ECI Users Exchange
Sponsored by Emerson

May 2-3, 2018
Pittsburgh Airport Marriott

www.eci.us/exchange

USERS EXCHANGE
eci
EQUIPMENT & CONTROLS, INC.

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WELCOME

Welcome to the 2018 Equipment & Controls, Inc. Users Exchange sponsored by Emerson Automation Solutions! The theme for this year's event is carried throughout all of our sessions – Operational Certainty: Your Playbook for Success.

Our two-day schedule features industry leaders who will share their insights, answer your questions and help prepare you to implement best practices in your workplace. We understand your need to optimize efficiency and reliability and have structured this event to address related challenges across many industries.

Our keynote speaker, Tunch Ilkin, will share his inspiring journey as a Steeler and a sports broadcaster. His insight into the critical elements of his playbook for success will be a powerful start for this two-day learning event! The presentations are divided into four tracks: Measure & Analyze, Reliability Solutions & Support, Operate & Manage and Final Control & Regulate. There are more than 50 sessions and you can select those that will be most impactful for you!

This learning is enhanced with a view of the latest products and services in our exhibit area.

Thank you for taking the time out of your schedule to join us - we appreciate your dedication to continued learning. This event has grown each year and we are excited to see both our returning and new attendees.

We also thank our sponsor, Emerson Automation Solutions, our presenters and exhibitors for supporting our event.

Sincerely,
2018 ECI Users Exchange Committee

GENERAL INFORMATION

The 2018 ECI Users Exchange will begin at 8:00 a.m. in the Three Rivers Ballroom with an introduction by ECI President Dan Smith and Josh Wilford, VP/GM North America for Emerson Automation Solutions, Flow Controls. At 8:15 a.m., we are honored to present our keynote speaker, Tunch Ilkin. At the conclusion of the keynote, the presentations will begin on the opposite side of the hotel lobby in Salon A, Montour, Robinson, Coraopolis, Findlay and Moon.

Exhibits: To ensure that you are able to attend the learning sessions, the exhibit hall will not be open during the presentations. Please visit the exhibits in Salons B – E during Wednesday's evening reception and lunch on Thursday.

Evening Reception: The evening reception is your opportunity to network while you view the latest products and services from our exhibitors, and enjoy cocktails and hors d'oeuvres. Users will also participate in a raffle! Users will turn in that day's raffle ticket (located behind the name badge) upon entering the exhibit hall. Users must be present to win.

Lunches and Breaks: A buffet lunch will be available at noon each day outside the Three Rivers Ballroom with seating in the ballroom and in the courtyard behind the lobby. Mid-morning and mid-afternoon breaks will include snacks and beverages in the main conference area.

Presentations and Workshops: The presentations and workshops will start on time according to the schedule. The lights will dim in the conference hallway to signal the start of the sessions. We ask that you take your seats promptly. If you need to take a call or have a conversation during the presentations and workshops, please step away from the conference area so as not to disrupt these sessions. There is limited seating in some of the workshops to accommodate hands-on learning. All seating is available on a first come, first serve basis.

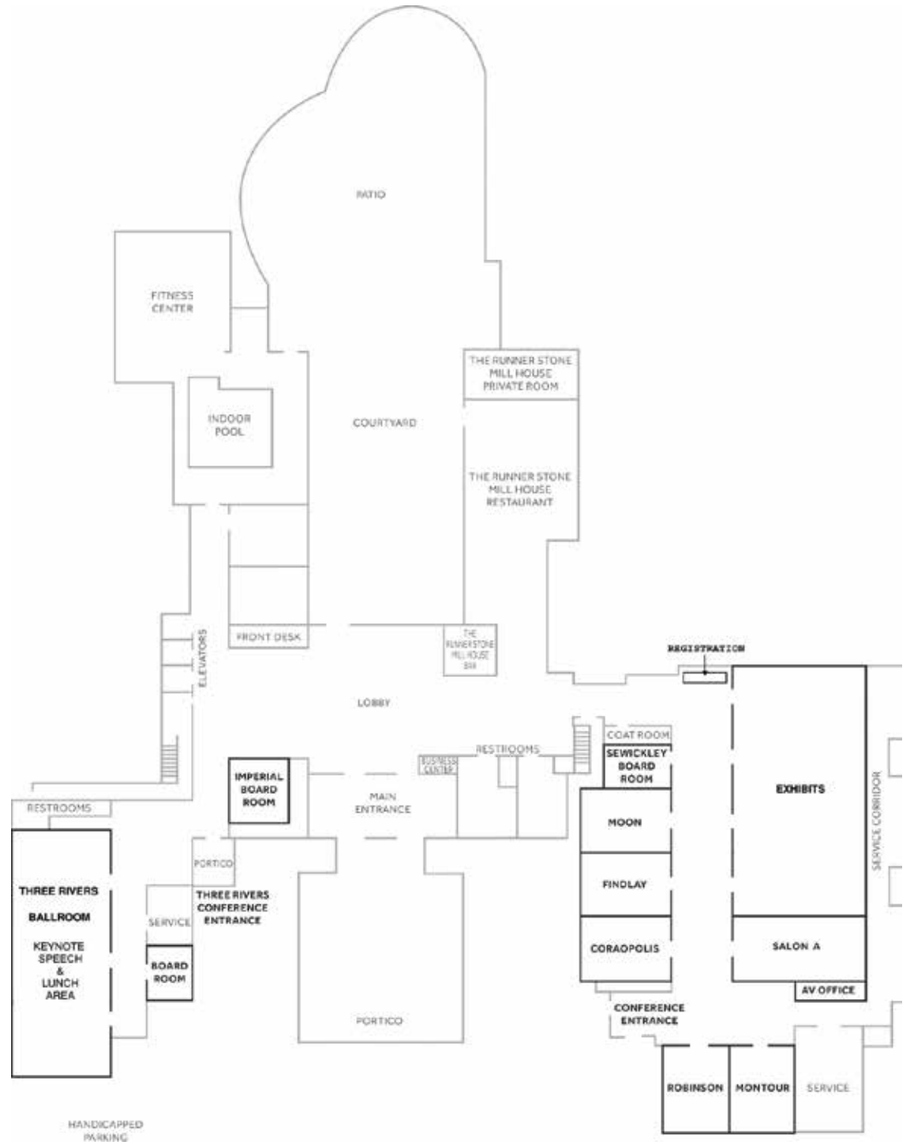
Day 2: At the request of our attendees, the ECI Users Exchange is two days. The sessions and workshops will begin at 8:00 a.m. on Thursday. Plan to stay all day for these compelling topics.

Sunrise Run: Runners are to meet ECI's Wellness Coordinator in the hotel lobby at 6:00 a.m. on Thursday. Those who registered for the run received a t-shirt with their name badge. If you did not register, you are still welcome to join.

Social Media: Use #ECIUE when posting on social media about your attendance at the ECI Users Exchange.

Feedback: Your feedback is always welcome! Tell us about your experience and share your suggestions for future presentations by emailing **eciue@eci.us**.

HOTEL MAP



CONFERENCE SCHEDULE

Pre-Registration Begins May 1 from 6:00 PM - 8:00 PM

WEDNESDAY, MAY 2

Start Time	End Time	Description	THREE RIVERS BALLROOM Mon/Ohio/Alleg.	SALON A Operate and Manage	MOON Measure and Analyze	FINDLAY Reliability	CORAOPOLIS Operate and Manage	ROBINSON Final Control and Regulate	MONTOUR Operate and Manage	GRAND BALLROOM Salon B-E
7:00 AM	5:00 PM	**Registration**								**Closed**
8:00 AM	9:50 AM	**Keynote Speaker**	**Forged in Steel – Leadership On and Off the Field** Tunch Ilkin							
9:50 AM	10:10 AM	**Break**								
10:10 AM	11:00 AM	**Session 1**		**DeltaV V14 Roadmap** Bruce Greenwald, Emerson	**Driving Operational Certainty in IIoT with Plantweb** Anthony Simpkins, Emerson Jim Davis, Emerson	**Reliability Roadmap** Drew Mackley, Emerson	**Remote Automation Solutions Roadmap** Bryan Sauer, Emerson	**Performance Service Capabilities - All Valves Everywhere** Frank Manks, Emerson	**Troubleshooting with DeltaV Diagnostics** Arturo Medina, Emerson 0.2 CEU	
11:10 AM	12:00 PM	**Session 2**		**Lifecycle Services for DeltaV** Natalie Grothause, Emerson	**Addressing Measurement Challenges in Today's Shale Plays** Stephen Anson, Emerson Marc Buttler, Emerson	**Build the Business Case for IIoT** Barry Coultas, ECI	**BMS on a Pad: Flares, Combustors and Natural Draft Heaters** Yves Lafortune, Platinum Control	**Valve Connected Services** John Carlow, Emerson		
12:00 PM	1:00 PM	**Lunch**								
1:00 PM	1:50 PM	**Session 3**		**Automation Modernization: A Lever for Business Success** Laurie Ben, Emerson	**Piecewise-Linearization and Natural Gas Custody Transfer Measurement** Marc Buttler, Emerson	**AMS Device Manager – Unlock your Instrumentation's Potential** Orlando Fernandez, ECI	**Solid Oxide Fuel Cells: Power for Remote Wellhead Sites** Mike Brennan, Atrex Energy	**Total Tank Protection** Steve Ludtman, Emerson	**Introduction to DeltaV with AMS Device Manager** Arturo Medina, Emerson 0.4 CEU	
2:00 PM	2:50 PM	**Session 4**		**Siemens Moore APACS+ Migration to DeltaV at Fort Amanda Specialties** Erica Illig, Fort Amanda	**Utilizing Coriolis: Accurate, Reliable and Maintenance Free Measurement** Chris Snell, Seneca Hugh Adams, Emerson	**A Small Step for your PdM Program, A Giant Leap in Digital Transformation** Tom Francisco, Emerson	**Exploring the Benefits – Adding a DC UPS System to Fuel Cells** David Eveland, SunWize	**Stand-Alone ESD Solutions for Pipelines, Wellheads and Storage** Hugh Flesher, Emerson		
2:50 PM	3:10 PM	**Break**								
3:10 PM	4:00 PM	**Session 5**		**DeltaV Operations Update** Camilo Fadul, Emerson	**Tackle Multiphase Challenges and Monitor the Happiness of Your Meters** Justin Hollingsworth, Emerson	**Artificial Intelligence, IIoT and Industry 4.0** Rajiv Anand, Quartic.ai	**Emerson's New Family of Flow Computers: FB1000 & FB2000** Todd Lamb, Emerson Mike Taccino, Emerson	**Plantweb Digital Ecosystem: Improving Operational Certainty** Tony Delgado, Emerson		
4:10 PM	5:00 PM	**Session 6**		**Legacy DCS/PLC Migration Options for DeltaV** Scott Ross, Emerson	**Upstream: Applying Technology to Multiphase Flow Regimes** Paul Jobe, Emerson	**Condition Asset Management - Ultrasound Remote Monitoring** Greg Inverso, UE Systems	**Terminal Manager Solutions: Improve Operations, Reduce Risk** Mike Stappert, Emerson	**Layers of Protection for Flame & Gas, From Detection to Suppression** Brian Ledeboer, Emerson		
5:00 PM	7:30 PM	**Cocktails / Hors d'oeuvres**								**Exhibits**

