



TRAINING
CONFERENCE
& EXPO

COVINGTON, KENTUCKY

AUGUST 7-9, 2024



Scan Me



CONFERENCE INFORMATION



Vibrations Solved.

Machinery and piping or structural vibration can lead to equipment degradation, failure, loss of production, or safety issues. But knowing whether the vibration is acceptable or needs immediate attention is often difficult to determine.

At E²G | The Equity Engineering Group, Inc., our team of certified ISO 18436-2 Category III and IV vibration analysts and engineers are deployed to the field with state-of-the-art equipment to perform data collection and system testing. We will identify the root cause of your vibration issues by applying our decades of experience with machinery, structural dynamics, acoustics, and system-level analysis.

We are focused on educating our clients and transferring knowledge; we will partner with you to develop the most practical and complete solution to even your most challenging problems.

BENEFITS



IMPROVE
SAFETY AND
RELIABILITY



AVOID COSTLY
EQUIPMENT
DOWNTIME



IDENTIFY
AREAS OF
VULNERABILITY

SERVICE AREAS

Onsite surveys and risk screening of piping and small-bore connections

Acoustic mechanical pulsation analysis

Piping vibration FFS evaluations

Machinery diagnostics - troubleshooting and reliability support

Welcome to the 2024 edition of the Vibration Institute Annual Training Conference (VIATC).

This year marks the 47th Annual Training Conference and the 51-year anniversary of the Vibration Institute.

I am sure that many of you do not know me. I volunteered to serve on a committee a couple of years ago and landed as an assistant to Bob Sayer on the Annual Training Conference committee. At the conference last year, I was asked to take over as chair of the committee, and here I am. I have had some level of involvement with the VI going back to about 1998. In my career, I have been a customer at a power plant, a consultant with a small company, and an employee of a vendor that makes protection and condition monitoring hardware and software systems. I appreciate the continued support of Bob and the committee members that joined this year.

I want to thank the authors of the technical papers that will be presented at this year's conference. I know these papers are not easy to prepare. They often represent efforts above and beyond the authors' day-to-day responsibilities. These papers will live on in the proceedings. They are your contribution to your field. I also want to thank all presenters, invited speakers, and our key-note speaker.

This year's Technical Program features a diverse range of content. Papers feature a wide range of traditional topics such as balancing and signal processing, but they also include some surprises such as reciprocating machines and fixed assets. Some additional examples of the technical content include papers and presentations related to hydro turbines, oil health monitoring, thermography,

motion magnification, synchronous sampling, analytics, and many more.

Our key-note address, "Is Your Vibration Monitoring Program Improving Equipment Reliability?" will be delivered by John Pucillo of True Reliability. Our invited speakers and featured presentations will address IoT adoption, oil whirl and shaft whip, high vibration on piping systems, and using digital sensors with the assistance of ChatGPT.

Located near the Ohio and Licking rivers, Covington has relaxed taverns, bistros, and waterfront hotels and restaurants to enjoy. The charming MainStrasse Village district features classic pubs and chic eateries along Main Street, plus Goebel Park's quirky clock tower. Devou Park is known for its Cincinnati skyline views, and the iconic 1800s John A. Roebling Suspension Bridge spans the river to Ohio. We hope you get out after the conference this week to enjoy the area!

The Vendor Expo receptions on Wednesday and Thursday evenings include over 35 solution providers demonstrating the latest in software, hardware, and consulting services. This part of the conference provides a great opportunity to learn about the products and services that can help take your condition monitoring and diagnostic programs to the next level.

Finally, this conference provides excellent networking opportunities. Attendees are from almost every industrial sector and academia, government, and the military. We hope you enjoy this event, and we hope to see you next year in Newport News, Virginia!



Michael J. Titone, P.E.

Welcome to Covington, Kentucky!

First and foremost, a big thank you to our new Annual Training Conference Committee Chairman, Michael Titone and our Committee Members for putting together a great technical program this year! I'd also like to thank our conference sponsors. Be sure to stop at their expo booth on Wednesday or Thursday to thank them as well.

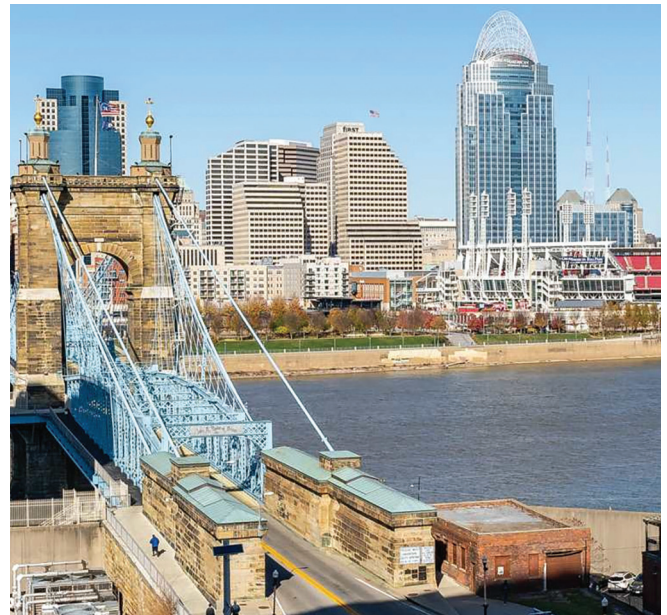
Our Annual Training Conference is our biggest event every year. This is a great opportunity to network with others in the industry. Be sure to take advantage of the networking opportunities over coffee breaks and meals. I encourage you to attend our expo and reception both Wednesday and Thursday evening. While you're at the expo and reception, be sure to visit all of our exhibiting companies, including the Vibration Institute booth where you'll also get your passport stamped. Drop off your completed card at the VI booth for your chance to win one of many awesome prizes, many which have been donated by our exhibiting companies. Winners must be present to win, so stay with us Thursday evening!

While you're in town, check out Mainstrasse Village, a German-influenced cobblestoned neighborhood known for pub dining, boutiques and shops. This is one of the region's go-to urban neighborhoods for foodies and culinary fun-seekers! There are other sites to visit such as the Newport Aquarium, Cincinnati Zoo, and American Sign Museum. If you're looking for a restaurant or something to do, be sure to check out the Northern Kentucky CVB kiosk near the registration desk.

Thank you so much for your support of the Vibration Institute. I hope you have a great time here in Covington, Kentucky as well as Cincinnati, Ohio. We'll see you in 2025 in Newport News, Virginia!



Janine Komornick
Executive Director, Vibration Institute





Northern Kentucky 101

Northern Kentucky, the top of the South & the end of the North, is perfectly situated along the Ohio River across from big sister Cincinnati. Encompassing the historic towns of Newport and Covington as well as the suburban centers along the Covington/Cincinnati International Airport, NKY is a strong part of the Cincinnati USA region with its roots firmly planted in Kentucky.

Famous Northern Kentuckians:

- George Clooney:** Raised along the Ohio River in Augusta, Ky., George attended Northern Kentucky University before becoming a box-office smash in Hollywood. George returned to his NKY roots while in CincinnatiUSA to film the award-winning *Ides of March* in 2012.
- John T. Thompson:** Born and raised in Newport, Ky., this U.S. Army General is well-known known for his creation of the first automatic machine gun, the Thompson Gun or Tommy Gun.
- Frank Duveneck:** Born and raised in Covington, Ky., Frank is a painter, sculptor and educator known for many local art pieces. Duveneck Square in downtown Covington is named for him.
- Nicholas Joseph “Nick” Clooney:** Born in Maysville, Ky., Nick has worn many hats over the years: journalist, politician, anchorman, game show host. But his most well-known roles may be father of actor & film director George Clooney and brother of Rosemary Clooney.
- Daniel Carter Beard:** American illustrator, author, youth leader and social reformer who founded Boy Scouts of America in 1910. Daniel lived in Covington, near the Licking River, where he learned the stories of Kentucky pioneer life.
- Rosemary Clooney:** Born in Maysville, Ky., Rosemary came to prominence in the early 1950s and received the Grammy Lifetime Achievement Award in 2002. One of her most memorable acting roles was in *White Christmas* with Bing Crosby and Danny Kaye.
- Heather Renee French Henry:** Born in Augusta, Ky., this Miss America 2000 has received numerous awards for her work with veterans.
- Josh Hutcherson:** Born in Union, Ky., Josh is the star of numerous critically acclaimed and award-winning films including *The Kids Are All Right* (2010), *Journey 2: The Mysterious Island* (2012), and played the main character, Peeta Mellark, in *The Hunger Games* (2012) series.

