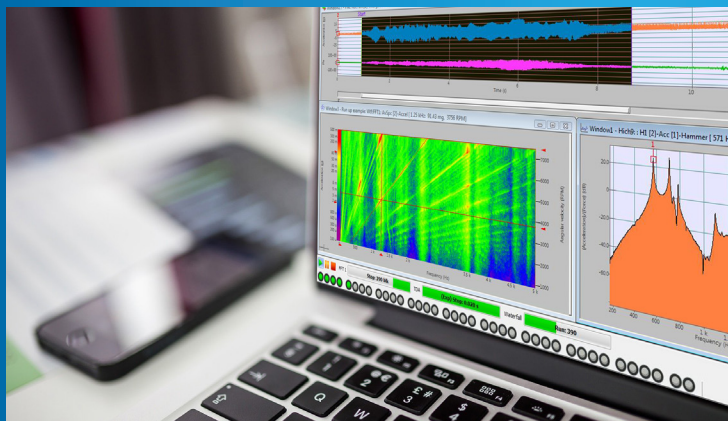# OROS
Americas Inc.
MEASURING NOISE & VIBRATION

NVGate Users Training
Enhance your skills!
October 4-5, 2022
Walker, MI (just outside of Grand Rapids, MI)

What is covered in this training?
- Basics of Signal Processing
- Basics of Instrument and NVGate Set-up
- NVGate Basic Recording and Analysis
- Reporting
- Machinery Diagnostics
- Advanced Rotating Analysis
- Torsion analysis with NVGate
- Acoustics with NVGate

Who should attend?
Anyone new to NVGate or those looking to refresh their existing knowledge.

Cost
$695 per seat

Register today at
https://landing.oros.com/training

TWO DAY NVGATE OPERATIONAL TRAINING PROGRAM

DAY ONE

Basics of Signal Processing – 1 Hour
- Mechanical behavior of systems
- Single or multiple degree-of-freedom systems
- The measurement chain: transducer's principles and considerations (mounting, etc.)
- Introduction to noise and vibration measurement
- Signal characterization
- From continuous and physical domain to a digital data, sampling and signal processing
- Fourier Transformation: main parameters of FFT analysis
- Other analysis modes

Basics of Instrument Set-up and NVGate software – 2 Hours
- Analyzer instrument main features
- Teamwork functionality
- Modes for online (real-time) analysis and post processing analysis
- How to prepare a measurement, settings and parameters
- User interface best practices for optimum performance during measurements
- Organize, save and share data
- Best practices for post-processing of recorded data

NVGate Basic Recording and Analysis (typical setup and configurations) – 2.5 Hours
- Record and measure a sensor signal
- Signal editing
- Monitor a "live" signal
- Narrowband FFT
- FFT Cross Functions
- FFT Diagnostics
- Constant Band Tracking

Reporting in NVGate – 1.5 Hours
- Reporting using Word and Excel
- Data copy, drag-n-drop, automatic export, different tools to enable reporting
- Reporting graph, data, settings, how to combine all these results in one report file
- One-click print reporting
- Report customization, how to manage Word and Excel model including NVGate tag

DAY TWO

Machinery Diagnostics with NVGate – 1.5 Hour
- Time Domain Analysis, typical results and how to setup and parameter the module
- Advanced FFT option for Cepstrum, Correlation, Envelope
- Use makers to identify troubles according to mechanical and kinematic design

Advanced Rotating Analysis with NVGate – 2.5 Hours
- How to get a good and reliable tachometer measurement
- Synchronous Order Analysis, the principle and features
- Constant Band Tracking method for diagnostics
- Waterfall and order extraction
- Order tracking, phase tracking

Torsion analysis with NVGate – 2 Hours
- How to get a good and reliable tachometer measurement
- Synchronous Order Analysis, the principle and features
- How to get a good and reliable torsion measurement : transducer setup and parameters
- IVC (Integrated Frequency to Voltage Converter) for Torsional Analysis
- Signal filtering from torsion velocity to angle position
- Static "twist" and dynamic analysis
- Acyclic analysis for reciprocating machinery

Acoustics with NVGate – 2 Hours
- Octave and Overall Acoustic theoretical
- Octave filters setting
- Type of averaging
- Save and compare data
- Report generation
- Exported and shared data

OROS
Americas Inc.
MEASURING NOISE & VIBRATION