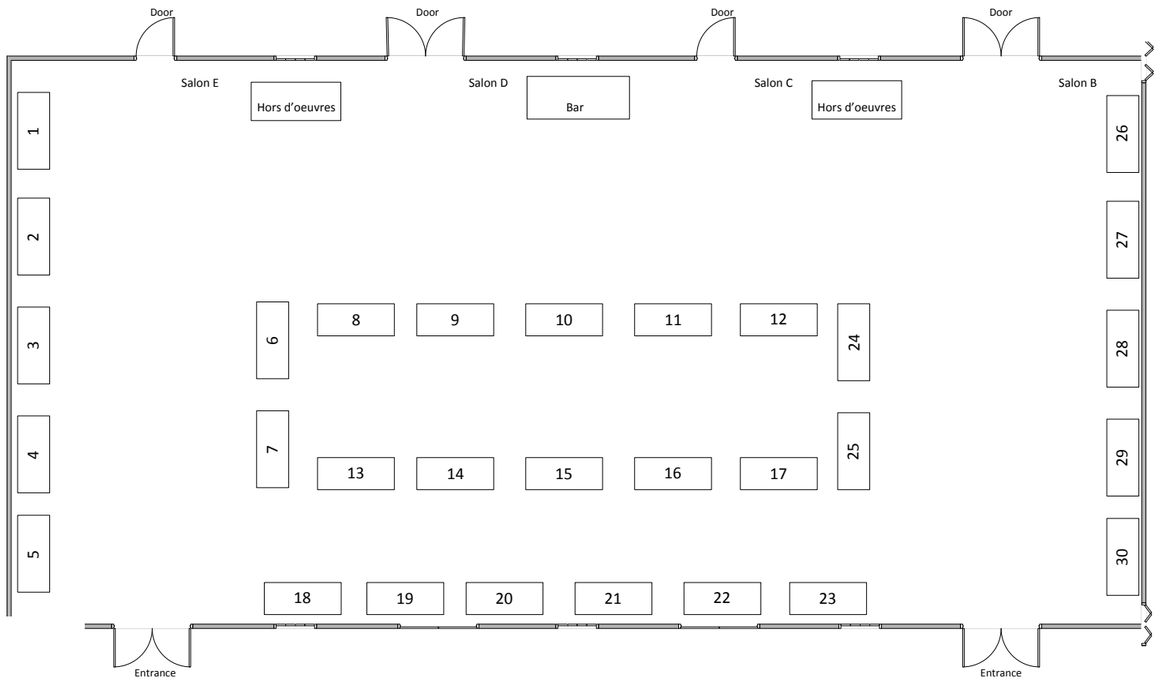
CONFERENCE SCHEDULE

THURSDAY, MAY 3

Start Time	End Time	Description	THREE RIVERS BALLROOM Mon/Ohio/Alleg.	SALON A Operate and Manage	MOON Measure and Analyze
6:00 AM	7:00 PM	**Sunrise Run**			
7:00 AM	12:00 PM	**Registration**			
8:00 AM	8:50 AM	**Session 7**		**Applying Technology to Modernize Your DCS to DeltaV** Laurie Ben, Emerson	**Coriolis Meters: Liquid Measurement and Small Volume Provers** Marc Buttler, Emerson
9:00 AM	9:50 AM	**Session 8**		**PK Controller** Bruce Greenwald, Emerson	**Inferred Mass Proving Best Practices for Coriolis Meter in NGL Service** Kolt Decker, MarkWest Mike Sylvester, Emerson Dean Minehart, Emerson
9:50 AM	10:10 PM	**Break**			
10:10 PM	11:00 PM	**Session 9**		**On-line Batch Analytics – Redeployment** Bob Wojewodka, Lubrizol	**Measurement Confidence: Enhanced Coriolis Diagnostics** Taylor Scott, Emerson
11:10 PM	12:00 PM	**Session 10**		**The Workforce Challenge: Millennials or Leadership?** Tyler Palko, Solutions 21	**New Developments in Coriolis Transmitters and Diagnostics** Anthony Gentile, Emerson
12:00 PM	1:00 PM	**Lunch**			
1:00 PM	2:50 PM	**Workshops**		**SIS 101: The Basics of Functional Safety** Steve Gandy, exida Loren Stewart, exida	**Coriolis Installation Best Practices and Smart Meter Verification** Anthony Gentile, Emerson
2:50 PM	3:10 PM				
3:10 PM	5:00 PM				

FINDLAY Reliability	CORAOPOLIS Operate and Manage	ROBINSON Final Control and Regulate	MONTOUR Operate and Manage	GRAND BALLROOM Salon B-E
So You Have Been Attacked, Now What? Rick Gorskie, Emerson	**Building the Virtual Plant for DeltaV** Spencer Absher, Emerson	**API 18.2: Custody Transfer of Crude Oil Using Alternative Measurement** Bill Pace, Emerson		**Closed**
OREDA with FMEDA – Achieve Device Level Failure Data Loren Stewart, exida	**Control and Operator Performance Center of Excellence** Eric Schulz, Emerson	**Wireless Drilling Mud Tank Monitoring: Speed, Efficiency and Reliability** Josh Peters, Seneca Anthony Capizzi, Emerson	**Troubleshooting with DeltaV Diagnostics** Arturo Medina, Emerson 0.2 CEU	
Risk Reduction: Get More From What Already Exists Tim Herbig, Bluefield Process Safety	**Casting HMIs and Comprehensive Process Monitoring** Michael Hrinishin, IV & C	**Modernizing your BMS – The Smart SIS Approach** MC Chow, Emerson		
Functional Safety for Managers Steve Gandy, exida	**The X's and O's of Control Room & Console Design** Bruce Johnson, Evosite	**Extending your Reach – Hazardous Area HMI and Mobility Solutions** Karen Balentine, Pepperl+Fuchs Matt Pavlik, Pepperl+Fuchs	**Smart Commissioning: DeltaV v13.3.1 and AMS Device Manager v13.5** Arturo Medina, Emerson 0.2 CEU	
				Exhibits **12:00-2:00**
AMS 2140: Advance Analysis – Coast Down Peak & Phase Mike Szurkowski, Emerson	**Introducing the FB Flow Computer** Todd Lamb, Emerson Mike Taccino, Emerson	**PRV 101 – What They Are, How They Work and Why You Need Them** Mark Martillaro, Emerson 0.2 CEU	**Introduction to DeltaV with AMS Device Manager** Arturo Medina, Emerson 0.4 CEU	**Closed**
		Control Valve Sizing and Selection Laura Rush, ECI Sean Brown, ECI Caleb Szajnuk, ECI 0.2 CEU		

EXHIBITOR MAP



LEGEND

1. Beijer Electronics
2. Phoenix Contact
3. Modernization
4. ECI Panel Shop
5. PIC Appalachia
6. DeltaV
7. DeltaV
8. Educational Services
9. Reliability Solutions Group
10. Reliability Solutions Group
11. UE Systems
12. Industrial Video and Control
13. Remote Automation Solutions
14. Remote Automation Solutions
15. Platinum Control
16. Atrex Energy; SunWize Power & Battery
17. Cyclonic Valve Company
18. Micro Motion/Emerson Flow
19. Micro Motion/Emerson Flow
20. Rosemount Measurement
21. Rosemount Measurement
22. Rosemount Analytical
23. Rosemount Analytical
24. exida
25. ASCO
26. Fisher Control Valves/Regulator Technologies
27. Fisher Lifecycle Services
28. ICE
29. ICE
30. Skid Technologies

ABSTRACTS

KEYNOTE

Forged in Steel – Leadership On and Off the Field

Tunch Ilkin, Sports Broadcaster and Former Steeler

"Everything that I have learned about leadership, I learned during my time with the Pittsburgh Steelers," explains Tunch Ilkin. "The humility and the integrity that I witnessed from the Rooney family and the mentorship and hard work I learned from my teammates have had a profound impact on my life. Football is more than a game to me. It is a way of life. The lessons that I learned in those years are with me today and have shaped me as a husband, father and a man."

On and off the field, success can only be realized through leadership, strategy and teamwork. Those same principles that Tunch built his football and broadcasting careers on are essential to success in any business. As we look ahead at the ever evolving process control landscape, it will become even more critical to tackle every project with this approach.

OPERATE & MANAGE

Applying Technology to Modernize your DCS to DeltaV

Laurie Ben, Emerson

With all of the available technology out there, it can be challenging to decide which solutions to apply in your modernization from an older DCS to DeltaV. This workshop will focus on the available field-proven brownfield solutions that can help work around your project's constraints – whether those be time, space or budget – for all types of legacy systems (Foxboro, Honeywell, Siemens, ABB, Rockwell, Novatech, etc.). We will cover creative uses of electronic marshalling, integration methods, operator transition solutions, cutover and commissioning concerns, and use of tools to simplify project execution.

ABSTRACTS

Using Automation Modernization as a Lever for Business Success

Laurie Ben, Emerson

When your facility is challenged to improve productivity, process availability, and enterprise profits, modernization of your control system may provide the answer. By taking advantage of today's automation systems' advances, you can create more profitable operations and make a lasting difference. By positioning and employing modernization in the right way, management will see that these projects offer the operational benefits and return on capital that they are looking for, and they will more readily approve the project. They are also more likely to view the project team as company leaders who help the enterprise cost-effectively meet market needs. In this workshop, we will review the three key best practices that will ensure success in your modernization project and for your business.

Solid Oxide Fuel Cells: Power for Remote Wellhead Sites

Mike Brennan, Atrex Energy

This presentation will introduce Solid Oxide Fuel Cells (SOFCs) to attendees challenged with providing reliable power for remote gas and oil infrastructure where no commercial power is available. The presentation will cover the development history of SOFCs, a technical discussion of how SOFCs work, SOFC reliability and maintainability, a review of projects currently using SOFCs; and how SOFCs compare against other methods of remote power.

The comparison against other methods of remote power is particularly relevant for the Marcellus/Utica Shale gas regions due to the limitations of historically used methods of remote power generation such as solar or thermoelectric generators.

Exploring the Benefits – Adding a DC UPS System to Fuel Cells

David Eveland, SunWize Power & Battery

Come explore the benefits of using a DC Uninterruptible Power Supply (UPS) in your remote power applications and as support to an end-of-line utility service. Our discussion centers around the advantages of adding a DC UPS system to a Fuel Cell or TEG power system, or in support of a vulnerable utility service. Just a few benefits of including a DC UPS system are start-up support, improved up-time, increasing intermittent power capacity, load distribution, power conditioning, alarms, and remote monitoring. Attendees will learn about these essential benefits and discover how a DC UPS system will improve up-time, reduce emergency service calls, and improve reliability of electrical power at your remote sites.

Functional Safety for Managers

Steve Gandy, exida

The IEC61511 Standard is built around a safety lifecycle (SLC) to provide a consistent approach to risk identification and risk reduction, in accordance with a company's tolerable risk and following best practices. By following the SLC it provides a means of achieving optimum design that balances risk reduction with performance.

What governs the SLC is Functional Safety Management (FSM), which requires a plan to be in place that defines how functional safety will be managed throughout the entire SLC. FSM requires that there be processes and procedures in place that are monitored and audited, to facilitate FSM. It also requires a competency plan to be in place to ensure staff are properly trained and regularly assessed. This needs to happen at all levels within the company, and with anyone involved in SLC activities and/or tasks.

The role of Functional Safety Management in ensuring compliance with the requirements of IEC61511 cannot be understated. This is especially true when it comes to preventing the potential for systematic failures – failures that are insidious, which can only be corrected by a change in the design, processes/ procedures and other factors (i.e. competency and training).

Accidents, such as the Buncefield oil storage depot explosion and Texas City Isomerization explosion in 2005, which killed 15 people and injured over 100 more, highlighted just how important it is to have the proper mechanical integrity and maintenance program in place. FSM was clearly lacking and the final report issued by the Chemical Safety Board on the Texas City incident highlighted deficiencies at all levels of management for not understanding the impacts of cost-cutting on the operations and maintenance of the plant. The problem with management is that they are not being held responsible for these cuts when it comes to process safety.

In order to ensure that the SLC is being followed and that systematic issues are being managed, Functional Safety Assessments (FSAs) are required to be carried out at key stages of the SLC. The purpose of the FSAs is to ensure that all activities within the particular SLC stage have been completed properly and thoroughly. The IEC61511 standards identifies five stages within the SLC where FSAs are required. This session will focus on the importance of completing Stage 1 and Stage 2 FSAs since these tend to be more often overlooked.

ABSTRACTS

SIS 101: The Basics of Functional Safety

Steve Gandy, exida
Loren Stewart, exida

The purpose of this course is to provide the attendee with a basic understanding of Functional Safety, Safety Instrumented Systems (SIS) and Safety Instrumented Functions (SIFs), the associated standards, commonly used terminology and the fundamental requirements for IEC 61511 and IEC 61508. This course will discuss the HAZOP to the LOPA analysis, and then decipher probability of failure on demand (pfd) and architectural requirements, focusing on Low Demand applications (PFDavg). Additional discussion on topics related to the Operational Phase of the safety lifecycle will also be covered, including validation and proof testing, partial stroke testing, proof test coverage and control of modifications. Questions will be highly encouraged. Example calculations will be done to show the impact of imperfect proof testing, proof test coverage and mission time. Workshop attendees will be given exercises on performing SIL calculations using simplified formulas as a way of looking at the differences in proof test coverage.