NKY Facts

- Population: 384,790 (2015)
- Metro Population: Northern Kentucky is part of the CincinnatiUSA MSA encompassing 2,137,406 people and is the 28th largest metro area in the U.S.
- Major Cities: Covington, Newport, Florence, Erlanger, Hebron, Union, Fort Thomas, Bellevue
- Airport: CVG International Airport serviced by Delta, United, Frontier, Allegiant, Southwest, Apple Air
- Signature Events: Cincinnati Flying Pig Marathon the first Saturday of May, is a qualifier for the Boston Marathon. The second-largest multi-cultural event in the U.S., P&G Music Fusion Weekend, is hosted here in July. Oktoberfest Cincinnati occurs the second weekend in October and is the largest Oktoberfest outside of Munich, Germany.
- Professional Sports: Cincinnati Reds: season April – October. Cincinnati Bengals: season September – December.
- Arts in Region: 100 plus arts & culture venues in the region including ballet, pops orchestra, chamber orchestra, Opera, Broadway theater and more.
- Culinary: Germanic and Southern fusion cuisine with a dash of bourbon and a craft beer from the more than 32 active breweries in the region.



meetNKY.com



TUESDAY AUGUST 6

| TIME | PRE-CONFERENCE WORKSHOPS | ROOM |
|-------------------|---|--------------------|
| 6:30am - 5:00pm | Registration | Lobby |
| 7:00am - 8:00am | Breakfast | Ballroom B |
| 8:00am - 5:00pm | Pre-Conference CAT I IMV Course: Introduction to Machinery Vibration Course | Meeting Room 2 |
| 8:00am - 5:00pm | Pre-Conference CAT I IMV Course: Basic Machinery Vibration Course | Meeting Room 3 |
| 8:00am - 12:00pm | Pre-Conference Workshop 1: Digital Signal Processing: Understanding the Fourier Transform and How Filters Affect Our Data (Good and Bad) Speaker: John Hiatt, <i>Dewesoft</i> | Meeting Room 5 |
| 10:00am - 10:30am | Break Sponsored by:  | Coffee Break Lobby |
| 8:00am - 12:00pm | Pre-Conference Workshop 2: Introduction to Forced Harmonic Analysis Speaker: Nelson Baxter, PE, <i>ABM Technical Services</i> | Meeting Room 6 |
| 12:00pm - 1:00pm | Lunch Sponsored by: MotorDoc[®] LLC | Ballroom B |
| 1:00pm - 5:00pm | Pre-Conference Workshop 3: Vibration Diagnostic Methods and Corrective Action Strategies to increase the Reliability of Mechanical Equipment Speaker: Robert J. Sayer, PE, Sr. Consultant, <i>Mechanical Solutions, Inc.</i> | Meeting Room 5 |
| 3:00 - 3:30pm | Break Sponsored by:  | Coffee Break Lobby |
| 1:00pm - 5:00pm | Pre-Conference Workshop 4: Vibration Analysis of Reciprocating Compressors Speaker: Stephen Plaisance, PE, <i>Bently Nevada</i> | Meeting Room 6 |



WEDNESDAY AUGUST 7

| TIME | EVENT | ROOM |
|-------------------|--|--------------------|
| 6:30am - 5:00pm | Registration | Lobby |
| 7:00am - 8:00am | Keynote Breakfast Sponsored by:  | Ballroom B |
| 8:00am - 10:00am | OPENING GENERAL SESSION | |
| | <p>Opening Remarks Speaker: Robert Sayer, PE, Past Chair <i>VIATC Technical Program</i> Speaker: Michael Titone, PE, Chair <i>VIATC Technical Program</i></p> <p>VI President Welcome Speaker: Gyorgy Szasz, Ph.D., <i>President, The Vibration Institute</i></p> <p>VI Keynote Address: Is Your Vibration Monitoring Program Improving Equipment Reliability? Speaker: John Pucillo, <i>True Reliability</i></p> <p>Featured Presentation: IoT for Condition Monitoring – Are you in the Right Place on the Adoption Curve Speaker: Ed Spence, Founder and Managing Director, <i>The Machine Instrumentation Group</i></p> | Ballroom B |
| 10:00am - 10:30am | Break Sponsored by:  | Coffee Break Lobby |
| 10:30am - 11:15am | <p>Equipment Specific Track: Case Studies on Hydro Turbines with High Vibration Speaker: Bernard Boueri, <i>Ontario Power Generation</i></p> | Meeting Room 4 |
| 11:15am - 12:00pm | <p>Equipment Specific Track: Investigation into a Large Boiler Feed Water Pump Thrust Bearing Failure at Bruce Power Speaker: James Chin, <i>Bruce Power</i></p> | |
| 10:30am - 11:15am | <p>VI General Track: The Analysis and Comparisons of Different Types of Vibration Rubs Speaker: Thomas Lantrip, <i>Southern Companies</i></p> | Meeting Room 8 |
| 11:15am - 12:00pm | <p>VI General Track: Adding Value for Turbomachinery Evaluation with Case Monitoring Speaker: Jeff Mauk, <i>BP</i></p> | |
| 10:30am - 11:15am | <p>Related Technologies Track: Online Oil Health Monitoring for Land Fill Gas Engines Speaker: Jeremy Sheldon, <i>Poseidon Systems</i></p> | Meeting Room 9 |
| 11:15am - 12:00pm | <p>Related Technologies Track: Infrared Thermography for Rotating Equipment Speaker: Jim Seffrin, <i>Infraspection Institute</i></p> | |
| 12:00pm - 1:00pm | Lunch Sponsored by: MotorDoc[®] LLC | Ballroom B |
| 1:00pm - 2:00pm | <p>Equipment Specific Track: Reciprocating Compressor Crosshead Guide Vibration Speaker: Brian Howard, <i>Bently Nevada</i></p> | Meeting Room 4 |
| 1:00pm - 2:00pm | <p>Signal Analysis and Data Processing Track: CBM Analysis Using Limited Vibration Data: Classification of Paper Machine Bearing Defects Using ML Models and RUL Prediction Speaker: Lloyd Dewey Lee, Jr. "Buddy", <i>Mesa Associates, Inc.</i></p> | Meeting Room 7 |
| 1:00pm - 2:00pm | <p>VI General Track: Unbalance Control of Rotors Using a Smart Bearing: SEMAJIB Speaker: Aly El-Shafei, Ph.D., Managing Director <i>RITEC</i></p> | Meeting Room 8 |
| 1:00pm - 2:00pm | <p>Related Technologies Track: Modal Analysis of a Vertical Turbine Pump Using Motion Magnification and Traditional Methods Speaker: Andrew Lerche, <i>Mechanical Solutions</i></p> | Meeting Room 9 |



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WEDNESDAY AUGUST 7 (CONTINUED)

| TIME | EVENT | ROOM |
|-----------------|--|----------------------------------|
| 2:10pm - 3:10pm | Equipment Specific: High-Frequency Vibration Mitigation Through Cylinder Design for Reciprocating Compressors Speaker: Tom Stephens, P.E., <i>Ariel Corporation</i> | Meeting Room 4 |
| 2:10pm - 3:10pm | Signal Analysis and Data Processing Track: Exploring the Benefits and Pitfalls of Shaft Synchronous Sampling Speaker: Robert Mihata, President <i>Alta Solutions</i> | Meeting Room 7 |
| 2:10pm - 3:10pm | Related Technologies Track: Troubleshooting High Vibration on a Steam Turbine Generator Using a New Video Alignment Method and Traditional Vibration Methods Speaker: Andrew Lerche, <i>Mechanical Solutions</i> | Meeting Room 9 |
| 3:10pm - 3:30pm | Break Sponsored By:  | Coffee Break Lobby |
| 3:30pm - 4:30pm | Equipment Specific: Advanced Analytics Support Malfunction Detection on Reciprocating Compressors Speaker: Fayyaz Qureshi, <i>Bently Nevada</i> | Meeting Room 4 |
| 3:30pm - 4:30pm | Signal Analysis and Data Processing Track: Naïve Bayes Classifier Optimization for Bearing Fault Detection Speaker: Matthew J. Kenney, <i>Spring Point Solutions, LLC</i> | Meeting Room 7 |
| 3:30pm - 4:30pm | General Vibration Track: Static and Couple Balancing Calculations Using Commonly Available Modern Tools Speaker: Steve Ciesla, P.E. and Michael Titone, P.E., <i>Bently Nevada</i> | Meeting Room 8 |
| 3:30pm - 4:30pm | Related Technologies Track: New Uses for Camera-Based Vibration Analysis: Modal Analysis, IoT Edge Computing, and Route-Based Vibration Speaker: Jeff Hay, <i>RDI Technologies</i> | Meeting Room 9 |
| 4:30pm - 7:00pm | Beer & Wine Reception Sponsored By:  | Vendor Expo Ballrooms C, D, E |



THURSDAY AUGUST 8


| TIME | EVENT | ROOM |
|-------------------|--|----------------------------------|
| 6:30am - 5:00pm | Registration | Lobby |
| 7:00am - 8:00am | Breakfast | Ballroom B |
| 8:00am - 10:00am | General Session: Conference Update Speaker: Michael Titone, PE <i>VIATC Technical Program Chair</i> Invited Speaker: Modal Instability Fundamentals of Oil Whirl and Shaft Whip Speaker: C. Hunter Cloud, <i>BRG Machinery Consulting</i> Featured Presentation: Resolving High Vibration on Piping Systems Speaker: Ray Kelm, <i>Kelm Engineering</i> | Ballroom B |
| 10:00am - 10:30am | Break Sponsored By:  | Coffee Break Lobby |
| 10:30am - 11:15am | Equipment Specific Track: Belt-Driven Fan Vibration Case Study: The Rotor Resonance that Wasn't... Or Was It? Speaker: Neil Tugby, <i>Ontario Power Generation</i> | Meeting Room 4 |
| 11:15am - 12:00pm | Equipment Specific Track: Will Your Pump Withstand Real-World Use After Passing Specified Acceptance Testing Speaker: Kirk Cormany, <i>Adash America</i> | Meeting Room 4 |
| 10:30am - 12:00pm | General Vibration Track: Hydrodynamic Bearing Basics Speaker: Andy Alcantar, <i>Miba Industrial Bearings</i> | Meeting Room 7 |
| 10:30am - 11:15am | Fixed Equipment Track: Dynamic Analysis of Rigid Foundations that Support Dynamic Equipment Speaker: Robert J. Sayer, PE, Vice-Chair of HI/ANSI 14.5.1 Standards Committee | Meeting Room 8 |
| 11:15am - 12:00pm | Fixed Equipment Track: A Preview of HI/ANSI 14.5.1, Foundation Design for Rotodynamic Pumps Speaker: Robert J. Sayer, PE, Vice-Chair of HI/ANSI 14.5.1 Standards Committee | Meeting Room 8 |
| 10:30am - 11:15am | Signal Analysis and Data Processing Track: Creating a Virtual Assistant to Vibration Analyst Speaker: Mantosh Bhattacharya, <i>Petrofac International</i> | Meeting Room 9 |
| 12:00pm - 1:00pm | Lunch Sponsored By: <i>MotorDoc[®] LLC</i> | Ballroom B |
| 1:00pm - 2:00pm | Related Technologies Track: Evaluation of Energy Losses Due to Degradation and Defects in Electric Machinery with Electrical Signature Analysis, Vibration Analysis and Motion Amplification Speaker: Howard W Penrose, Ph.D., CMRP, CEM, <i>MotorDoc, LLC</i> | Meeting Room 4 |
| 1:00pm - 2:00pm | Fixed Equipment Track: Data Acquisition Guidelines for Dealing with Fixed Equipment Vibration Problems Speaker: Gyorgy Szasz, Ph. D., <i>Stress Engineering</i> | Meeting Room 8 |
| 1:00pm - 2:00pm | Sensor Technology Track: Staying out of the IoT Stall Zone - IoT Best Practices for the Industrial Environment Speaker: Dr. M. David Howard | Meeting Room 8 |
| 1:00pm - 2:00pm | Break Sponsored By:  | Vendor Expo Ballrooms C, D, E |
| 3:00pm - 3:45pm | Equipment Specific Track: Standardized Fan Diagnostics According to ISO 13373-5 Speaker: Aly El-Shafei, PhD, <i>RITEC</i> | Meeting Room 4 |

