibrant Technology is the ME'scope software series. ME'scope is designed to aid engineers and technicians working on new product research and development, predictive maintenance, manufacturing quality control, and monitoring of critical machines and structures.

## VIBRATION RESEARCH

Booth **507**

### SILVER SPONSOR

1294 Chicago Drive  
Jenison, MI 49428  
United States

[vibrationresearch.com](http://vibrationresearch.com)

Vibration Research is the innovator in sound and vibration technology. VR offers testing products, software and support that deliver unrivaled value. The VR9500 Controller, ObserVR1000 DAQ/Analyzer, VibrationVIEW and ObserVIEW software, including iDOF®, FDS, FDR, and Kurtosion®, are used world-wide to ensure accurate and fast vibration testing.

## VISPIRON/ROTEC

Booth **421**

PO Box 369  
Milford, MI 48381  
United States

[angerinc.com](http://angerinc.com)

[vispiron.de/rotec](http://vispiron.de/rotec)

High resolution torsional vibration analysis. Your benefits: Support of the entire measuring chain Precise and modular measuring technology Market-leading measurement principle High-end technology "made in Germany" Customer- and application-oriented Reliable analysis and simulation Applications: Clutch and flywheel tuning Gearbox testing, Valvetrain analysis, Belt and chain drive analysis, Single flank testing.

## VORWERK AUTOTEC GMBH

Booth **526**

26211 Central Park Blvd  
Southfield, MI 48076  
United States

[vorwerk-autotec.de/en](http://vorwerk-autotec.de/en)

Suspension technology is an interplay between quality, innovation and precision. For the automotive industry we develop and produce high-quality suspension bushings. Our expertise, experience and continuous process optimisation enable us to respond individually to our customers' wishes. With our flexible medium-sized organizational structure we can realise projects quickly and economically.

## 2019

### **New Energy & Intelligent Connected Vehicle Technology Conference**

May 21-22  
Shanghai, China

### **Aviation Technology Forum**

June 4-5  
Shanghai, China

### **Noise and Vibration Conference & Exhibition**

June 10-13  
Grand Rapids, MI

### **escar USA**

June 12-13  
Ypsilanti, MI

### **International Conference on Icing of Aircraft, Engines, and Structures**

June 17-21  
Minneapolis, MN

### **SAE CyberAuto Challenge™**

July 21-26  
Warren, MI

### **JSAE/SAE International Powertrains, Fuels & Lubricants Meeting**

August 25-29  
Kyoto, Japan

### **COMVEC™**

September 9-11  
Indianapolis, IN

### **Connect2Car Executive Leadership Forum**

September 17-18  
Chicago, IL

### **On-Board Diagnostics - Americas**

September 17-19  
Garden Grove, CA

### **North American International Powertrain Conference**

September 18-20  
Chicago, IL

### **Brake Colloquium & Exhibition**

September 22-25  
Orlando, FL

### **AeroTech Europe**

September 24-26  
Bordeaux, France

### **Thermal Management Systems Symposium**

October 15-17  
Plymouth, MI

### **Innovations in Mobility**

October 29-31  
Novi, MI

### **Small Engine Technology Conference & Exposition**

November 19-21  
Hiroshima, Japan

### **DoD Maintenance and Logistics Exhibition**

December 9-11  
Spokane, WA

### **DoD Maintenance Symposium**

December 9-12  
Spokane, WA

## 2020

### **Connect2Car at CES**

January 7  
Las Vegas, NV

### **Government/Industry Meeting**

January 22-24  
Washington, DC

### **Hybrid and Electric Vehicle Technologies**

January 28-30  
Pasadena, CA

### **AeroTech Americas**

March 17-19  
Pasadena, CA

### **On-Board Diagnostics - Europe**

March 24-26  
Dublin, Ireland

### **High Efficiency IC Engine Symposium**

April 19-20  
Detroit, MI

### **WCX SAE World Congress Experience**

April 21-23  
Detroit, MI

### **COMVEC™**

September 15-17  
Rosemont, IL

### **North American International Powertrain Conference**

September 16-18  
Chicago, IL

### **Powertrains, Fuels & Lubricants Meeting**

September 22-24  
Krakow, Poland

### **On-Board Diagnostics - Americas**

September 22-24  
Indianapolis, IN

### **Thermal Management Systems Symposium**

October 6-8  
Mesa, AZ

### **Brake Colloquium & Exhibition**

October 11-14  
San Antonio, TX

### **Heavy-Duty Diesel Emissions Control Symposium**

October 13-14  
Gothenburg, Sweden

### **DoD Maintenance and Logistics Exhibition**

December 7-9  
Kansas City, MO

### **DoD Maintenance Symposium**

December 7-10  
Kansas City, MO