Developing the use of leading and lagging indicators to help with maintaining SIS performance and risk reduction will also be reviewed and discussed. The attendees will be presented with some examples and encouraged to think of how to apply this to their organizations.

The standards on Functional Safety can be lengthy and difficult to navigate. This course will help unravel some of the mysteries behind safety and help navigate the user through the associated standards and requirements. It will help them understand terms associated with safety, why proof testing is needed and how to reduce maintenance errors and expenses by extending their proof test intervals. Attendees will also understand the importance of useful life and the need for replacement and/or refurbishment of SIF equipment at the end of useful life, as part of mechanical integrity.

The attendees will gain a basic understanding of SIS, the ability to read and interpret safety-related standards and documentation, and gain knowledge around operating and maintaining their safety instrumented functions (SIF). With this information, attendees can evaluate their current SIS practices for improvement opportunities and cost reductions, and make competent decisions with respect to safety.

Comparing OREDA with FMEDA – Achieving Realistic Device Level Failure Data

Loren Stewart, exida

Many would consider the published OREDA failure data to be the most credible in the world. However, failure rate data for specific device types such as a solenoid valve, a scotch yoke actuator, etc., are not available due to data reporting limitations. Failure Modes Effects and Diagnostics Analysis (FMEDA) is a failure rate prediction technique that uses component failure rates and design strength profile. Using a combination of OREDA field failure data compared to a statistical analysis of FMEDA predicted failure rate data, the FMEDA predictions can be calibrated to closely predict field data results. Once that is done, ratios of device FMEDA data is used to predict specific results for devices like solenoid valves from OREDA data.

The calibrated FMEDA predictions for new device designs can then be used to verify optimal safety instrumented function designs which match performance with process risk. The results have been used to show justification for reduced proof testing with better safety integrity.

DeltaV V14 Roadmap

Bruce Greenwald, Emerson

Building on two decades of Human Centered Design, DeltaV version 14 provides both new to the world and enhancements to a variety of process control applications. Integration, security and enhanced connectivity are addressed in new features and functions in the v14 release. This session will cover an overview of the enhancements to the Ethernet IO Controller, Electronic Marshalling, and new offerings including OPC UA and the PK Controller.

PK Controller

Bruce Greenwald, Emerson

Powerful Standalone. Easily Integrated. These four words describe the capabilities of the new DeltaV PK Controller. The DeltaV PK Controller provides a “fit for purpose” form factor for both traditional DCS deployments and standalone applications. This session will cover the technical specifications and deployment opportunities for the PK Controller.

ABSTRACTS

DeltaV Operations Update
Camilo Fadul, Emerson

This session will cover enhancements to DeltaV Operate as well as an introduction to DeltaV Live, the new, modern, easy to deploy and use operator interface for DeltaV. Enhanced features to DeltaV Operate include high performance dynamos, additional themes support and data integrity improvements to the Event Chronicle. New features include Process History View trending enhancements, easy display deletions, and DeltaV Live, the first DCS operator interface based on HTML5.

Lifecycle Services for DeltaV
Natalie Grothause, Emerson

Emerson offers an array of lifecycle services designed to help you protect your automation investment while improving performance and safety. Learn more about how to follow a comprehensive maintenance plan, develop long-term lifecycle strategy for reliability, and access the right people and necessary resources to keep plant assets performing optimally.

Casting HMIs and a Comprehensive Process Monitoring System
Michael Hrinishin, Industrial Video & Control

Process control computers with their own HMIs can be spread throughout a plant and require operator monitoring to insure nominal operating parameters. The ability to aggregate HMI feeds to a central location allows for a comprehensive plant management solution when combined with CCTV cameras that monitor the plant's physical processes. HMI displays and camera video integrated with SCADA such as DeltaV, add another layer of visibility and control via TCP/IP or OPC commands based on alarms that dictate how cameras and screen recordings behave in the larger plant environment.

Siemens Moore APACS+ Migration to DeltaV Project at Fort Amanda Specialties
Erika Illig, Fort Amanda Specialties

This presentation will cover the APACS+ to DeltaV migration project at Fort Amanda Specialties. A brief background about Fort Amanda Specialties will be discussed leading into detailed description about how the migration project was planned and executed at Fort Amanda Specialties. Included will be strategies for working with a difficult schedule, building the right project team, leaving field wiring intact from the field, replacing APACS+ I/O with DeltaV Charms in the existing marshalling cabinets, replacing APACS+ controllers with DeltaV controllers in the existing controller cabinets, FATs, loop checks and startup.

The X's and O's of Control Room & Console Design - A Playbook for Operator Success
Bruce Johnson, Evosite

Is your control room 'game day' ready? Control room renovations, typically done in conjunction with system upgrades, take place on average every 8.7 years (which is also the average number of years between Super Bowl wins for the Pittsburgh Steelers). While upgrades typically focus on system design, process optimization, asset monitoring, safety instrumentation, display design, alarm management and more, it's the operators and engineers who must live with the results of these upgrades and control room renovations on a daily basis. Come learn how winning companies are adapting control room design principles and new console technologies to improve safety, health, ergonomics, situational awareness and morale for their operators. (We may talk a little football, too!)

Introducing the FB Flow Computer
Todd Lamb, Emerson
Mike Taccino, Emerson

This short course is for anyone concerned with fiscal measurement in the gas industry and will highlight how to perform critical tasks using Emerson's new family of Flow Computers, the FB1000 and FB2000 Series. Participants will be given an overview of the devices and configuration software FBxConnect. This will be followed by a hands-on workshop which will include using the FBxConnect configuration software to connect to the FB2200, perform initial configuration, set up meter runs and instruction on how to perform typical operational tasks.

ABSTRACTS

BMS Uses on a Pad: Flares, Combustors and Natural Draft Heaters

Yves Lafortune, Platinum Control

Burner Management Systems are used for different applications on a pad bringing safety, compliance and higher productivity. Each scenario however, has its own potential issues. We will analyze different applications and describe how to prevent the usual problems from occurring.

Troubleshooting with DeltaV Diagnostics

Arturo Medina, Emerson

This course will demonstrate how to best utilize DeltaV diagnostics to troubleshoot common issues I/E technicians may encounter. Content will focus on I/O, field device and Smart Switch troubleshooting.

Smart Commissioning with DeltaV v13.3.1 and AMS Device Manager v13.5

Arturo Medina, Emerson

This course will use DeltaV v13.3.1 and AMS Device Manager v13.5 to demonstrate how to properly configure new I/O devices. Topics will include the creation of the field device templates in AMS Device Manager, using the Bulk Transfer configuration tool, auto-sensing of the field devices, the commissioning process, and how to perform a loop check with an AI transmitter.

The 21st-Century Workforce Challenge: Millennials or Leadership?

Tyler Palko, Solutions 21

Millennials have been the most talked about cohort for the past decade. And for good reason. After all, there are 84 million card-carrying members of this generation and by 2025, they will make up 75% of the American workforce.

The silver tsunami is in full effect. Ten thousand experienced Baby Boomers are leaving the workforce every day, increasing the need to fast-forward the wisdom of talented succession candidates. Herein lies the problem:

- 94% of companies do not feel fully ready to address their leadership issues
- 93% of companies do not have strong programs to build next-generation leaders
- 90% of companies do not feel comfortable with their succession program

Stay ahead of this disruptive shift. This session examines the current multi-generational workforce, focusing specifically on Millennials/Generation Y. The future of every company is going to be in the hands of these young individuals. Understanding this generation of workers is key to ensuring long-term talent attraction and retention and industry competitiveness.

Topics discussed will include:

- Examining the reality of a retiring workforce
- Leading across generations
- Understanding 21st-century leadership truths
- Breaking generational myths
- Tools and tips for integrating generations

Legacy DCS/PLC Migration Options for the DeltaV DCS

Scott Ross, Emerson

This presentation will cover the various methods of bringing in 3rd party systems, PLCs, and various Emerson and non-Emerson DCS vendor wiring to the DeltaV™ DCS. FlexConnect™ Solutions is Emerson's branding for wiring solutions that leave the field wiring untouched while bringing the field wiring in to the DeltaV DCS through cables, interface panels, and replacement field termination assemblies (FTAs). Emerson has solutions for these, and many more, DCS/PLC platforms; PROVOX™, RS3™, ABB® Bailey INFI 90, ABB, Allen Bradley® PLC-5/1771 Remote I/O™, Honeywell® IPC620 / TDC 2000™, and Schneider Foxboro® I/A Series 100 and 200 I/O. We'll be covering some new and exciting upcoming releases for the Rockwell Automation Allen-Bradley PLC-5/1771 Remote I/O to DeltaV DCS, replacement FTAs for the NovaTech™ GSE D/3® system, and replacement FTAs for Honeywell® TDC 3000™ / HPMIO to DeltaV DCS. Utilizing these creative solutions can save you up to 40% on your DCS switching costs.

Remote Automation Solutions Roadmap: Intelligent Solutions for Production, Pipelines, and Terminals

Bryan Sauer, Emerson

This session will explore Intelligent Solutions for the oil and gas value chain including production, midstream and distribution. In particular we will discuss the product roadmaps for RTUs, Flow Computer, and SCADA solutions and how they can be applied to challenges in the oil and gas space.

ABSTRACTS

Emerson Introduces the Control and Operator Performance Center of Excellence

Eric Schulz, Emerson

Within the last year, Emerson has made significant investments in services and solutions that will help improve a plant's Control and Operator Performance. These services include loop tuning, advanced process control (APC), alarm rationalization and high performance graphics. Acquisitions of Mynah and ProSys have paved the way for Emerson to deliver these high valued capabilities to our customers. Additionally, Emerson's strategic alliance with AspenTech provides additional advanced software solutions that further enhance our broad portfolio of offerings in this space. All of these additions complement Emerson's already solid portfolio of embedded APC solutions. A description of all of these new and exciting capabilities and how our customers can use them to improve the performance of their operation will be discussed.

Terminal Manager Solutions Suite: Improving Terminal Operations While Reducing Risk

Mike Stappert, Emerson

Today's terminal owners are looking to eliminate manual processes and improve operational efficiency with solutions that facilitate automatic workflow processes to streamline truck and rail movements, eliminate human error from driver and operator managed movements; and deliver real-time invoicing and operational reporting.

Their ideal terminal management solution would also help them mitigate increased operational risks in terms of physical security, cybersecurity, avoidance of HSE incidences inside the facility, risk of liability once a shipment leaves the facility and stock accounting over and shorts.

Terminal owners are in need of a single point solution that they can layer over their investment in automation and instrumentation and manage their storage facilities to streamline their operations, increase utilization and throughput, and eliminate manual operations, data entry and spreadsheet reporting.

On-line Batch Analytics - Redeployment

Robert Wojewodka, The Lubrizol Corporation

Following past successful on-line real-time batch analytics trials, Lubrizol is now gearing up for full-scale deployment and roll out of this functionality to help further study and improve manufacturing processes. Plant operations typically generate vast quantities of data. Historically, operations personnel and process improvement specialists could only access and leverage lesser amounts of this data to study and improve processing. Once obtained, operations personnel typically did not have the knowledge, methodology or toolsets to adequately analyze this data to pull out relationships. Today, this is no longer the case. By taking advantage of current data integration capabilities along with advanced data analysis methodologies, manufacturing processes can be studied like never before. This talk will explore this evolving trend and provide some insight into the possibilities and benefits to process stakeholders and provide a status update on Lubrizol's plans for deployment of on-line, real-time batch analytics.

Building the Virtual Plant for DeltaV

Spencer Absher, Emerson

Emerson Process Systems and Solutions has made key moves in becoming a global leader in an essential part of the virtual plant: process simulation. Lifecycle dynamic simulation (an integrated control system simulator and dynamic process simulator for the entire lifecycle operation of the plant) has significant business results for both project execution (CapEx) and operational excellence initiatives (OpEx). This session will discuss Emerson's recent business moves to become industry leaders in process simulation, key components of the virtual plant and best practices for supporting lifecycle use.

So You Have Been Attacked, Now What?

Rick Gorskie, Emerson

In today's cybersecurity environment, everybody is subject to a hacker's attacks. Are you ready to defend your control system? What would you do if they hit you? Do you (or your organization) have a plan? Where can you go for help if you need it?