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THURSDAY AUGUST 8

| TIME | EVENT | ROOM |
|-----------------|---|----------------------------------|
| 3:00pm - 3:45pm | General Vibration Track: Make Service Companies Your Partner in Reliability Speaker: Forrest Pardue, <i>Tango</i> | Meeting Room 7 |
| 3:45pm - 4:30pm | General Vibration Track: Making an Initial Machine Vibration Assessment Speaker: George D'Entremont | Meeting Room 7 |
| 3:00pm - 3:45pm | Fixed Equipment Track: Advanced Methods for Piping Vibration Assessments Speaker: Andrew Gordon and Ryan Hopman, <i>Stress Engineering Services, Inc.</i> | Meeting Room 8 |
| 3:00pm - 3:45pm | Sensor Technology Track: The Impact of Accelerometer Mounting Techniques on the Accuracy of Vibration Data Speaker: Peter Eitnier, <i>Wilcoxon Sensing Technologies</i> | Meeting Room 9 |
| 4:30pm - 7:00pm | Beer & Wine Reception Sponsored By:  <i>Vibration Institute</i> | Vendor Expo Ballrooms C, D, E |

FRIDAY AUGUST 8

| TIME | EVENT | ROOM |
|-------------------|--|--------------------|
| 6:30am - 5:00pm | Registration | Lobby |
| 7:00am - 8:00am | Breakfast | Ballroom B |
| 8:00am - 9:00am | Fixed Equipment Track: Foundation Interface Problems as it Relates to Vibration Investigations Speaker: Thomas Lantrip, <i>Southern Company Generation</i> | Meeting Room 4 |
| 8:00am - 9:00am | General Vibration Track: War Stories of a Vibration Analyst Speaker: Monroe Voyles, <i>ITT Goulds Pumps</i> | Meeting Room 7 |
| 8:00am - 9:00am | Sensor Technology Track: Batteries and IoT – Are They Made for Each Other? Speaker: Ed Spence, Founder and Managing Director of <i>The Machine Instrumentation Group</i> | Meeting Room 8 |
| 9:10am - 10:10am | General Vibration Track: Adventures with Online Multi-Plane Balancing Using a Balancing Portal Speaker: Aly El-Shafei, PhD, <i>RITEC</i> | Meeting Room 9 |
| 9:10am - 10:10am | Fixed Equipment Track: Analysis and Mitigation of Acoustic-mechanical FCCU Feed Piping and Nozzle Vibration Speakers: Scot McNeil and Michael Ackman, <i>ExxonMobil</i> | Meeting Room 4 |
| 9:10am - 10:10am | General Vibration Track: A Mathematical Review and Measured Validation of Dynamic Stiffness of a Simply Supported T-Beam Speaker: Tom Calko, <i>The Equity Engineering Group</i> | Meeting Room 7 |
| 10:10am - 10:30am | Break Sponsored By:  | Coffee Break Lobby |
| 10:30am - 12:00pm | General Assembly: Vibration Measurement Using Digital Sensors and Assistance from ChatGPT Invited Speaker: Mike Mains, <i>The Modal Shop</i> | Ballroom B |
| | Lunch Sponsored By: <i>MotorDoc[®] LLC</i> | Ballroom B |
| | Final General Session: Vibration Institute Annual Meeting Speakers: Gyorgy Szasz, Ph.D. President Janine Komornick, Executive Director Nancy Denton, PE, Technical Director, Certification Monroe Voyles, Training Committee Chairman | Ballroom B |

southern spirit lives here



Wonders never cease in Northern Kentucky. Immerse yourself in some of the country's most impressive sights and inspiring experiences.

remARKable experiences

A full-size replica of Noah's Ark as described in the Bible, **Ark Encounter's** sheer size will open your eyes and maximize your sense of wonder. Board the vessel and you'll discover three decks of exhibits teaching Noah's story.

the story from day one

Biblical history is brought to life at the **Creation Museum** through state-of-the-art exhibits, but the fun doesn't end there! Stroll through the botanical gardens, career through the air on a zip line, enjoy the special effects theater, and more!

make a B-Line

An Official Gateway to the Kentucky Bourbon Trail®, home to 11 of the "Best Bourbon Bars in America," and named the Best Bourbon Weekend Trip of 2019 by The Bourbon Review, NKY is no stranger to bourbon. Northern Kentucky's self-guided bourbon experience, **The B-Line** showcases a plethora of bourbon-centric bars, restaurants, and distilleries.

feeling buoyant

Enjoy the Ohio River in style, day or night, on one of several **BB Riverboats** cruise packages catering to a variety of tastes and interests.

goggles not required

All ages thrill to the amazing underwater panorama of exhibits at **Newport Aquarium**. Watch sharks and rays glide by, be enchanted by seahorses, encounter the mysterious world of the octopus, and more!

say it in neon

See how the sign industry developed, shaping the visual world around us for more than a century. The **American Sign Museum** exhibits a collection of more than 200 signs, many of which have become iconic of American culture.

cry out for freedom

Discover a museum of great national and international importance. The **National Underground Railroad Freedom Center** tells the story of slavery and the road to freedom in America.

long live baseball

Baseball fans shouldn't miss the **Cincinnati Reds Hall of Fame & Museum**, the largest existing baseball hall of fame.

guten tag

Discover Northern Kentucky's German roots at **Hofbräuhaus Newport**, an authentic German restaurant and brewery known for their live music and hearty fare.

KEYNOTE / FEATURED SPEAKERS



John Pucillo
True Reliability

KEYNOTE SPEAKER: John Pucillo

Is your vibration monitoring program improving equipment reliability?

John Pucillo is a subject matter expert experienced in management, product development, and deployment strategies including reliability, predictive maintenance, and optimizing workflow to reduce inefficiencies and cost. He has managed PdM field services, directed service operations, product development, and served as business unit leader for electrical safety, predictive maintenance, and lockout tagout offerings. John's 40 years of experience has proven successful in executing best-in-class delivery and project strategies to achieve overall business objectives.



Ed Spence
*Founder and Managing Director of
The Machine Instrumentation Group*

FEATURED SPEAKER: Ed Spence

*IoT for Condition Monitoring –
Are you in the Right Place on the Adoption Curve*

Ed Spence is the Founder and Managing Director of The Machine Instrumentation Group, representing a network of consulting and contract engineering service providers helping clients define and develop new sensors for machine health instrumentation.

Ed has published or presented on subjects related to CBM / PdM on numerous occasions, maintaining an ongoing dialogue with the PdM eco-system regarding technology trends on subjects such as MEMS accelerometers, wireless sensor networks (IIoT) and data engineering for Predictive Maintenance.



Ray Kelm
*Owner and Chief Engineer of
Kelm Engineering, LLC*

FEATURED SPEAKER: Ray Kelm

Leveraging the Industrial Metaverse for Digital Twins

Ray Kelm, P.E. is owner and Chief Engineer of Kelm Engineering, LLC located in Houston, Texas and principal developer of ZetaQuest Technologies, LLC products. Kelm Engineering, LLC specializes in numerical modeling and field testing of dynamic systems including rotating and reciprocating machinery as well as piping systems and other equipment. ZetaQuest Technologies, LLC manufactures and sells vibration damping products for piping systems and other structures.

He has 40+ years of experience in the oil & gas, power, manufacturing and petrochemical industries. He holds a B.S. in Mechanical Engineering from Texas A&M University and a M.S. in Mechanical and Aerospace Engineering from University of Virginia. He is a registered professional engineer in the State of Texas, a member of the Vibration Institute board of directors, and ASME.

INVITED SPEAKERS



C. Hunter Cloud
BRG Machinery Consulting

INVITED SPEAKER: C. Hunter Cloud

Modal Instability Fundamentals of Oil Whirl and Shaft Whip

C. Hunter Cloud is President of BRG Machinery Consulting, LLC, located near Charlottesville, Virginia, a company providing a broad range of rotating machinery technical services. He began his career with Mobil Research and Development Corporation in Princeton, NJ, as a turbomachinery specialist responsible for application engineering, commissioning, and troubleshooting for production, refining and chemical facilities. During his 11 years at Mobil, he worked on numerous projects, including several offshore gas injection platforms in Nigeria as well as serving as reliability manager at a large US refinery. Dr. Cloud received his BSME (1991) and Ph.D. (2007) from the University of Virginia. He is a member of ASME, the Vibration Institute, the API 617 and API 684 task forces, and the advisory committee for the Texas A&M Turbomachinery Symposium.



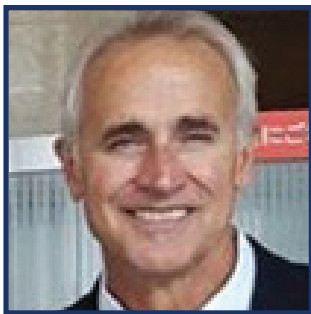
MIKE MAINS
The Modal Shop

INVITED SPEAKER: Mike Mains

Vibration Measurement Using Digital Sensors and Assistance from ChatGPT

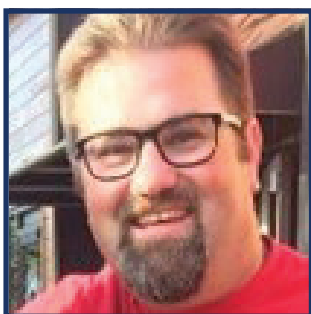
Mike Mains is a Product Specialist, Software and Mechanical Engineer at The Modal Shop. He has worked with TMS's Structural Test Products, Calibration Systems and is beginning his support TMS's Nondestructive Testing Systems. Yes, Mike is a jack of all trades, master of none for The Modal Shop. Prior to joining The Modal Shop in 2022, Mike was an Associate Professor at the University of Cincinnati and Faculty Advisor for Bearcat Motorsports, which is the organization for the University of Cincinnati's Formula FSAE and SAE Baja teams. Prior to joining the UC in 2019, he spent 14 years as a Senior Software Developer at Brüel & Kjær.

PRESENTERS



GEORGE D'ENTREMONT

George D'Entremont recently retired from a 41-year career at PG&E's Diablo Canyon Power Plant. George participated in the initial commissioning of Diablo Canyon; holding positions as a Reactor Operator, Operations and Engineering Instructor, and for the last 26 years as a Predictive Maintenance Engineer. He holds an ISO Level IV Vibration Analyst Certification.



STEVEN P. CIESLA

Steven P. Ciesla, P.E. is presently a Machinery Diagnostic Services Technical Leader for Bently Nevada. He re-joined the company in 2013. Prior to that he worked as a predictive maintenance engineer at a nuclear power point where he was responsible for the vibration and lubrication programs. His work history includes being as a field engineer for both Bently Nevada and Westinghouse Process Control. He has over 20 years of hands-on, vibration analysis experience in the power generation industry. Steve earned a BS in mechanical engineering from California State Polytechnic University, Pomona and an MSE in mechanical engineering from the University of Nevada, Las Vegas. He is a licensed professional engineer in the states of Nevada and California and certified as a Category IV Vibration Analyst through Mobius Institute.

PRESENTERS



MICHAEL J. TITONE

Michael J. Titone, P.E. is presently a Machinery Diagnostic Services Technical Leader for Bently Nevada. He joined the company in 2011. In prior job assignments, he worked for a power generation company and a vibration consulting firm in various roles. Since 1989, Michael has been a practicing engineer in the areas of vibration analysis, balancing, condition monitoring, mechanical system design/analysis, and I&C system design. Michael earned a BS in mechanical engineering from Louisiana Tech University and an MBA from Mississippi College. He also earned 18 hours of graduate credit in mechanical engineering classes. He is a licensed professional engineer in the state of Mississippi and certified as a Category III Vibration Analyst through the Vibration Institute.



ROBERT J. SAYER

Robert J. Sayer, P.E. is a Sr. Consultant at Mechanical Solutions, Inc. and the Past President of the Vibration Institute. He has over forty-five years of experience as a mechanical and structural engineering consultant to a wide range of industries including pulp & paper, mining & metals, fossil-fuel & nuclear power generation, petrochemical, food processing, glass manufacturing, and aerospace & defense. Mr. Sayer provides analytical and experimental dynamic analysis of mechanical equipment for design projects, structural and mechanical failure studies, and process reliability and efficiency studies. He holds engineering degrees from Ohio University (BSCE), Cleveland State University (MSIE), and Purdue University (MSCE). He had the honor and fortune of collaborating with the late Art Crawford, a pioneer of vibration analysis, on numerous projects. Mr. Sayer is a regular contributor at technical conferences and has published over 50 technical articles and co-authored 2 chapters in "The Simplified Handbook of Vibration Analysis." He is Vice-Chairman of ANSI/HI Standard 10.5.1 "Rotordynamic Pumps for Foundation Design."



GEORGE SZASZ

Dr. Szasz is a Principal at Stress Engineering Services, Inc. Previously he worked for Structural Integrity Associates, and Southern Company Services. He has over 25 years of experience with hands-on vibration testing, measurement and analysis. He has performed an extensive amount of field work globally in various power plants (including hydro, fossil and nuclear), refineries, pipeline stations, LNG facilities, offshore platforms, a shipyard and a wood processing plant. He is a certified category IV vibration analyst, member of ASME, president of the VI board of directors, and a former member of the ASME Technical Committee on Sound and Vibration.



THOMAS B. LANTRIP

Tom Lantrip, PE is a consulting engineer with Southern Company Generation and works in the Performance and Reliability Department - Balancing and Vibration Analysis group. Tom has worked at Southern Company for 41 years, primarily in the field of balancing and vibration analysis, with an emphasis on turbines, fans, and pump components. He has a background in structural dynamics and in structural and seismic design, vibration analysis, and balancing of rotating machinery. Tom graduated from the University of Alabama with a B.S. in Civil Engineering, attended the University of California at Berkeley, and has an M.S. in Civil Engineering from the University of Alabama at Birmingham. Tom is a member of ASCE and is a professional engineer in the state of Alabama and holds a Category IV certification from the institute.



M. DAVID HOWARD

Dr. Michael Howard is an American entrepreneur, a veteran of the United States Air Force, and respected leader in the predictive maintenance industry. Michael is an avid CrossFit® athlete, CrossFit® CF-L1 Trainer and passionate advocate of revolutionary concepts in wireless instrumentation and the IIoT communities for the maintenance & reliability industries. He is a graduate of Excelsior University, Capella University, & Charter University with degrees in Electro-Mechanical Engineering, Leadership, & Organizational Management, & Engineering Management. Mike is a Certified Reliability Engineer, Department of Defense Certified analyst in multiple predictive technologies, Six-Sigma Black Belt, & Certified Maintenance & Reliability Professional. Dr. Howard is the Chairman & CEO of Erbesd Instruments and is responsible for Strategic Direction, Distribution, Sales, Marketing and Operations throughout the English-speaking markets.

PRESENTERS



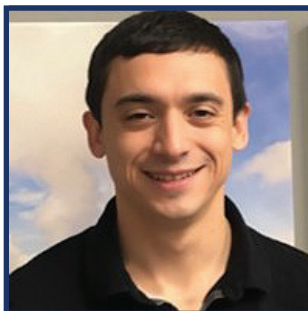
FORREST PARDUE

After earning a BSEE at North Carolina State and then an MBA, Forrest has worked in the field of vibration analysis and predictive maintenance for more than 30 years. As one of the founding members of Computational Systems, Inc (CSI), he was actively involved in the technical and market development of modern condition monitoring technologies. Following Emerson Electric's acquisition of CSI in 1998, Forrest co-founded 24/7 Systems. He recognized that the greatest challenge facing industrial maintenance had shifted to the measurement, management, and improvement of plant asset reliability. 24/7 Systems is focused on the development and delivery of Reliability Information Management software and services.



JEFFREY M. MAUK

Jeffrey M Mauk has worked as a Machinery Equipment Monitoring Technician at BP Whiting Refinery in Indiana for the past 17 years, with principal duties focused on centrifugal compressors, turbine generators and large critical process rotating equipment. He completed a maintenance machinist apprenticeship certification with the US Department of Labor, and he has over 40 years' experience working in heavy process industry from Steel, Chemical, gas and oil, and manufacturing. He has worked in predictive maintenance for 25 years and holds a Cat III certification with the Vibration Institute.



MATTHEW J. KENNEY

Matthew J. Kenney currently lives in Connecticut with his wife and two kids who are his greatest motivation to succeed in challenging circumstances. Matthew served six years in the US Navy – directly servicing motors and generators as an Electrician's Mate for nuclear powered submarines. After the Navy, he immediately began working in Quality Assurance for nuclear energy critical motor repair at Schulz Electric in New Haven, CT. During his time at Schulz Electric, the era of Big Data was becoming popular, and he quickly realized the potential it had to serve the motor repair industry. He began study at Post University where he earned a B.S. Degree in Data Science. During his study, he developed a method for bearing fault detection with vibration analysis. This paper outlines his work.



STEPHEN PLAISANCE

Mr. Stephen Plaisance is a Leader in Bently Nevada on Baker Hughes' System 1 software, Bently Performance, and 3500 hardware and software. He monitors the quality of Bently Nevada's Reciprocating Compressor Solution utilizing the Bently Nevada 3500 monitors and Baker Hughes' System 1 software platform and he leads the Recip Certification program for our global field services team. He tests System 1 software enhancements and also 3500 software/hardware enhancements for the Reciprocating Compressor solution. He is a registered Professional Engineer in Mechanical Engineering for Texas since 2001. He earned a Bachelor of Science degree in Naval Architecture from the United States Naval Academy. He retired from the US Navy after 30 years of Active and Reserve service.