ABSTRACTS

Emerson's New Family of Flow Computers the FB1000 & FB2000

Todd Lamb, Emerson
Mike Taccino, Emerson

This session provides insight into the recently released family of Flow Computers from Remote Automation Solutions that satisfy the ever increasing demands of oil and gas fiscal metering applications. We will briefly introduce the four new Flow Computers and highlight the benefits, showing where each one can be used to improve measurement uncertainty, operational performance, safety and security.

This course will highlight the new features available from the new FB1000 & FB2000 flow computers that replace the legacy FloBoss & ControlWave flow computers.

Risk Reduction: Getting More from What Already Exists

Tim Herbig, Bluefield Process Safety

Once a Layer of Protection Analysis is complete and the assessment shows that a hazard still has risk that exceeds the risk tolerance criteria, teams are left with three options for reducing the hazard risk to a tolerable level:

- Designing and installing new Independent Layers of Protection (IPLs), including Safety Instrumented Functions within a Safety Instrumented System.
- Modifying existing IPLs to something more robust, so that they provide more risk reduction and so that more credit can be taken for the risk reduction that they provide.
- Converting existing safeguards for which no credit for risk reduction can be taken into IPLs for which risk reduction credit is allowed.

More than merely gaming a system, legitimate strategies for achieving more risk reduction should actually reduce risk or change the understanding of risk, rather than simply comply with a set of criteria as an exercise. Moreover, there is no virtue in spending more in either capital investment or operating expense than necessary to achieve the required risk reduction.

A number of strategies and tactics for reducing risk using modest modifications to existing designs have proved successful. This session describes several of those. From simple configuration revisions to uncomplicated equipment changes, this session shows how to increase the risk reduction provided by existing safeguards and IPLs, with both specific examples and with a general approach.

Modernizing your BMS – The Smart SIS Approach

MC Chow, Emerson

A Burner Management System (BMS) is a critical component of every combustion process, whether it be a boiler, heater, kiln, dryer, thermal oxidizer, incinerator or other unit. This is the system that protects against hazardous firing conditions, which could result in harm to the process equipment and any personnel around it. BMSs come literally in all shapes and sizes and modernizing a legacy BMS to comply with today's process safety standards and codes can be a challenge.

Emerson delivers a BMS solution that enables compliance to process safety standards and codes, supports safe operation while also allowing improved reliability and availability. This presentation discusses best practices in modernizing legacy BMSs and how modernizing with Emerson's BMS implementation with DeltaV SIS will help alleviate legacy BMS pains.

Extending your Reach – Hazardous Area HMI and Mobility Solutions for Operations/Maintenance

Karen Balentine, Pepperl+Fuchs
Matt Pavlik, Pepperl+Fuchs

Could your operations and maintenance personnel increase efficiency and effectiveness if they had access to applications in the field? What about the new mobile products available from Emerson – do you want to extend their usefulness by using them in the field? Three general technical solutions are available to deploy a remote monitor in a hazardous location:

1. KVMs with a suitably rated remote monitor
2. Purge-Pressurized enclosure with remote monitor
3. Industrial Thin Client remote monitor

Tablets, smartphones and scanning devices are becoming more commonplace – but how do you ensure that your personnel are safe while using these devices in the field?

This presentation will include a live demo as well as features mobility products to extend your reach into the field.

ABSTRACTS

MEASURE & ANALYZE

Utilizing Coriolis for Accurate, Reliable and Maintenance Free Gas and Water Measurement

Chris Snell, Seneca Resources
Hugh Adams, Emerson

Seneca Resources, an E&P company, takes the stance to capture the most reliable and accurate measurement possible. Seneca has been utilizing Coriolis measurement for water at the well level for years. Recently, we have taken those successes and applied this technology to gas measurement for individual well measurement and bulk/test locations. By implementing this technology, we have realized far better accuracy on gas and water measurement, lowered LOE costs on calibrations and experienced far better turn down than any other meter on the market.

Addressing Measurement Challenges in Today's Shale Plays

Stephen Anson, Emerson
Marc Buttler, Emerson

Measurement challenges in unconventional shale plays have a severe impact on the allocation, custody transfer and fiscal payments of natural gas and crude oil. System balances can exceed 15% if these challenges are not identified and addressed, and the lessons learned in North America will be beneficial to the rest of the world as their shale play developments progress.

Live oil gathering systems, centralized processing facilities, volatile crude oils and higher BTU gases have all presented challenges for conventional methods of measuring and selling natural gas and crude oil in unconventional plays. This presentation will discuss the challenges of accurately measuring wet gases and live oil, accounting for all produced fluids, applying value to all hydrocarbons and proposed solutions available in emerging technologies that improve operational certainty from an unconventional shale play.

While the impact of mismeasurement in today's unconventional shale oils and gases will vary between shale plays and composition of the hydrocarbons, system imbalances can exceed 15% if the appropriate actions are not taken. This creates a significant financial loss to the producer. Advanced diagnostics can help bring these balances within 2%-5% while justifying a savings on maintenance costs related to meter inspections, proving and sampling. By working with preferred vendors to make the appropriate measurement technology choices, operators will experience the benefits of accurate measurement through the use of advanced diagnostics.

Coriolis Meters Liquid Measurement and Proving with Small Volume Provers

Marc Buttler, Emerson

Coriolis meters have many advantages for mass flow and volumetric measurement in a wide variety of applications. Inherent reliability, linearity and stable meter factor (MF) on a wide variety of products make them an ideal choice for pipeline transfer. With the recent introduction of high flow rate meters, Coriolis technology can now be used in line sizes up to 16". Custody transfer of liquid products is very common in these large pipelines. Many applications contractual requirements dictate that meters be proved in situ periodically to ensure accurate measurement over time and/or product changes.

Traditionally, large stationary pipe provers have been employed at metering stations. These provers are large, expensive and take up valuable real estate. Maintenance costs of the complex four-way valve can also be a concern. Small volume or "piston-type" provers (SVPs) are becoming more common because they have a much smaller footprint and reduced maintenance costs. However, SVPs typically have a much shorter displacement cycle because the base prover volume (BPV) is so much smaller than traditional provers. Furthermore, SVPs disturb the flow slightly when the piston launches. Because the measuring volume is small, the rate change created by the prover becomes a significant and integral part of the proving cycle that is measured by the metering device.

Data and guidelines will be presented that illustrate the overall performance of Coriolis meters when proved with a small volume prover. Average MF and repeatability results will be presented for a range of flow rates and SVP sizes. Recommendations are made to optimize the response time of meters to accommodate the small sizes of SVP provers to achieve acceptable repeatability and optimum MF stability.

ABSTRACTS

Piecewise-Linearization (PWL) and Natural Gas Custody Transfer Measurement with Coriolis Meters

Marc Buttler, Emerson

The Second Edition of American Gas Association Report No. 11 (AGA 11) (a.k.a, American Petroleum Institute Manual of Petroleum Measurement Standards Chapter 14.9 (API MPMS 14.9)) Measurement of Natural Gas by Coriolis Meter explains how to properly use a Coriolis meter for natural gas service. Converting mass into units of standard volume and energy is a simple matter that only requires the base density and calorific value from the composition of the gas. Certain Coriolis meters offer flexibility of different calibration methods including gas calibration or calibration with alternative fluids like water. Some Coriolis meters offer the option for applying Piecewise-Linearization (PWL) based on as-found gas calibration data to achieve enhanced reproducibility on gas over the full flow rate range of the application. Different priorities factor into the decision of which type of fluid to use for calibration and whether or not to apply the option to linearize the meter output.

Driving Operational Certainty in IIoT with Plantweb

Jim Davis, Emerson
Anthony Simpkins, Emerson

Discover numerous ways that Emerson's implementation of the Industrial Internet of Things (IIoT), the Plantweb Digital Ecosystem, can help you move your plant's operational reliability to the next level. Learn how Emerson has expanded their Plantweb architecture beyond monitoring instruments to now include a growing list of critical plant assets.

Topics include:

- Rotating Pump Monitoring
- Heat Exchanger Monitoring
- Corrosion Monitoring
- Electrical Power Monitoring
- Steam Trap Monitoring
- Pressure Relieve Valve Monitoring
- Hydrocarbon Leak Detection

MEASURE & ANALYZE

Inferred Mass Proving Best Practices for Coriolis Meter in NGL Service

Kolt Decker, MarkWest Energy
Mike Sylvester, Emerson
Dean Minehart, Emerson

Coriolis meters applied to natural gas liquid (NGL) custody transfer metering are proven on a mass basis. Inferred mass proving requires proper density measurement be applied to a volumetric prover. Results will be shared of inferred mass proving best practices determined through a series of site visits by MarkWest Energy Partners and Emerson Automation Solutions personnel during May 2015.

New Developments in Micro Motion Coriolis Transmitters and Diagnostics

Anthony Gentile, Emerson

Learn about the new product developments for Coriolis transmitters. The Model 5700 provides advanced diagnostics such as Zero Verification, Smart Meter Verification (including coating detection and proof test interval extensions for SIS), Data Historian, Two-Phase flow detection and remediation and more. The 5700 can be an important part of your Industrial Internet of Things implementation and is available with configurable I/O, Ethernet, FOUNDATION Fieldbus, Intrinsically Safe Outputs and Exe. We offer both aluminum and SS housings for your most demanding applications. Software features such as Advanced Phase Measurement, Concentration, Net Oil Computing, and Batching allow for optimization of many diverse processes. Customer success stories will also be shared.

Coriolis Installation Best Practices and Smart Meter Verification

Anthony Gentile, Emerson

This Micro Motion Coriolis short course is for attendees that are concerned with the efficiency, safety and maintenance of plant processes and who want to be able to determine if the operator is experiencing a process issue or meter issue. The growth of Coriolis flow and density meters continues to displace other technologies. Whether you already use Coriolis flow meters or not, you will learn about trouble shooting techniques with hands-on Coriolis meter demos and about an exciting Micro Motion diagnostic capability with Smart Meter Verification Professional and the Model 5700 transmitter with data historian.

ABSTRACTS

Software Applications for Coriolis Meters: Tackling Multiphase Challenges and Monitoring the Happiness of Your Meters

Justin Hollingsworth, Emerson

This presentation will consist of an overview of Advanced Phase Measurement algorithm for Micro Motion's 5700 Coriolis transmitter and the new Smart Meter Fleet addition to the PlantWeb Insight platform. For each application, we will review the customer challenges that led Micro Motion to develop the new software, how the new capabilities address those challenges, and how these applications fit into the Emerson PlantWeb digital ecosystem. Data from field trails and independent laboratory validation will also be presented.

Advanced Phase Measurement is a licensable feature for the 5700 transmitter, which uses a proprietary algorithm to detect 2-phase conditions and remediate errors in mass flow, density, volume flow and watercut/net oil measurement. It can reduce the dependence on separators for allocation measurement, and provide reliable measurement in challenging 2-phase applications for all industries. Smart Meter Fleet is a way to monitor all of your meters from one dashboard. It has an intuitive display that gives an overview of meter diagnostics and allows users to optimize maintenance operations, and get detailed information about a meter's status remotely.

Layers of Protection for Flame & Gas, From Early Detection to Suppression

Brian Ledeboer, Emerson

The HSE in Europe did a study and concluded that over 30% of gas leaks go undetected. We will discuss ways of closing that gap by using multiple forms of gas and flame detection.

API 18.2 Best Practices: Custody Transfer of Crude Oil from Lease Tanks Using Alternative Measurement Methods

Bill Pace, Emerson

While manual tank gauging remains a common practice within custody transfer applications in the United States oil and gas industry, there are growing concerns about its effect on accounting accuracy, production losses, and worker safety. Find out how the American Petroleum Institute (API) has addressed this issue by releasing the new API 18.2 standard, which provides guidance on best practices in custody transfer from lease tanks using alternative measurement methods.

MEASURE & ANALYZE

Achieving Measurement Confidence: The Power of Enhanced Coriolis Diagnostics

Taylor Scott, Emerson

In the world of flow instrumentation, two common concerns are:

1. How do I determine if my meter is healthy and in good physical condition?
2. Is my meter capable of meeting my accuracy requirements in the actual application?

This session will explore the latest improvements to Micro Motion's Smart Meter Verification and includes a new focus on complete measurement confidence to address these common concerns.