**LLOYD DEWEY LEE, JR.
"BUDDY":**

After graduating from the University of Tennessee with a BSEE in 1987, Buddy was hired as a General Engineer at the Department of Energy in Oak Ridge. In January of 1989, he joined CSI as an Applications Engineer. Buddy formed MAARS, Inc. in 1996, where he developed online, permanently mounted vibration and process monitoring systems. Buddy is a co-holder on US Patent # 6,276,213, awarded in 2001, for an Analog Devices 5B module redesigned to add vibration capability and mount on an Opto-22 backplane. In 2009, AESSEAL hired Buddy as the National Accounts Manager. Buddy performed consulting work at customer sites from 2013 to 2017 while completing an MBA at the University of Tennessee. In early 2018 Buddy joined Emerson as an Instructor and in 2021 completed a Master of Science degree in Reliability Engineering. In October 2022, Buddy joined Mesa Associates, Inc. as an Artificial Intelligence/Machine Learning Subject Matter Expert.

PRESENTERS



MICHAEL ACKMAN

Michael Ackman is an Advanced Analysis Engineer in ExxonMobil with a total of 26 years of experience including 21 years as a Machinery Engineer supporting ExxonMobil's Downstream and Chemicals assets in Baton Rouge, LA. In his current role, he performs detailed analysis (stress, modal, vibration, acoustic, etc.) of fixed and rotating equipment using finite element analysis techniques. He received his B.S. and M.S. degrees from Louisiana State University.



BERNARD BOUERI

Bernard Boueri is currently a Senior Vibration Engineer in the Machine Dynamics Section at Ontario Power Generation (OPG). He has 20 years' experience supporting rotating equipment commissioning, diagnostic and balancing activities. In recent years he involved in the new commissioning and upgrades of the hydroelectric fleet at OPG. He was involved in the commissioning of the Upper and Lower Mattagami Projects which included the installation of 13 new units. Bernard is a graduate from the University of Florida. He is a licensed Professional Engineer in the province of Ontario and is a certified Category IV from the Vibration Institute.



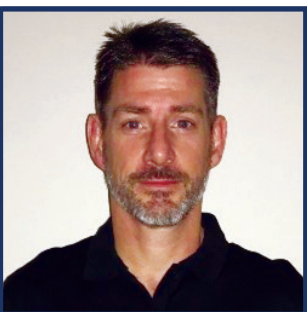
JAMES CHIN YUT

James Chin Yut, P Eng, is employed at Bruce Power as a Senior Technical Specialist. Current duties include the life cycle management of rotating equipment- large pumps and motors. His career experience spans various roles in maintenance, inspection and engineering in aviation, petrochemical and nuclear power generation. Mr. Chin Yut is a graduate of the University of the West Indies with a B Sc. – Mechanical Engineering (Hons) and holds a Cat III certificate with the Vibration Institute (VI) and Canadian Machinery Vibration Association (CMVA).



FAYYAZ KARIM QURESHI

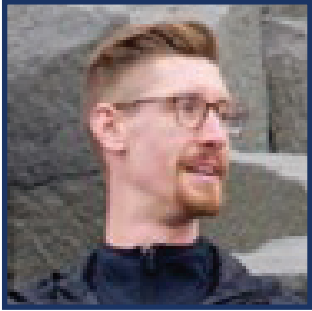
Fayyaz Karim Qureshi is the Senior Technical Leader for Reciprocating Compressors and Analytics for Bently Nevada looking after Middle East, India, Africa and Asia. He is responsible for commissioning asset health monitoring and advanced analytics solutions for reciprocating machines around the world. In addition, Fayyaz performs diagnostics and advises customers on proactive maintenance of reciprocating compressors. As part of his job, Fayyaz retrofits existing rotating and reciprocating assets with sensors and protection systems.



MONROE VOYLES III

Mechanical engineer with 29 years of experience. Ten years as a maintenance engineer in refineries and chemical plants; nineteen years working for pump manufacturers. Experience with finite element modeling (CREO/Simulate/DyRoBes). Instructor for the Vibration Institute for 8 years. B.S.M.E Louisiana State University 1994. CAT IV Vibration Analyst 2010.

PRESENTERS



NEIL TUGBY

Neil Tugby is presently a Senior Vibration Engineer at Ontario Power Generation in Toronto, Ontario, Canada. He has 15 years of experience supporting rotating equipment commissioning, diagnostic & balancing activities, as well as numerous M&D and reliability initiatives, at a variety of hydroelectric, nuclear and fossil power generation facilities.

Neil holds a B. Eng degree (Mechanical Engineering) from Carleton University and an M. Eng degree (Mechanical & Industrial Engineering) from the University of Toronto. He is a licensed Professional Engineer in the province of Ontario and is certified as a Category IV Vibration Analyst with the Vibration Institute.



TOM STEPHENS

Tom Stephens is a Senior Equipment Specialist within the Research & Development group at Ariel Corporation in Mount Vernon, Ohio. He has over 30 years of experience with high-speed reciprocating compressor and has been with Ariel Corporation since 1998, predominately working to reduce lateral and torsional vibration levels and improve the performance efficiency & reliability of high-speed reciprocating compressors. Mr. Stephens received an Engineering degree from the Colorado School of Mines in 1993, a Professional Engineer license from the State of Ohio in 2004, and a Category IV vibration certification from the Vibration Institute in 2005. He has participated in several standard workgroups, including API 688, ISO 20816-8, and the GMRC torsional sub-committee. He has published multiple papers at the Gas Machinery Conference, Vibration Institute, and Torsional Vibration Symposium.



ANDY LERCHE

Mr. Lerche has more than 20 years of professional experience in the areas of design, testing, analysis (fluid and structural), and troubleshooting of mechanical equipment and machinery such as pumps and turbomachinery. He is experienced in the areas of turbomachinery, high pressure fluid control equipment, and shipboard equipment. He has extensive experience with flow-induced vibration of turbomachinery blades, as well as shock and vibration testing and analysis of fixed mechanical and electrical equipment. Mr. Lerche has authored and presented several technical papers in the area of turbomachinery and holds three patents related to industrial compressors and valves. He holds a B.S. and M.S. in Mechanical Engineering from the University of Texas at Austin and the University of Texas at San Antonio, respectively.



JEREMY SHELDON

Jeremy Sheldon is Director Asset Management and Analytics at Poseidon Systems, LLC. He has over twenty years of experience in the Condition Based Maintenance and Prognostic Health Management domain with a strong background in signal processing, data analysis, health monitoring system implementation, testing, vibration diagnostics. In his current role, Jeremy manages Poseidon's condition monitoring team while simultaneously contributing to technical and programmatic aspects of several programs.



HOWARD W. PENROSE

Howard W Penrose, Ph.D., CMRP is president of the Veteran Owned Small Business, MotorDoc® LLC, the 2022-25 chair standards development American Clean Power (wind, solar, storage), past chair SMRP, past chair Chicago Section IEEE, IEEE standards committee(s) active member, and past Senior Research Engineer University of Chicago Energy Resources Center. He is a 5-time recipient of the UAW-GM People Make Quality Happen Award, leading researcher ESA/MCSA applications, design team GM hybrid Tahoe and Volt, John Deere 644 and 944 hybrid Construction Tractors, LVAD heart Pump, flywheel generators, high temp/low atmosphere electric machine design, and US Navy electric machine repair/rewind journeyman (NEC 4619/4621). He serves the SMRP and ACP government affairs team for workforce, smart grid, cybersecurity, and infrastructure, amongst numerous other energy/environment/workforce programs.

PRESENTERS



BRIAN HOWARD

Brian Howard, P.E. is a Principal Mechanical Engineer at Bently Nevada in Minden, Nevada. In this role, he focuses on sensor development, machinery analytics, diagnostic algorithm development, and research. Prior roles include Signal Processing Engineer and Global Technical Leader for Reciprocating Machinery Diagnostics where he provided diagnostic support to customers to solve problems with rotating and reciprocating machinery. Mr. Howard received a B.S. in Mechanical Engineering from the University of Houston and an M.S. in Electrical Engineering from the University of Washington. He is a member of ASME and IEEE.



ROBERT MIHATA

Robert Mihata is the president of Alta Solutions, Inc. in San Diego, CA. Since 1996, he has designed multiple generations of portable and permanent instruments used for advanced machinery diagnostics, turbomachinery protection, and combustion dynamics control. He holds a Bachelor of Science in Computer Engineering from University of California, San Diego.



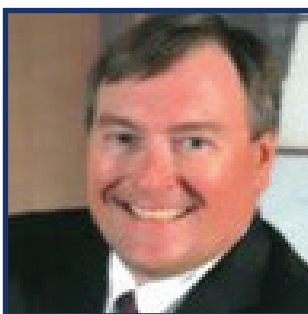
ANDY ALCANTAR

Andy Alcantar is an Applications Engineer at Miba Industrial Bearings in Houston, Texas – former TCE. He specializes in fluid film bearing design and analysis, seal design, troubleshooting, and failure analysis. Previously, Andy worked at the Texas A&M Turbomachinery Laboratory as a Graduate Assistant Researcher while pursuing a M.S. in Mechanical Engineering. He conducted experimental and analytical research in rotating machinery with emphasis on the measurement of performance and identification of force coefficients on tilting pad journal bearings for turbomachinery applications.



JEFF HAY

Jeff Hay, PhD is the founder and CEO of RDI Technologies. He is the inventor and visionary behind the Iris M platform that allows you to amplify and measure motion with the use of video. His products are moving industrial vibration to the visual spectrum. His passion is using his background in applied optical technology to change the way you see machinery and maintenance.



R. JAMES SEFFRIN

R. James Seffrin is a Level III Certified Infrared Thermographer® and Director of Infraspection Institute located in Burlington, NJ. Mr. Seffrin has nearly 40 years' experience in performing infrared inspections for a wide variety of commercial, industrial, and residential applications. He is a co-author of several industry standards and is qualified as an expert witness on the subject of thermography. Mr. Seffrin is also a Certified Maintenance Reliability Professional (CMRP) and an Infraspection Institute Master Thermographer™.