Improved Coriolis diagnostics can now detect meter damage (erosion, corrosion freezing, over-pressurization) plus the ability to detect coating (and thus verify density/concentration measurement and volumetric flow). Real-life performance is also verified by assessing actual process conditions (high turndown, entrained gas or two-phase flow) and their possible effects on Coriolis performance. The importance of third-party data and regulatory agency recognition (API, AGA, IEC, ISO, FDA, EPA) of diagnostics will also be discussed.

Plantweb Digital Ecosystem: Improving Operational Certainty

Tony Delgado, Emerson

Learn how the Plantweb Digital Ecosystem is providing much greater visibility into asset health and plant operations in order to improve Operational Certainty. From pumps to heat exchangers, steam traps and cooling towers, Plantweb is your early-warning-system for potential issues. We will highlight real-world examples of companies using Plantweb to improve reliability, energy usage, and health and safety while reducing costs. We'll show the latest additions to the Plantweb Digital Ecosystem including Plantweb Optics and new Plantweb Insight applications that can improve asset performance today. We will also show how Emerson Connected Services and Mobility can provide crucial technical expertise remotely, whenever you need it.

ABSTRACTS

Wireless Drilling Mud Tank Monitoring for Speed, Efficiency and Reliability

Josh Peters, Seneca Resources
Anthony Capizzi, Emerson

Josh Peters, a previous Emerson Exchange "Best in Conference" award winner, discusses the search, selection, implementation and integration of the Emerson Wireless Non-Contacting Radar Solution for Drilling Mud Tank Monitoring.

Josh approached Emerson looking for a fully wireless tank level monitoring solution for the Seneca Drilling Team to implement and utilize for Drilling Mud monitoring and inventory control. Wired solutions were preventative from a cost, implementation and maintenance perspective since these tanks are often set up, taken down and moved from site to site.

The search for the appropriate system required Emerson subject matter experts to pull from past experiences and industry knowledge to determine the best solution for the unique and challenging application.

Upstream Oil and Gas Multiphase Applications – Defining and Applying Emerson Technologies to Multiphase Flow Regimes

Paul Jobe, Emerson

This discussion will center around the technical details of multiphase regimes, with emphasis on how and when to utilize Micro Motion's suite of proprietary products, Production Volume Reconciliation (PVR), Transient Bubble Remediation (TBR), Transient Mist Remediation (TMR) and Advanced Phase Measurement (APM), all the way to full well stream, gas/oil/water regimes using ROXAR Multiphase Meters.

RELIABILITY SOLUTIONS & SUPPORT

Artificial Intelligence, IIoT and Industry 4.0 - A Beyond-the-Hype, Practical Look from an Automation Insider

Rajiv Anand, Quartic.ai

In the manufacturing and industrial world, Industry 4.0, Smart Industry and Industrial IoT have created a lot of buzz lately. In software and computing, Machine Learning and Artificial Intelligence and Big Data are at the top of the hype cycle. Digital transformation and the digital enterprise are on the top of the strategic initiatives list of every board room and C-suite.

Is it all just hype and the fad of the season, or as transformational and disruptive as it is being hyped up to be? How will it impact manufacturing, industrial automation and the people responsible for running these operations? As a process control and reliability professional, what should I be preparing for, learning and applying to enable my company to benefit from this technological revolution?

This session will address why and how the industrial automation and reliability professionals should embrace these technologies and be the leaders for the digital transformation of their companies.

The talk will address some of the following topics:

- These technologies will be as transformational as the invention of the internet was on our lives and as influential as the programmable controller, the PID controller, the personal computer, the Ethernet and digital communication was to industrial automation. The pace of technology advancement will be unlike any seen before, completely defying Moore's Law.
- The technology will not – as hypothesised by fear mongers – replace humans. It will enable and empower humans to focus on creative and high value, rather than mundane contributions of their skills and expertise to advance the manufacturing industry.
- While cloud computing is one of the key enablers, Smart Industry does not mean running all your applications in the cloud.
- A majority of the infrastructure required to start implementing IIoT and Smart Industry exists in most industrial plants. Ripping out your existing automation infrastructure is not necessary (you may not need new sensors) and you certainly don't need for a new, common IIoT protocol to be finalized.
- That it is not as complicated, scary or risky as some laggards would have you believe, nor does it require everyone to become data scientist and programmers to implement it.
- That industrial automation professionals and domain experts will now become some of the most valuable contributors to an enterprise's supply chain.
- That we can all begin our journey of learning and starting to apply these technologies today, without disruption to our existing operations and work processes.

ABSTRACTS

Build the Business Case for IIoT
Barry Coultas, ECI

Today, the Industrial Internet of Things (IIoT) is a concept that has drawn a lot of attention. Initiatives like the "Digital Plant," "Digital Transformation," and "The Plant of the Future" are all directed at leveraging the IIoT to improve plant performance. This session will identify how to build a business case around these types of initiatives either from a single process line or a fleet of assets perspective.

AMS Device Manager Best Practices – Unlocking your Instrumentation's Potential
Orlando Fernandez, ECI

This session will provide an overview of AMS Device Manager's primary functions: diagnostics, documentation, calibration and configuration. Each of these capabilities will be discussed and demonstrated in a way that the attendee leaves with a better understanding of how this software platform maximizes the potential in plant instrumentation and enhances plant reliability.

Condition Asset Management Using Ultrasound Remote Monitoring
Greg Inverso, UE Systems

Airborne and structure-borne ultrasound technology has become a major player in predictive and preventative maintenance. Ultrasound has been proven and accepted by maintenance and reliability professionals globally across many industry and manufacturing sectors. With the advancements in technology and software, potential electrical and mechanical failures can be diagnosed early, allowing for more time to plan, schedule, kit and perform work that would have otherwise been more reactive. Using ultrasound for condition monitoring impacts costs, increases productivity and best of all improves safety. This presentation will focus on remote continuous monitoring applications using ultrasound. In a time where we are seeing more and more guarding and shielding of assets, remote sensors are a critical tool to help you continue to safely monitor your assets.

RELIABILITY SOLUTIONS & SUPPORT

Reliability Roadmap
Drew Mackley, Emerson

This session will provide updates from the Reliability Solutions business on the latest product releases and roadmap that are aimed at addressing industry digitalization needs of customers to enable operational certainty. Product releases include the next generation plant health management software and hardware to manage the health of instruments, valves and machinery to enable top quartile performance.

Introduction to DeltaV with AMS Device Manager
Arturo Medina, Emerson

This course focuses on the joint use of DeltaV and AMS with HART field devices. Topics will include: Configuring I/O channels, proper Device Alerts set-up, mapping of the HART field devices into DeltaV Control Modules, Configuration of AMS Device Manager's Alert Monitor and various methods to troubleshoot field device issues.

AMS 2140 User Group: Advance Analysis – Coast Down Peak & Phase
Michael Szurkowski, Emerson

The AMS 2140 vibration analyzer has many advanced features that can be employed in troubleshooting machinery faults. Utilizing these advanced features can enhance a reliability program providing insight into those more difficult vibration problems. This presentation will review the Advanced Analysis Coast Down Peak & Phase feature, saving this information in a job mode and uploading the data in the AMS Machinery Manager vibration analysis program for in-depth evaluation.

AMS 2140 users are encouraged to bring their own analyzers to this presentation to follow along and if time allows to perform these steps to familiarize themselves with this feature.

ABSTRACTS

AMS 6500 – One Small Step for your PdM Program, One Giant Leap in your Reliability Program's Digital Transformation

Tom Francisco, Emerson

Upgrading portions of your route-based PdM program may seem like a logical next step for getting better results, but the benefits provided go far beyond simply more data. Converting hand-held data collection points to full-time online monitoring actually improves numerous aspects of your plant's operations including data trending, pattern-recognition, process improvement and, last but not least, personnel safety. This presentation will discuss each aspect in detail to help you transform your plant to the digital world and IIoT.

FINAL CONTROL & REGULATE

Valve Connected Services

John Carlow, Emerson

The process industry's complexity is increasing, industry scale continues to grow and expertise is leaving the workforce. While these trends are already occurring, industrial plants are still being challenged to enhance reliability and throughput. With the Valve Connected Services Monitoring program, customers are provided 24/7, non-intrusive health monitoring of their Fisher™ control valves, to deliver focused predictive analysis enabling early issue identification to minimize costly unplanned downtime, helping improve overall plant safety, availability and profitability. The benefits include:

- Access to Expertise
- Predictive Insight into Control Valve Health
- Executing More Efficient Turnarounds
- Improved Safety and Valve Performance

Stand-Alone ESD Solutions for Pipelines, Wellheads and Storage Applications

Hugh Flesher, Emerson

Learn the theory and operation of self-contained fail-safe control systems, which are used for emergency shutdown valve applications. The instructor will review the technical operation of various types of Morin and Bettis self-contained hydraulic actuators and their applications. This talk is ideal for anyone who has responsibility for engineering an automated solution or maintaining the equipment in the field.

Total Tank Protection

Steve Ludtman, Emerson

This talk will consist of the practical use of pressure control products, tank blanketing, and flame arrestors as commonly found on API 620 and API 650 tanks and will reference the API 2000. Animations and colored schematics are used to describe operation of single components and demonstrate how they operate as a system. Sizing is discussed along with system design and installation considerations.

Performance Service Capabilities – All Valves Everywhere

Frank Manks, Emerson

Emerson Lifecycle Services offers engineering expertise, leading technology, and proven processes for our customers and all final control products: control valves, pressure and safety relief valves, isolation valves, valve instrumentation, regulators and actuators. This presentation will begin to show you how Emerson's Maintenance and Reliability expertise will help you operate safely, improve asset reliability, optimize your plant performance and achieve your business goals with our Performance Services.

ABSTRACTS

Control Valve Sizing & Selection

Laura Rush, ECI
Caleb Szajnuk, ECI
Sean Brown, ECI

This course will begin with a brief overview of control valves and control valve sizing terminology. The main focus of this presentation will be to introduce you to the Fisher Specification Manager program. This course will go into the sizing and selection of control valves for both gases and liquids. There will be discussion around sizing control valves to provide aerodynamic and hydrodynamic noise reduction and how to model these phenomena in Fisher Specification Manager. This is an interactive session and questions are encouraged.

PRV 101 – What They Are, How They Work and Why You Need Them

Mark Martillaro, Emerson

Have you even wondered why you need to have safety relief valves or why they need to be tested by an authorized service center? In this session you will learn the difference between spring and pilot operated relief valves, participate in hands-on demonstrations, and take a tour of an SRV trailer where you will watch ECI technicians test (pop) relief valves. This is a great opportunity to ask questions and better understand the valves that keep you and your assets safe.

OPENING REMARKS

Dan Smith

President & CEO, Equipment & Controls, Inc.

Dan Smith graduated from West Virginia University with a BS in Electrical Engineering in 1997. He began his career with Fisher Controls as an Application Engineer before joining Equipment & Controls, Inc. (ECI) as an Account Manager in 2001. In 2006, Dan started a division of ECI focused on the remote automation of natural gas wells and led that business unit for 4 years. In 2010, he was promoted to Vice President of Sales and served in the capacity until taking over as President & CEO in October of 2014.

Dan has led ECI, an Emerson Local Business Partner, to continued growth while working hard to preserve the strong corporate culture that has existed at ECI for decades. He encourages leadership and a problem-solving mindset at all levels of the company and has established a singular guiding principle throughout the organization: deliver successful customer outcomes 100% of the time.

OPENING REMARKS

Josh Wilford

VP/GM North America for Emerson Automation Solutions, Flow Controls

With more than 20 years of experience with Emerson, Josh Wilford has been serving the process industries in a variety functions and perspectives while focusing on the control valve market and its customers.

Currently, VP/GM North America for Emerson Automation Solutions, Flow Controls, Josh joined Emerson in 1997 as an application engineer for Emerson Process Management – Fisher Controls. During his tenure at Fisher, he held several positions of increasing responsibility including Manager Pulp and Paper and Manager Special Products Group. In 2008, Josh was promoted to Director of the FUSION Oracle Program for Fisher. In 2011, he became the Plant Manager in Sherman, Texas, and in 2013 was named the Vice President of Engineered Products in Marshalltown. His most recent position was Vice President Engineered Products and Global Test & Evaluation.

Josh holds a BA degree in Chemical Engineering from Iowa State University.

Josh and his two daughters reside in Ankeny, IA, where they enjoy golf, movies, and traveling.