PRESENTERS



THOMAS CALKO

Thomas Calko, PE, is a consultant at E2G in the REVD Team primarily working in the chemical and petrochemical industries. He performs advanced vibration data analysis and root cause evaluations to solve structural dynamics problems on structures and rotating equipment. He is a Category IV vibration analyst and a certified welding inspector. Prior to working at E2G, he worked in maintenance engineering at nuclear power plant as a welding engineer and vibration engineer. He holds engineering degrees from Youngstown State University (BSME) and the University of Pittsburgh (MSME).



ANDREW GORDON

Andrew is a Principal at Stress Engineering Services, Inc. where he has worked in the Petro-Chemical industry for a majority of his 14 year career. Mr. Gordon has a background in computational solid mechanics and vibration, with 12 years of experience with hands-on vibration testing, measurement, and analysis. In his time with SES, he has completed numerous Level 3 FFS assessments including but not limited to LTA, vibration, fatigue, and creep. He has a masters degree in mechanical engineering from the University of Cincinnati, is a member of ASME, and is a registered professional engineer in the state of Ohio.



NELSON BAXTER

Nelson L. Baxter P.E. is President of ABM Technical Services. He has 45 years of experience in troubleshooting machinery and structural vibration problems. Work has been performed in nuclear power plants, coal power plants, hydro-electric generation, paper mills, gas turbine facilities, oil refineries and process plants. He has a B.S. in Mechanical Engineering from Rose Hulman and an M.S. in Nuclear Engineering from Purdue University. Mr. Baxter has a Category IV certification from The Vibration Institute and is a registered Professional Engineer. He has been on the Board of Directors of the Vibration Institute for over 20 years and has been an instructor of the AVA CAT IV training courses. Mr. Baxter is a recipient of the Jack Fraey award.



DR. ALY EL-SHAFEI

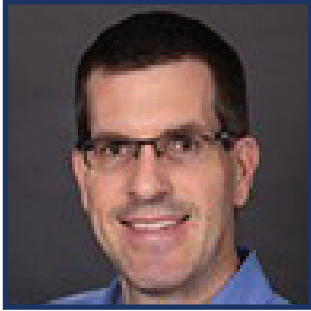
Dr. Aly El-Shafei is a Certified Vibration Analyst, Category IV. He holds a Ph.D. from the Massachusetts Institute of Technology (MIT) and is a world-renowned expert on vibration analysis, rotordynamics and machinery diagnostics. In addition to serving as Managing Director at RITEC, Dr. El-Shafei is also a Professor of Vibration Engineering at Cairo University, Egypt. He is also known worldwide for his work on Squeeze Film Dampers, and the developing of new technology for the control of rotating machinery vibration. Prof. El-Shafei is the recipient of the distinguished Grand African Innovation Award in 2017.



PETER EITNIER

Peter Eitnier is a Senior Applications Engineer at Wilcoxon Sensing Technologies in Frederick, Maryland. He holds an ISO CAT II certification as a vibration analyst and a degree in Mechanical Engineering from the University of Maryland. Since joining Wilcoxon in 2012, he has specialized in providing technical expertise to customers in a variety of applications.

PRESENTERS



SCOT MCNEILL

Dr. McNeill has over 20 years of experience in vibration measurement, modeling, and analysis of fixed equipment. He specializes in flow induced vibration and analysis of random processes. Dr. McNeill contributed to industry standards including API 579/ASME FFS and Energy Institute Guidelines. He is a member of the API 579/ASME FFS committee and SEM (Society of Experimental Mechanics) and is also a certified category III vibration analyst and a registered professional engineer in Texas.



JOHN HIATT

John Hiatt is a Business Development Engineer for DEWESoft LLC. He has 40 years of work experience. A B.S. in ME from the Military Academy and M.S. in ME From University of Texas at Austin. Work experience includes 10 years in the US Army serving in the first Gulf War in Armor Branch, 13 years at Ford Motor Company doing Powertrain NVH, 17 years as an application engineer in the areas of noise, vibration, durability, and environmental testing with LMS, Siemens and DEWESoft LLC.



RYAN HOPMAN

Ryan is an associate engineer at Stress Engineering Services, Inc. He has worked in the integrity assessment and design services in both aerospace and petro-chemical industries. Mr. Hopman has a background in mechanical engineering with emphasis in vibration, with 14 years of experience with hands-on vibration testing, measurement, and analysis. He has tackled vibration problems from data collection to stress analysis and remaining life for a wide variety of fixed equipment types and applications. He has a masters degree in mechanical engineering from the Georgia Institute of Technology, is a member of ASME, and is a registered professional engineer in the state of Louisiana.



MANTOSH BHATTACHARYA

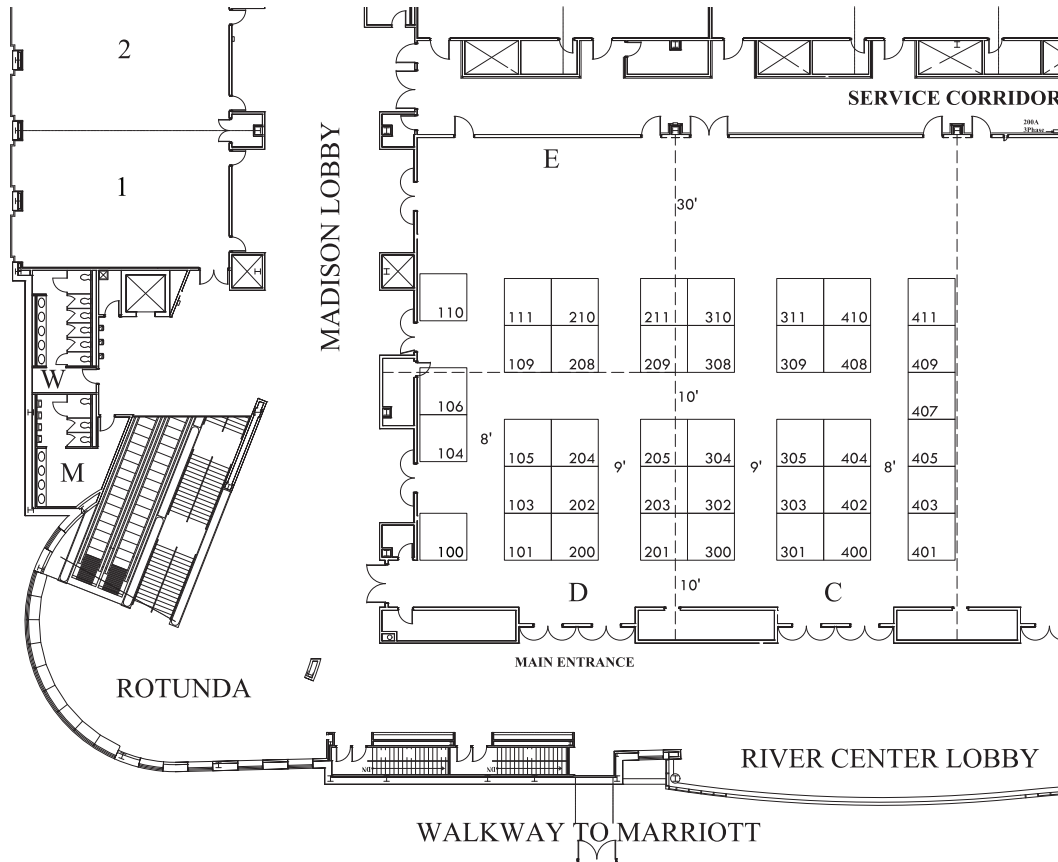
Mantosh Bhattacharya is designated Subject Matter Expert on Turbomachinery in Petrofac Intl. located in UAE. He is a chartered engineer CEng (MIMechE- UK), Intl. PE (UK), a member of ASME, Vibration Institute and ISCM – (BINDT UK). He is a CAT –IV vibration analyst and member of advisory committee of ATPS [TEES – Texas A&M] He is the member of HI 9.6.4, 9.6.5 and 14.5.1 standard committees. He holds 3 U.S. patents related to structural dynamics. He has published and presented several technical papers in journals and conferences.



KIRK CORMANY

Kirk Cormany is a highly regarded expert in the field of reliability engineering, with over 30 years of experience in predictive maintenance and condition monitoring. As the Founder and Technical Director of AdashAmerica Inc. and the Founder and President of Condition Monitoring Services, Inc. (CMS), Kirk has established himself as a leading authority in equipment reliability. Kirk's experience and innovative approaches make him a sought-after speaker, and his insights into predictive maintenance and condition monitoring are invaluable for professionals across various industries.

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If you're working to maintain machines, Acoem USA wants to help. We're committed to providing tools, training, and services that will transform your approach to maintenance and reliability. Our portfolio includes solutions for condition monitoring, vibration analysis, laser shaft alignment, belt alignment, and geometric measurement. With an emphasis on our relationships with customers, we have always strived to deliver experiences built around the needs of the client. Our success is defined by strengthening individuals and organizations working in industry, all while delivering a remarkable customer experience. You can count on Acoem USA as your partner in reliability.

BOOTH #305



crystalinstruments.com

Crystal Instruments stands at the forefront of technological innovation in the dynamic data acquisition, vibration control, and machine condition monitoring industries. From our meticulous design at the component level (circuit board, FPGA code, firmware, algorithms, and DSP) to the expansive and user-engineered testing at the software level, our commitment to precision, accuracy, and the overall user experience stands out as our top priorities. With our products proudly crafted at our manufacturing facility in the heart of Silicon Valley, California, we take pride in our product's durability from the initial installation setup and usage for years to come. In fact, we still have most of our first products, the CoCo-80, still in field use to this day. Along with our dedication to superior quality products, our sales and support team will expertly guide you from the initial discovery call throughout the full device lifetime, with unparalleled expertise along the way for seamless testing solutions. In the ever-evolving environmental testing landscape, our products have been utilized in industries such as defense, automotive, aerospace, consumer products, mining, energy, healthcare, and many more. In these industries, custom engineering solutions or contract testing at our state-of-the-art labs are often necessary, which we conveniently supply.