KEYNOTE SPEAKER

Tunch Ilkin

Sports Broadcaster and Former Steeler

Tunch Ilkin was born in Istanbul, Turkey. His parents Mehmet and Ayten Ilkin emigrated to the United States when he was two years old and settled in the Chicago area. In 1975, he was granted an athletic scholarship to Indiana State University. Tunch was selected by the Pittsburgh Steelers in the sixth round of the 1980 NFL Draft.

Tunch played offensive tackle for the Steelers for 13 seasons from 1980–1992, and the Green Bay Packers for one season in 1993 and retired from football after the 1993 season. He was the first Turkish-born player in the NFL. Tunch earned 2 Pro Bowl appearance honors in 1988 and 1989. Tunch served as Vice President of the NFL Players' Association from 1989 to 1994.

After retiring from football, Tunch got into TV and radio broadcasting. In 1998, he joined the official Steelers broadcasting team of Myron Cope and Bill Hillgrove as an analyst. After Cope's retirement following the 2004 season, Tunch took over the color-commentary and analyst duties for Steelers game radio broadcasts. He continues to work with sideline reporter and former teammate, Craig Wolfley, who also joined the Steelers via the 1980 draft. Ilkin and Wolfley host a morning radio show called In *The Locker Room* with Tunch and Wolf.

Since 2005, Tunch is the Men's Pastor at The Bible Chapel, a non-denominational church in McMurray, PA. Tunch and his wife, Karen, reside on Mt. Washington, PA. Tunch has three children, Tanner, Natalie and Clay and two grandsons, Levi and Abbott, all residing in Pittsburgh.

PRESENTER BIOS

Spencer Absher

Building the Virtual Plant for DeltaV

Spencer has been with Emerson (formerly MYNAH Technologies) since 2012. Previously, he worked as an application engineer with areas of expertise including IO communications, process simulation development, control system testing and optimization, custom operator training development, platform virtualization and was lead instructor for MYNAH training courses. As a Business Development Engineer, Spencer supports numerous Emerson Local Business Partners, world areas and industries in designing lifecycle dynamic simulators.

Hugh Adams

Utilizing Coriolis for Accurate, Reliable and Maintenance Free Gas and Water Measurement

Hugh Adams has been involved with instrumentation for over 30 years. He started his career designing material testing equipment, primarily for the aerospace industry. In 2000, Hugh moved to an outside sales position with a representative firm in Pittsburgh covering western PA, West Virginia and eastern Ohio. Eleven years later, he accepted a position with Industrial Controls and Equipment to develop automated valves sales in the oil and gas industry. After two years, he moved to Micro Motion as a flow and density consultant.

Rajiv Anand

Artificial Intelligence, IIoT and Industry 4.0 - A Beyond-the-Hype, Practical Look from an Automation Insider

Rajiv Anand is the co-founder and CEO of Quartic.ai, a company focused on providing Machine Learning and Artificial Intelligence solutions for industrial applications, Industrial IoT and Smart Industry.

He is an instrumentation and control engineer with 30 years of experience implementing process control and asset health solutions using Emerson platforms for power, mining, pharmaceutical and chemical industries. Rajiv held key engineering, management and leadership positions with Emerson local business partner, Lakeside Process Controls in Mississauga. Prior to starting Quartic.ai Rajiv spent a year researching Industrial AI and Machine Learning with Silicon Valley companies, and advising technology companies and customers on digital manufacturing strategies.

Rajiv is a technology evangelist, thought leader, educator, writer and speaker. Rajiv holds a BS in Control Engineering from Thapar University. Rajiv is based in Waterloo, Ontario.

PRESENTER BIOS

Stephen Anson

Addressing Measurement Challenges in Today's Shale Plays

Stephen has 17 years of experience in oil and gas measurement with experience in meter maintenance, installations, station design, measurement standards and regulation, and data validation and integrity. He is currently responsible for helping customers solve complex measurement challenges and identifying customer needs to drive product development for midstream applications.

Technical/Professional Memberships:

- Board Advisor & past President for the Rocky Mountain Measurement Society
- Board of Directors (At Large) for Natural Gas Sampling Technology (NGSTech)
- Instructor and General Committee Member at the International School of Hydrocarbon Measurement (ISHM)
- Committee Member (COGFM and COLM) of the American Petroleum Institute (API)

Karen Balentine

Extending your Reach – Hazardous Area HMI and Mobility Solutions for Operations/Maintenance

Karen Balentine has approximately 22 years of experience in the automation industry. Karen started her career at The Dow Chemical Company as an Automation/Electrical Engineer, worked nearly 15 years at Emerson in Austin in various sales and marketing roles, and is currently the Emerson account manager for Pepperl+Fuchs.

Laurie Ben

Applying Technology to Modernize your DCS to DeltaV
Using Automation Modernization as a Lever for Business Success

Laurie Ben is the Director, Business Development within Emerson's PSS/AO Global Modernization Group. She has been a leader focusing on modernization and migration since 2001, when she and her team led the charge centered on providing consulting, platform expertise, and solutions to assist customers in modernizing their legacy automation for both Emerson and Non-Emerson systems. With 26 years of experience with Emerson, Laurie has held varying roles and responsibilities including System Engineering, Industry Consulting, Product & Services Marketing and Services Management. Prior to joining Emerson, Laurie worked in the Pulp & Paper Industry for Mead Paper and James River Corporation for almost 12 years. Laurie has a BA in Life Science from Otterbein College, a Bachelor's in Chemical Engineering from University Dayton and a MBA from University of Texas.

Mike Brennan

Solid Oxide Fuel Cells: Power for Remote Wellhead Sites

Mike Brennan joined Atrex Energy as its Business Developer Director in January 2013. Mike has over 30 years of sales, marketing and general management experience that includes over 20 years in remote power where he was involved in providing power systems for some of the world's largest gas and oil infrastructure projects. In addition to G&O infrastructure, he has extensive experience in providing remote power for high reliability telecommunications infrastructure.

Mike has extensive international experience having been involved with projects on all seven continents. His previous experience includes Director of Marketing for Raychem's Electronics Group, Vice President of Northern Power System's Industrial Infrastructure Group and Director of Integrated Systems for Global Thermoelectric. He is a graduate of the United States Naval Academy and Harvard Business School's Program for Management Development.

PRESENTER BIOS

Sean Brown

Control Valve Sizing & Selection

Sean W. Brown has worked as an Application Engineer with Equipment & Controls' Final Control Systems division since 2015. Prior to ECI, he worked briefly as an analytical chemist. Sean is an alumnus of West Virginia University's Department of Chemical and Biomedical Engineering and earned his EIT in 2015. Sean has spent his time with ECI working in the Oil & Gas group.

Marc Buttler

Coriolis Meters Liquid Measurement and Proving with Small Volume Provers
Piecewise-Linearization (PWL) and Natural Gas Custody Transfer Measurement with Coriolis Meters
Addressing Measurement Challenges in Today's Shale Plays

Marc Buttler is the Global Oil and Gas Industry Application Innovation Director at Micro Motion, Emerson. He holds a Bachelor's Degree in Mechanical Engineering from the University of Colorado. Marc has been with Emerson for a total of 30 years in a wide variety of roles. Marc has specialized in custody transfer applications involving both gas and liquid products for many years. He is active with the API Committee on Petroleum Measurement and with the National Conference of Weights and Measures. In addition to working for Emerson, Marc has also previously worked for the NIST Office of Weights and Measures. Marc enjoys traveling, hiking, biking and skiing.

Anthony Capizzi

Wireless Drilling Mud Tank Monitoring for Speed, Efficiency and Reliability

Anthony Capizzi, a Pittsburgh native, had previously lived in Ohio for five years where he worked for the Therm-O-Disc business unit of Emerson. As of last year, Anthony moved back to Pittsburgh and has worked for Rosemount to provide premium Measurement Instrumentation Solutions to solve customers' most common to their most complex challenges. He earned a BS in Electrical Engineering from Penn State University and an MBA from Ashland University.

John Carlow

Valve Connected Services

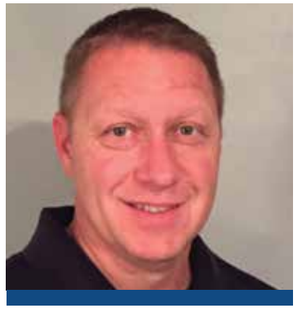
John Carlow began his valve industry career in 1996 doing inside sales for an industrial valve representative company. In this role, he was responsible for handling incoming customer requests, specifying product, quoting jobs and processing orders. After five years of inside sales, he transitioned to an outside sales account manager. For the next four years, he called on customers in the central and western half of Virginia. John was responsible for representing several brands of industrial control valves, pumps, and blowers. In 2004, he began working for Emerson Lifecycle Services as an Area Manager responsible for the operation of their service center located in Richmond, VA. For the next ten years, John managed the daily operations including in-house valve repairs, field service, turnaround engagements, ES&H program and all HR related activities. In 2015, he transitioned to his current role as a business development manager. John is currently focused on the development of Emerson's Valve Connected Services program along with the Lifecycle Services competitive repair program.

PRESENTER BIOS

MC Chow

Modernizing your BMS – The Smart SIS Approach

MunChoong (MC) Chow is a Modernization Business Development Consultant within Emerson Automation Solutions' PSS Global Modernization Group. He is responsible for creating new initiatives to advance Emerson's success in replacing legacy automation systems. His role encompasses both consulting and customer facing aspects of marketing, focusing on refining/hydrocarbon processing industry. MC has over 25 years in process automation, with the past 16 years being with Emerson and Emerson's Local Business Partner Novaspect. He has held roles in Inside Sales, Strategic Account Management and Systems Field Sales. He has worked in Asia, Europe and North America. MC has a BS in Control, Systems and Instrumentation Engineering from City University, London, England and is a Certified Functional Safety Professional.



Barry Coultas

Build the Business Case for IIoT

Barry Coultas is the Director of the Reliability Solutions Group at Equipment & Controls, Inc. The group was started seven years ago as a new business unit for the Local Business Partner of Emerson Automation Solutions. ECI Reliability Solutions Group works with their customers to improve reliability and safety while controlling maintenance costs with the goal of helping customers achieve top quartile performance. ECI provides not only the technologies to drive this improvement but also the expertise in the form of program development, reliability engineering, CMMS optimization and predictive maintenance technicians.

Prior to joining ECI, Barry spent more than 20 years with Emerson Automaton Solutions in various roles focused on improving customers' process control. Barry is a Certified Maintenance and Reliability Professional (CMRP) and he holds an MBA and a BA in Marketing.

Jim Davis

Driving Operational Certainty in IIoT with Plantweb

Jim holds a BS in Mechanical Engineering and has been working in the automation and instrumentation field for 35 years. After several years with Honeywell, Jim made his way into the Emerson team at Caltrol where he has held positions as Sales Engineer, Training Manager, Systems Engineer, Project Manager, Solutions Consultant and Director of Projects and Automation Services. Gaining experience throughout the years in almost every aspect of industrial instrumentation and automation, Jim's current role is Sr. Business Development Manager for Emerson Automation Solutions.

Kolt Decker

Inferred Mass Proving Best Practices for Coriolis Meter in NGL Service

Kolt Decker is a Measurement Specialist with MarkWest Energy, which involves the gathering from the well head to the finished product. Kolt graduated from college in 2004, then began earning valuable field experience starting with EQT in 2008 in the Measurement department. Kolt increased his Liquids & Gas expertise while commissioning interconnects and measurement facilities. He is responsible for MarkWest's Corporate Measurement and provides services to support his company's Measurement Accounting.

Tony Delgado

Plantweb Digital Ecosystem: Improving Operational Certainty

Tony is the Integrated Solutions Manager for Emerson Automation in the Northeast U.S. Prior to this role, Tony was the Area Wireless Manager for the Northeast US Region. Before joining Emerson, Tony was Director of Business Development for Ember Corporation, a Boston-area wireless networking company. Tony also held business development and sales positions at N*Able Technologies, a hardware encryption company. In addition to technology business development, Tony was associate partner at Techfarm Ventures, a venture capital firm based in Silicon Valley. Tony received his Bachelor of Science Degree in Computer Science from Rochester Institute of Technology.