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adash.com

With a distinguished 30-year heritage, Adash has established itself as a pioneering force in machine condition monitoring. Adash offers innovative and leading-edge solutions for plantwide condition monitoring with a primary focus on portable and online vibration monitoring hardware and software as well as complementary tools to provide customers with a holistic understanding of their machinery performance and health. Our diverse products are integrated seamlessly into a single software interface allowing for multiple technologies, reports, alarms, and performance indicators to subsist on a single page. This consolidated approach equips users with the necessary tools to drastically reduce unscheduled downtime and accurately diagnose equipment issues. Adash's extensive history, forward-thinking approach, and unwavering commitment to customer satisfaction establish them as a trusted leader in the machine condition monitoring field.

BOOTH #304



cti.org

The Cooling Technology Institute (CTI) is a broad-based industry association. Our mission is to advocate and promote, for the benefit of the public, the use of all environmentally responsible commercial cooling technologies such as wet cooling towers, air-cooled condensers, dry coolers, indirect cooling, and hybrid systems by encouraging education, the development of codes, standards, and guidelines, the use and oversight of independent performance verification and certification programs, research and development, information exchange, and dialog with government agencies and organizations with a shared interest in evaporative heat rejection equipment.

TECHNICAL PARTNERS

BOOTH #208



altasol.com

MONITOR – ANALYZE – PROTECT. For over 25 years Alta Solutions has been an innovative producer of machinery Monitoring, Analysis and (API 670) Protection systems for single asset to fleetwide applications. Examples of our capabilities include transient capture/diagnostics, modal analysis and combustion dynamics. Alta's products are optimized for a variety of rotating machinery: steam and gas turbines, motors, generators, gearboxes, compressors, pumps, fans, blowers and structures or piping vibration. With over 1000 systems installed worldwide, Alta equipment has field proven reliability for Power Generation (NERC/FERC Cip v6), Refining, Chemical Production, Steel and Aluminum Mills, Cement Mills, Performance Monitoring, Product Development, Research, and Production QC applications. Innovative accuracy, performance, and superior support allow customers to trust Alta for their needs.

BOOTH #110



ctconline.com

At CTC, we are a family-owned and operated business passionate about providing the best quality products backed by excellent customer service. We are the world leader in the design and manufacture of industrial accelerometers, piezo velocity transducers, 4-20mA vibration sensors, and proximity probes as well as all related mounting hardware, cabling, and junction boxes. Our mission is to offer the most extensive collection of accelerometers and vibration analysis hardware products, as well as the tools for installation. CTC products are compatible with multiple third-party data collectors and online monitoring systems. We are the industry leader in quick delivery for stock and built-to-order products, which are all proudly made or assembled in the U.S.A and backed by our best-in-class warranties.

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VENDORS



dewesoft.com

DEWESoft, the next evolution in data acquisition instrumentation, offers a full suite of hardware for in-vehicle and lab data acquisition applications. Scalable from one to thousands of channels our instruments are available as small USB and EtherCat devices, stand-alone battery-powered systems, rack-mounted configurations, and ruggedized field-ready solutions. Powered by the latest DEWESoft X software, we acquire and control many multi-domain test sets that include analog in/out, digital in/out, video, CAN, FlexRay, XCP, GPS, and much more. DEWESoft hardware and software are used around the world in a variety of fields ranging from auto manufacturers and construction equipment, to aeronautical development and telemetry.

CONFERENCE BAG SPONSOR

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heartlandsolutions.com

Heartland Industrial Solutions has been the exclusive distributor of Pruftechnik products since 1998. Based out of Cincinnati, OH, we are the exclusive representative for Pruftechnik in the states of Ohio, Kentucky, Tennessee, Michigan, Illinois, and Indiana. We are a master distributor for CTC in Michigan, Ohio, and Indiana; exclusive distributor of Alkitronic in Ohio, Kentucky, Tennessee, Michigan, Illinois, and Indiana, as well as a nationwide distributor of Alkitronic.

We are alignment specialists who represent state-of-the-art laser shaft alignment systems with the most professional personal care. In addition, we provide precision measurement systems for exact measurement of machine tools, machine trains, machine and engine bores and a host of other precision measurement requirements. Additionally, everyone on the Heartland staff is (at a minimum) a Level 1 Certified Vibration Analyst and represents the entire line of Pruftechnik vibration and condition monitoring equipment.

Once we match your requirements to the best laser or vibration tools for the job, we look forward to providing you continued support.

BOOTH #311



e2g.com

The Equity Engineering Group, Inc. leverages technology and industry experience to extend the safe operating life of rotating machinery, piping, and structures by helping to prevent future failures, increase efficiencies, maximize reliability, and minimize damage. The structural vibration and rotating equipment team combines field testing, data analysis, and advanced computational analysis to provide practical and actionable recommendations to solve complex problems. E2G helps its clients improve rotating equipment reliability and mechanical integrity with predictive and preventive maintenance programs.

KEYNOTE BREAKFAST SPONSOR

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helwigcarbon.com

Helwig Carbon Products, Inc. is the premier, family-owned, American manufacturer of carbon brushes, brush holders, spring assemblies, Bearing Protection Kits™, metal graphite brushes, and carbon graphite components. Since 1928, we have forged innovations that have since become industry standards and requirements. We pride ourselves on manufacturing all of our products to the highest standard and performance because we know your application depends on it!

Made In The USA and located in Milwaukee, WI, Helwig Carbon's carbon brush and holder solutions are expertly designed for maximum performance on all types of industrial motors and generators including: commutator and slip ring, fractional horsepower motors, tachometers, synchronous motors, and permanent magnetic motors.

BOOTH #303



erbesd-instruments.com

At Erbesd Instruments, we stand at the forefront of innovation, dedicating ourselves to the development, manufacturing, and distribution of cutting-edge instrumentation for vibration analysis, condition monitoring, and balancing machines. With over four decades of unwavering commitment to excellence, our mission is to simplify and enhance the experience for our valued clients.

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hansfordsensors.com

Hansford Sensors Ltd specialise in the design and manufacture of accelerometers for monitoring vibration and temperature levels of industrial machinery, playing a key part in the role of predictive maintenance. Our product range includes vibration and velocity sensors or industrial accelerometers with either AC outputs for use with data collectors, or 4-20mA transmitters for direct use with Plc. Intrinsically safe AC and 4-20mA versions are available with ATEX and IECEx certification for approved use in Group I (Mining) and Group II (Petrochemical). We also supply multi-sensor switch boxes, vibration modules, vibration meter kits, vibration condition monitoring protection systems and custom-built vibration sensors.

With global presence, we manufacture and supply to over 44 countries worldwide to a wide variety of organisations ranging from internationally renowned systems integrators and distributors to international offices, agents, individual vibration consulting companies and OEM's.

BOOTH #302

VENDORS



pumps.org

Founded in 1917, the Hydraulic Institute (HI) is the largest association of pump manufacturers in North America. The global authority on pumps and pump systems, HI develops standards and technical resources including application guidebooks, on-line tools and calculators. In addition to collecting statistical data and providing a forum for the industry, HI manages efficiency programs that stem from its advocacy work with the US Department of Energy. While the HI Energy Rating label is found on efficient equipment and the Pump System Assessment Professional (PSAP) certification designates individuals; both programs promote the efficient use of pumps and pumping systems. The Institute's educational subsidiary, Pump Systems Matter (PSM), provides product neutral training on energy efficiency, reliability and effective applications of pump systems through an extensive catalog of live, virtual and on-demand courses and webinars.

TECHNICAL PARTNERS

BOOTH #211



mechsol.com

MSI uses and sells its own Video Vibration Amplification product, VibVue®. MSI's 25+ year reputation is founded on its ability to solve difficult rotating machinery problems. MSI also uses its experience and analysis techniques to reduce the risk of problems prior to the installation of new or refurbished high-value rotating machines. Additionally, MSI provides complete pump, compressor, and turbine machinery or component design and development services. Computation tools regularly utilized include unsteady CFD, FEA, and rotordynamics analysis packages. Vibration related testing methods include: strain gauges, dynamic pressure, experimental modal analysis (impact), operating deflection shape (ODS), Motion Magnified Video, and specialized flow instability measurement.

BOOTH #204



hydroinc.com

Extensive experience across manufacturers, an unwavering commitment to quality, and a focus on reducing pump life cycle costs have made Hydro a trusted source for comprehensive pump support for over 50 years. Our Reliability Services division provides field testing and analytical support to troubleshoot complex vibration problems, optimize pump systems, and understand equipment health.

BOOTH #300



ludeca.com

LUDECA is a leading provider of Predictive and Proactive Maintenance Solutions including laser alignment, ultrasound testing, induction heating, vibration analysis and balancing equipment as well as related software, rentals, services and training.

BOOTH #408



metrixvibration.com

With more than 55 years of service, Metrix is the preferred supplier of industrial vibration monitoring systems and services to many of the world's leading manufacturers and users of reciprocating engines and compressors, gas turbines, centrifugal compressors, generators, pumps, motors, fans, and other rotating machinery. With headquarters in Houston, Texas, we operate in more than 40 countries via factory-direct sales and service professionals, along with a strategic network of instrumentation partners. Metrix invented the technology of simple, affordable machinery protection with our revolutionary 4-20mA vibration transmitters, robust high-temperature velocity sensors, innovative impact transmitter technology, and vibration switch offerings. Metrix is again revolutionizing the industry through digital and configurable solutions including our Digital Proximity System (DPS) and 5580 Smart Signal Conditioner.