PRESENTER BIOS

David Eveland

Exploring the Benefits – Adding a DC UPS System to Fuel Cells

David Eveland has worked in the solar industry since 1998. His drive for success shows up in his commitment to his family, his active cross-fit ventures and the effort poured into effective leadership as the President of SunWize Power & Battery, LLC. Dave's entrepreneurial journey began with a Master's Degree in Mechanical Engineering from UC Davis in 1999, following a BS in Mechanical Engineering from Santa Clara in 1996. Just two brief years passed before he became the President of Solar Summit, a company involved with grid-tied and off-grid solar electric systems in Southern California and Western Oregon.

Fast forward eight years—Dave has his first encounter with SunWize Technologies, as the Director of Commercial Project Sales. This soon leads to his role as VP of Sales, and ultimately, to his buyout of the off-grid assets of SunWize Technologies. Thus marks the birth of SunWize Power & Battery. Dave's company engineers and manufactures remote power systems to Industrial clients from a multitude of sectors, providing top-of-the-line products in the form of simple solutions.

His commitment to excellence and innovation shows itself in his history, but never is it more prominent than at SunWize Power & Battery. Hard work combined with thousands of cups of coffee, hundreds of sleepless nights, and a whole lot of laughter is at the foundation of his company, and ultimately attests to his genuine character.

Camilo Fadul

DeltaV Operations Update

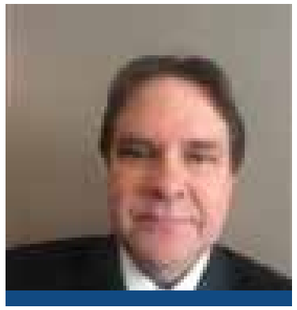
Camilo Fadul is the Product Marketing Manager for DeltaV Operations. He came to Emerson with over 10 years of experience using DeltaV, developing fuel cell power plants control systems, Burner Management Systems and Combustion Control Systems. Camilo received his BS in Electrical Engineering from the Universidad del Norte in Barranquilla, Colombia and his Master's Degree in Electrical Engineering from the Universidad de Los Andes in Bogotá, Colombia. He is also a Certified Automation Professional from ISA.

Orlando Fernandez

AMS Device Manager Best Practices – Unlocking your Instrumentation's Potential

Orlando has worked in field service for ECI for over 20 years. His experience in field service comprises working with field instrumentation, calibration and configuration, loop checks, various protocol communications, wireless devices and distributed control systems and PLCs. Orlando has worked on various vendors' products but mostly with Emerson products. He has also worked in a range of processing plants including refineries, oil and gas, compressor stations, food and beverage, and chemical plants.

He is a graduate of Akron University with a degree in Micro Electronics Engineering. He has also worked with integrating data exchange between protocols like OPC, Ethernet IP, Modbus and SQL, and configured and installed different protocols and hardware for DeviceNet, profibus, fieldbus, modus ethernet, modbus serial and OPC tunnels.



Hugh Flesher

Stand-Alone ESD Solutions for Pipelines, Wellheads and Storage Applications

Hugh Flesher, Sr. Product Manager, Actuation Technologies, Emerson Automation Solutions, is a proven leader and innovator with extensive involvement in the field of valve automation, spanning applications from drilling to refining. With over 40 years of industry-specific experience, Mr. Flesher's expertise encompasses aspects of sales, operations, design, applications and aftermarket service. Hugh has worked directly with several of the major actuation manufacturers including Bettis, Shafer, Ledeen, Biffi and Morin, and has as well launched world class valve automation centers affiliated with brands such as Rotork and Oil States.

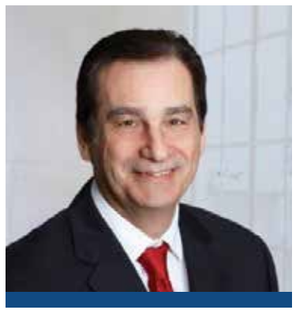
Hugh is most effective when working with end users to resolve automation-related issues and he enjoys discovering new ways to implement engineered solutions whether related to quarter-turn or rising stem applications, powered by pneumatic, hydraulic or electric energy.

PRESENTER BIOS

Tom Francisco

AMS 6500 – One Small Step for your PdM Program, One Giant Leap in your Reliability Program's Digital Transformation

Tom Francisco is a Business Development Manager for Emerson's Reliability Solutions business. Tom specializes in the areas of Online & Wireless Machinery Monitoring Solutions. He learned vibration analysis and condition monitoring as a U.S. Navy Machinist's Mate. After the Navy, Tom completed his Bachelor's Degree in Mechanical Engineering at the University of Washington. Tom is a Professional Engineer in Washington state and has been certified CMRP and CRL during his 27 years in the field of reliability.



Steve Gandy

SIS 101: The Basics of Functional Safety
Functional Safety for Managers

Steve Gandy is VP Global Business Development and Director of the End User Service Business for exida Consulting LLC for Functional Safety and Cyber Security. Steve has nearly 40 years of industrial experience, of which a large portion has been spent in senior and corporate management positions; most notably leading a cross-functional, multi-discipline team in changing the company culture. Steve is also one of the top trainers for exida, teaching the Functional Safety FSE100 Course since joining exida in 2012, as well as presenting a number of webinars and blogs on the subject of Functional Safety and Cyber Security. Steve is also a Certified Functional Safety Professional.

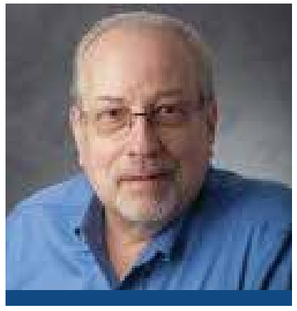
Prior to joining exida, Steve was VP Sales and Operations Asia for Metso Automation, responsible for setting up the India operations and managing the channel partners in Asia. Prior to that, Steve was GM of ICS Technology based in the UK, responsible for product development for the ICS Group of companies. Steve began his career as a software and hardware development engineer in the UK, designing hardware and software products for the ICS range of ICS2000 Emergency Shutdown, Fire Detection and Fire & Gas systems. Steve also held various R&D management position and achieved his MBA from the Open University in 1999. He was elected to the Board of the Institution of Engineering and Technology (IET) in the U.K. and served from 1997 to 1999. Steve is a Member of the Institution of Engineering and Technology.

Steve has published a number of papers over the years and was a keynote speaker for the IET on two occasions, as well as presenting at the Safety System Symposium, most recently: Complying with IEC61511 Operations and Maintenance requirements, which was presented at GE's national conference in 2014, the ISA Technical Conference in 2014 and again in 2015.

Anthony Gentile

New Developments in Micro Motion Coriolis Transmitters and Diagnostics
Coriolis Installation Best Practices and Smart Meter Verification

Anthony Gentile is a Marketing Product Manager with Emerson Automation Solutions, Micro Motion. He has 14 years of experience in the area of Coriolis flow measurement and holds a Bachelor's Degree in Chemical Engineering and Petroleum Refining from Colorado School of Mines, as well as an MBA from Regis University.



Rick Gorskie

So You Have Been Attacked, Now What?

Rick has served the process controls industry for more than 40 years in a combination of executive, marketing and sales roles. His career includes direct background in the fields of control valves, field instrumentation (pressure, temperature and flow), single-loop and multi-loop panel-mounted controllers and several DCS systems. He has also held other positions in Competitive Intelligence as well as in both Aerospace Instrumentation and Process Controls Asset Management Solutions. Rick is now serving Emerson Automation Solutions in the Process Systems and Solutions Lifecycle Services marketing and development organization and is the Global Sales Manager - Cybersecurity.

PRESENTER BIOS

Bruce Greenwald

DeltaV V14 Roadmap
PK Controller

Bruce is the DeltaV Platform Business Development Manager for Emerson Automation Solutions. He started his career with Dow Chemical in Freeport, Texas, after graduating from the University of Kansas with a BS in Chemical Engineering in 1979. Bruce joined Fisher Controls in 1983 and has worked for Emerson and the R.E. Mason Company for over 25 years. He has an extensive background in batch, primarily in the pharmaceutical and biotech industries.

Natalie Grothause

Lifecycle Services for DeltaV

Natalie Grothause is the Director, Lifecycle Services North America within Emerson's Process Systems and Solutions in Austin, Texas. She's been with Emerson for 11 years and was previously with Cummins Engine for six years. With a BS in Mechanical Engineering, Natalie spent 9 years in Manufacturing Engineering driving assembly line process improvements and new equipment installs. After earning her MBA, she then moved into roles within New Product Management before joining the PSS Global Lifecycle Services organization in 2014.

Tim Herbig

Risk Reduction: Getting More from What Already Exists

Tim Herbig has been working in the safety industry for over five years. His interest in safety stems from his long-held desire to help others and his realization that the field of process safety has relatively few resources for those trying to grapple with standards as a secondary or tertiary part of their job description. Tim most enjoys his work when designing safety systems and performing Safety Integrity Level Calculations. He graduated from Missouri University of Science and Technology with a BS in Chemical Engineering and uses the knowledge he gained in his consulting.

Justin Hollingsworth

Software Applications for Coriolis Meters: Tackling Multiphase Challenges and Monitoring the Happiness of Your Meters

Justin Hollingsworth is an Application Research Engineering Manager with Emerson Automation Solutions. He has a BS in Aerospace Engineering from North Carolina State University and five years of experience engineering dynamometers and other automotive test equipment. Justin also has three years at Emerson, working on challenging customer applications, such as multiphase measurement and introducing IIoT technologies and strategies.

Michael Hrinishin

Casting HMIs and a Comprehensive Process Monitoring System

Michael Hrinishin is a technical sales manager at Industrial Video Control (IVC) and focuses on customer project management. Michael is primarily responsible for evaluating customer video application requirements and recommending appropriate technical solutions. This includes conceptualizing the architecture and components of IVC camera systems. He holds a Bachelor's Degree in Philosophy from the University of Massachusetts, Lowell.

PRESENTER BIOS

Erika Illig

Siemens Moore APACS+ Migration to DeltaV Project at Fort Amanda Specialties

Erika Illig is the Senior Production Engineer at Fort Amanda Specialties, a joint venture between AkzoNobel and BASF. She is currently responsible for four (4) of the site's nine (9) process areas and control & safety system cybersecurity & maintenance. In her 18 years with AkzoNobel, Erika has been involved in several site expansions, new product development/introduction, continuous improvement projects and control system migration projects. She has a BS in Chemical Engineering from the University of Toledo. Prior to joining Fort Amanda Specialties, Erika worked as a Controls Engineer for Elsag Bailey/ABB servicing DuPont Parkersburg and Circleville sites and as an Instrumentation Engineer for Ohio-based consulting firms servicing the Ohio Oil Refineries. In addition to working for Fort Amanda Specialties, Erika is the co-director of Science Enhancement for Science Advancement (SESA) which is a science program that teaches exciting hands-on science lessons which support the standards used in the state science curriculum for children in kindergarten through eighth grade. The program is sponsored by the companies which make up our local chemical compound – Ashland Chemicals, Fort Amanda Specialties, Husky, Ineos and Nutrien.

Greg Inverso

Condition Asset Management using Ultrasound Remote Monitoring

Greg Inverso is the Mid-Atlantic manager for UE Systems. Greg has been assisting customers with their ultrasound implementation programs for nearly a decade. Greg is a Certified Maintenance and Reliability Professional (CMRP) and has spoken at numerous reliability conferences on the value of adding ultrasound to your Asset Management program. Being an avid Philadelphia sports fan and father keeps him busy in his free time.

Paul Jobe

Upstream O&G Multiphase Applications – Defining and Applying Emerson Technologies to Multiphase Flow Regimes

Paul started his Oil & Gas career with ARCO, the producer who discovered the giant Prudhoe Bay field on the North Slope of Alaska.

As a user of Rosemount P, T & L, Fisher flow computers and control valves, Micro Motion Coriolis and Daniel dP for many years, it was a natural move to work directly for Emerson, when he joined Micro Motion in 2006 as the first Upstream Oil & Gas Business Development Manager.

Since early 2016, Paul's role as the North America Technical Resource & Business Development for both ROXAR Multiphase and Micro Motion Coriolis has engaged him in the forefront of optimization initiatives with both technologies for NA Unconventional Shale applications and markets.

After 32 years in Alaska, Paul has made his home in Colorado since 2007, where in his spare time Paul enjoys home renovation with his partner Karen in "HGTV/Fixer-Upper" style, his family and of course, the annual fishing and hunting trek in Alaska.