BOOTH #202



infraspection.com

Infraspection Institute is the oldest independent infrared training and infrared certification firm in the world. Founded in 1980, Infraspection Institute has trained and certified over 10,000 thermographers worldwide. Our Certified Infrared Thermographer® training course curricula comply with training requirements for NDT personnel as specified by ASNT and ISO. Students may choose from open enrollment classes or our convenient web-based Distance Learning program. Onsite classes are available for groups of four or more students. Our certifications never expire and do not require students to pay renewal fees.

With over 40 years in business, Infraspection Institute literally pioneered the infrared training industry. During our long history, we have shaped the infrared industry through training, technical consulting, publications, research, standards development, and software publishing. Our mission is to support practicing thermographers with educational, certification and support services. We provide timely, accurate and unbiased information about infrared hardware, applications, and program development.

TECHNICAL PARTNERS

BOOTH #210



miba.com

Miba Industrial Bearings produce hydrodynamic bearings and labyrinth seals for use in the Petrochemical, Refining and Power Generation markets. Our products are used in a wide range of high-performance applications (centrifugal compressors, turbines, motors and industrial pumps). Our technology enables those applications to run more efficient, powerful, and environmentally friendly. Regardless of where our customers are located, they can rely on the performance of Miba Bearings. We accompany our customers around the world, supporting them with our products and services. Our network spanning four continents allows us to respond quickly and flexibly to the various needs of our customers.

BOOTH #404

VENDORS



philagear.com

Since its inception in 1892, Philadelphia Gear® has been at the forefront of gearing solutions, design, and manufacturing. Originating as a pioneer in the U.S. industrial manufacturing sector, we've built an unmatched reputation for producing the highest quality and most reliable gearboxes available, now recognized globally. As an integral component of the Timken Power Systems (TPS) network, Philadelphia Gear has significantly broadened its horizons. Beyond traditional gearboxes, we now offer a comprehensive suite of electromechanical services. With the support of five additional TPS service providers, our customers can access bespoke solutions encompassing gearboxes, electric motors and generators, bearings, and control systems, enhancing operational efficiency and reliability.

BOOTH #103



sdtultrasound.com

SDT provides ultrasound solutions that give our customers an understanding of the health of their factory. We help predict failures, control energy costs, and improve product quality while contributing to the overall uptime of their assets.

BOOTH #401



Part of the Burckhardt Compression Group

prognost.com

PROGNOST Systems is the market leader for online diagnostic systems for reciprocating compressors and the inventor of the segmented vibration analyses. We offer specialized monitoring solutions and services for Rotating Equipment, including bearings, shafts, and gearboxes. This holistic portfolio allows our customers a successful implementation or expansion of the Predictive Maintenance approach. Our products build upon 30 years of machine diagnostic experience and expertise in: Machine protection system (MPS), Machine monitoring system (MMS), Diagnoses of machine condition.

BOOTH #105



springpt.com

Spring Point offers a suite of integrated products for the electro-mechanical industry. MotorBase job costing, accounting, sales, & shop management. QM Wizard electronic step-by-step task guide and data capture tool. Equipment Manager - track thousands of items along with status, location, history, & documentation. Spring Point CRM track prospects, opportunities, & customer relations. A Customer Web Portal to give your customers insight to their jobs and equipment, access to their quotes & invoices, and allow them to place orders or request quotes. Job Tracker/Scheduler, Dashboard, & more. Spring Point App - Take QM Wizard Jobs offline, use the Mobile Time Clock and/or the field service time sheet. Pricing Analyzer - Repair pricing across all EASA Regions based on thousands of reliable records. Spring Point evolved from the electric motor repair industry. With our staff of industry experts, and more than 250 years' experience in the industry, Spring Point is more than just a software system. We understand your world like no other software company can.

BOOTH #309



rditechnologies.com

RDI Technologies is pioneering the camera as the sensor of the future because visualization is faster, safer, and makes the complex more simple. Our proprietary technology platform powered by Motion Amplification® enables our users to see and measure motion that is impossible to see with the human eye and could previously only be measured by contacting sensors.

Our products combine the power of modern cameras with our software to turn what used to be complex charts and graphs into easy to understand video data that enables our users to quickly and safely solve their toughest problems and communicate the results.

BOOTH #104



stiweb.com

STI was founded in 1989 with the goal of bringing low-cost solutions to our customers while providing the flexibility required in today's competitive market. Our products are manufactured in the USA and include a variety of machine monitoring systems, accelerometers, 4-20mA sensors, junction boxes, mounting hardware and cabling for both permanently installed and portable analyzer systems. STI is family owned and specializes in quick turnaround manufacturing and custom products.

BOOTH #203

VENDORS



stress.com

At Stress Engineering Services we specialize in taking on your toughest technical problems because we understand that you don't just want answers; you want the right answers. Since 1972, we have been providing solutions for companies and industries that require in depth technical knowledge and proven performance in the fields of engineering design and analysis, thermal and fluid sciences, instrumentation, and testing. Problem solving is what we do and what we deliver. It is our commitment to provide the most comprehensive design, analysis, and testing services with an unsurpassed level of engineering integrity and expertise. This devotion to quality stems from the two basic principles on which the company was founded – technical excellence and a passion to serve.

BOOTH #407



vibetech.com

For decades, engineers, analysts and technicians have relied on Vibrant's ODS and Modal Analysis technology to quickly and affordably solve even the most complex noise and vibration problems. Our premier software, MEscape, uses industry-leading 3D animated models, videos, and post-processing tools to turn data into solutions and actions.

BOOTH #109



tps.tamu.edu

The Turbomachinery Laboratory is a center of the Texas A&M Engineering Experiment Station (TEES), located in College Station, Texas. Founded in 1971, the Turbo Lab conducts theoretical and applied research on the reliability and performance of turbomachinery – rotating machinery that extracts or adds energy to fluids. Turbo Lab faculty and staff are proud to continue Texas A&M's land-grant charter and tradition of answering industry needs in basic and applied research, undergraduate and graduate education, and continuing education and professional development. Its numerous activities are sponsored by both industry and government agencies. The Turbo Lab's acclaimed Turbomachinery and Pump Symposia (TPS) is held annually in Houston, and its sister event, the Asia Turbomachinery and Pump Symposia, biennially in Singapore. Both feature a world-class exhibit hall and cutting-edge technical program.

TECHNICAL PARTNERS

BOOTH #209



waites.net

Waites offers nothing less than a completely revolutionary way to perform maintenance while providing around the clock, effortless monitoring of any and every piece of equipment in your facility. Our modern, easy-to-use vibration analysis software allows you to automatically set alerts - whether you're a vibration expert or not.

BOOTH #410



uptimecm.com

UpTime Solutions provides wireless condition monitoring and predictive maintenance solutions for industrial applications. Combining ultrasound, vibration, temperature with the most advanced analytic software to prevent unscheduled downtime.

BOOTH #106



wilcoxon.com

Wilcoxon Sensing Technologies, an Amphenol company, is a leading supplier of reliable, high-quality accelerometers and vibration sensing products. Our solutions are at work in predictive maintenance and condition monitoring programs around the world. We design and manufacture a wide range of accelerometers, vibration transmitters, velocity sensors, cable and connector assemblies, mounting hardware, junction boxes, handheld vibration meters, and more. Our solutions are built to last, helping you effectively monitor rotating machinery in industrial, Test & Measurement, underwater and defense applications.

BOOTH #400



zetaquest.com

ZetaQuest Technologies, LLC is an innovative company that offers vibration damping hardware for piping and other mechanical applications. The products can address excessive vibration of small bore and larger piping including low frequency swaying as well as high frequency (>300 Hz) vibration. Products are easily implemented and can provide significant levels of damping to mechanical systems.

BOOTH #111



With a distinguished 30-year heritage, **Adash** has established itself as a pioneering force in machine condition monitoring. Starting with only 5 offices in Europe in 1991, Adash has rapidly expanded to an impressive network of over 90 global locations.

Adash offers innovative and leading-edge solutions for plantwide condition monitoring with a primary focus on portable and online vibration monitoring hardware and software as well as complementary tools to provide customers with a holistic understanding of their machinery performance and health.

While other legacy CbM companies are scaling back their development of advanced machine analysis tools, Adash remains steadfast in delivering cutting-edge technology for machinery health and performance. Furthermore, our commitment extends beyond the sale, providing customers with support for the lifespan of their equipment at no additional ongoing cost.

Our diverse products are integrated seamlessly into a single software interface allowing for multiple technologies, reports, alarms, and performance indicators to subside on a single page. This consolidated approach equips users with the necessary tools to drastically reduce unscheduled downtime and accurately diagnose equipment issues.



Adash is proud to announce its **new corporate office in Las Vegas, AdashAmerica**, strategically positioned to serve North American customers with excellence. AdashAmerica not only houses administrative functions but also serves as a hub for training, repairs, and calibration services. This facility ensures that our customers receive hands-on support and expertise locally, enhancing their experience and maximizing the uptime of their critical machinery.



The company continues to specialize in advanced, **subscription-free** solutions for comprehensive plantwide condition monitoring, emphasizing portable and continuous monitoring hardware and software, alongside complementary tools. This approach provides customers with a holistic understanding of machinery performance and health.

In conclusion, Adash's extensive history, forward-thinking approach, and unwavering dedication to customer satisfaction, reinforced by the capabilities of AdashAmerica, position us as a trusted leader in the field of machine condition monitoring.

Come visit us at BOOTH 304 to hear about the new OMEGA Online Monitoring Expert Guard systems.





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