Bruce Johnson

The X's and O's of Control Room & Console Design - A Playbook for Operator Success

Bruce joined Evosite Control Rooms in December 2016 to develop and lead the company's Emerson business unit, following a 29-year career with Emerson Automation Solutions. He is responsible for the development and commercialization of Emerson's iOps Workspace solution, as well as serving as principal liaison for control room projects being implemented through Emerson Engineering Centers and Emerson Local Business Partners.

PRESENTER BIOS

Starting with Emerson in 1988 as a marketing analyst, Bruce has held various marketing and sales positions, including product manager, program manager, industry sales engineer and sales development manager. Bruce was a founding member of the Emerson Global Users Exchange and served as its Executive Director for 14 years, managing the organization and annual conferences since its inception in 2003. Bruce has published several papers for the process automation industry and has been recognized with awards for Best Technical Paper (ISA/95) and Best Overall Paper (ISA/96). Bruce is a graduate of The University of Texas McCombs School of Business, and previously worked with Carnation/Nestle and IBM.

Yves Lafortune

BMS Uses on a Pad: Flares, Combustors and Natural Draft Heaters

Yves Lafortune serves as Chief Operating Officer, joining Platinum in late 2013. With more than 12 years of management and engineering experience, Yves is an accomplished operations manager and engineer. In the BMS industry, Yves holds more than six years of experience with burner management design, technology, application and sales.

Prior to joining the Platinum team, Yves experienced great success as the general sales manager at Variosystems, an Electronic Contract Manufacturer, where he oversaw the sales, procurement and production planning operations. During his time at Variosystems, Yves acquired business from and collaborated with industry leaders such as Snap-On, BRP, Siemens, Mercury Marine and Medela.

While working with Marconic Communication, a state-of-the-art telecommunications company, Yves achieved success as a Field Application Engineer/Network Designer/Hardware Designer where he was responsible for the overall design and conception of optical cards processing high-speed data.

Yves is a graduate of the University of Quebec in Montreal with a degree in Electrical Engineering. After graduation, he decided to teach at the University and became the youngest teacher of all of the Engineering departments. By introducing new, cutting edge technologies, Yves restructured and revolutionized the microcontroller courses taught at the University.

Todd Lamb

Introducing the FB Flow Computer
Emerson's New Family of Flow Computers the FB1000 & FB2000

Building on a 22 year career in the Department of Defense as an Aviation Electronics and Communications Security Officer Todd entered the private sector 17 years ago and has served in both sales and management roles, delivering full turn-key Open Architecture SCADA Solutions to customers across Oil & Gas and other process industries. Over that time, he has specialized in delineating the differences between distributed wide area "outside the fence" SCADA systems vs. centralized local area "inside the fence" SCADA systems, and why each merit different approaches to system design in order to ensure high integrity SCADA operations. Todd earned his undergraduate degrees in Applied Mathematics and Business Leadership, and currently serves as the Central U.S. Regional Sales Manager for Emerson Remote Automation Solutions.

Brian Ledeboer

Layers of Protection for Flame & Gas, From Early Detection to Suppression

New to Emerson, Brian Ledeboer has worked in the flame and gas detection field for over 30 years, working directly with many of the different technologies we are using today. He has a strong technical background in understanding how the technologies work along with the experience in their application.

PRESENTER BIOS

Steve Ludtman

Total Tank Protection

Steve has a total of 24 years experience with Pressure Regulators, 19 of those with Emerson. He has application and practical experience with Regulators used in Fuel Gas Systems, Pressure Reducing Stations, Relief Valves, and Regulators used in Gas, Liquid and Steam Service. Also, more specialized topics such as Tank Blanketing, Vacuum Regulation, Vacuum Breakers, and Differential Regulators along with application of Regulators in the Upstream, Mid-Stream and Downstream Industries. Steve is an instructor for Emerson's Gas Conference, Emerson Internal/Customer Training Programs and Appalachian Gas Short Course.

Drew Mackley

Reliability Roadmap

Drew Mackley is Director of Marketing and Sales Enablement for Emerson's Reliability Solutions business in Knoxville, TN. Drew has had a 24 year career with Emerson's Reliability Solutions business, primarily in product management working with industry professionals to develop product solutions to address customer's needs, make products easier to use and improve asset reliability.

Frank Manks

Performance Service Capabilities – All Valves Everywhere

Frank Manks is the Fisher Lifecycle Services Central Region Manager, and is responsible for 14 control valve maintenance and manufacturing facilities across 18 states. He previously served as the Central Region Operations Excellence Manager, responsible for driving continuous improvement initiatives for technical and administrative processes. Frank has been with Fisher Lifecycle Services for more than 27 years and has managed the successful execution of more than a hundred Shutdowns and oversaw the disaster recovery efforts during the Cedar Rapids, IA floods.

Mark Martillaro

PRV 101 – What They Are, How They Work and Why You Need Them

Mark Martillaro is a Business Development Manager for Emerson Automation Solutions. As a Business Development Manager, Mark is tasked with being the local technical expert for Emerson's line of Pressure Management Products. These include Anderson Greenwood, Crosby and Varec Pressure Relief Devices. Through various acquisitions, Mark has been working in this position since January 2001.

Mark spent four years in the United States Marine Corps as a Cryogenic Technician. After graduating from the Naval School of Cryogenics, Mark spent the balance of his Marine Corps career as an operator of a small LOX / LN2 liquefier. Upon discharge, Mark spent a year as a Cryogenic Technician at the Fermi National Accelerator Lab in Batavia, IL. While at Fermi Lab, Mark decided to pursue a career in the process control industry.

Arturo Medina

Introduction to DeltaV with AMS Device Manager
Troubleshooting with DeltaV Diagnostics
Smart Commissioning with DeltaV v13.3.1 and AMS Device Manager v13.5

Arturo Medina is a Chemical Engineer with over 24 years of experience in the process automation field, most of which have been in the field during project, startup and asset manager work at customer sites, which includes extensive use of DeltaV and Provox control systems, AMS Device Manager use and smart field device integration to the control systems. He currently is one of the DeltaV and AMS Device Manager instructors and curriculum developers for Emerson in Round Rock, TX.

PRESENTER BIOS

Dean Minehart

Inferred Mass Proving Best Practices for Coriolis Meter in NGL Service

Dean Minehart is a Business Development Manager with Emerson Automation Solutions-Micro Motion. He has over 30 years of industry experience related to mass and density measurement of liquid hydrocarbons. Dean is a 1982 graduate of DeVry University-Chicago and holds one U.S. patent.

Bill Pace

API 18.2 Best Practices Custody Transfer of Crude Oil from Lease Tanks Using Alternative Measurement Methods

Bill Pace is a Level Business Development Manager for Emerson Automation Solutions – Rosemount, Inc. Previous to this role Bill was an Executive Account Manager for Rosemount in the New York/New Jersey area. Bill has a BS Degree in Electrical Engineering from Rutgers College of Engineering. He also has over 30 years of applications engineering and business development experience in the process control industry. Currently – Bill leads the Emerson/Rosemount Process Level efforts in the Northeast area of the US.

Tyler Palko

The 21st-Century Workforce Challenge: Millennials or Leadership?

Tyler Palko is the Director of Leadership Development for Solutions 21. Through his life experiences, he has developed invaluable leadership skills and understands leadership from various important perspectives.

Thanks to Tyler's athletic talents and his knack for leadership, Tyler led his team to championships at every stage in his career. He set records, guided his team to a number of important victories, and was a three-time captain elected by his peers at the storied football program at Pitt, which has had its share of successful leaders in their own right, including Mike Ditka, Dan Marino and a number of other Hall of Famers. Tyler's ambition and dedication led him to achieve his lifelong dream of playing at the highest level in his professional career — the NFL.

After his five-year career in the NFL, Tyler joined Solutions 21 as the Director of Leadership Development and has focused his efforts on the expansion and implementation of Solutions 21's Next Leader Now program. As a resident millennial himself, Tyler has become the face of Next Leader Now and is involved in every stage of the client relationship, from interfacing with executives, to identifying appropriate candidates, overseeing facilitation and coaching efforts, and maintaining client satisfaction. He has grown the Next Leader Now program to include national and international clientele, including the nation's largest privately held insurance firm and successful family-owned businesses in industries ranging from automotive to manufacturing. Tyler is at the forefront of millennial attraction, development, and retention. By 2020, 75% of the workforce will be made up of the next generation of leaders. Tyler is responsible for leading the Solutions 21 team in transforming the 21st-century workforce.

Tyler is the Founder and Chairman of TC House, a foundation whose mission is to build homes where individuals with Down Syndrome can live independently in a family community, as part of the community. Tyler resides in Overland Park, Kansas with his wife, Tricia, and four kids, Aubree, Kaiden, Kasen and Shaylee.

Matt Pavlik

Extending your Reach – Hazardous Area HMI and Mobility Solutions for Operations/Maintenance

Matt Pavlik is the HMI Technology at Pepperl+Fuchs, in Twinsburg, OH. Matt works closely with users to integrate P+F's, thin client based solutions into their virtualization architectures in the Life Sciences, Oil & Gas, and Specialty Chemical industries. In his 10+ years at P+F, Matt has also designed HMI workstations specifically for Classified Hazardous areas, and customized solutions as an engineer in P+F's Systems and Solutions group.

PRESENTER BIOS

Josh Peters

Wireless Drilling Mud Tank Monitoring for Speed, Efficiency and Reliability

Josh Peters is the Manager of Measurement, Communication and Automation for Seneca Resources. With 12 years of service with Seneca Resources, Josh and his team work to increase safety and mitigate environmental risks through the automation of production operations on Seneca's Marcellus and Utica well pads. In doing so, Josh helped Seneca pioneer a number of new communication and automation technology projects. A longtime resident of Pine City, PA, Josh is an avid outdoorsman who enjoys hunting and fishing with his family.

Scott Ross

Legacy DCS/PLC Migration Options for the DeltaV DCS

Scott Ross is the SME for Emerson DCS (PROVOX and RS3) migrations within Emerson Automation Solutions PSS/AO Modernization Group. Scott is also the FlexConnect Solutions Portfolio Manager, which focuses on bringing Emerson and non-Emerson DCS/PLCs in to the DeltaV system. Scott joined Fisher Controls International, Canada, in 1987. With 31 years of experience within Emerson, Scott has held varying roles and responsibilities including Field Service, Quality Assurance, Lifecycle Management and Customer Service. Scott holds an Electronic Engineering Technology degree and Bachelor's in Computer Science.

Laura Rush

Control Valve Sizing & Selection

Laura Rush graduated from West Virginia University with a Bachelor's Degree in Chemical Engineering and a certification in Biomedical Engineering. She has six years of experience in the sizing and selection of control valves for a wide range of applications. In addition, she has spent seven months at Fisher Controls' headquarters in Marshalltown, Iowa, where she worked in their Global Industry Sales group as well as the Nuclear Division.

Bryan Sauer

Remote Automation Solutions Roadmap: Intelligent Solutions for Production, Pipelines, and Terminals

Currently the Director of Marketing for the Remote Automation Solutions business based in Houston, Texas, Bryan is responsible for management of the product portfolio for our O&G Solutions. He has spent 12 years with Emerson and nearly 20 in the Automation industry. Having worked for both Pfizer and Applied Control Engineering early in his career, Bryan has experience as an end user, integrator and as an equipment supplier. He has a Bachelor's Degree in Chemical Engineering from the University of Delaware and MBA from the University of Notre Dame.

Eric Schulz

Emerson Introduces the Control and Operator Performance Center of Excellence

Eric Schulz is a Process Control Consultant with Emerson's Performance Services group in Round Rock, TX. His career within the Chemical industry has included roles as a Production Engineer, Process Control Engineer, Continuous Improvement Manager and Operations Manager. He has also served in Business Development and Sales oriented roles, supporting customers of Emerson DeltaV Systems for the past nine years.

Taylor Scott

Achieving Measurement Confidence: The Power of Enhanced Coriolis Diagnostics

Taylor Scott is a product marketing manager for Emerson's Coriolis software products, including Smart Meter Verification, an in-situ method for verification of complete Coriolis measurement performance.

PRESENTER BIOS

Anthony Simpkins

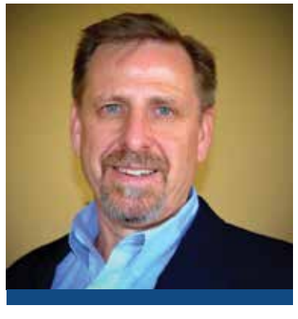
Driving Operational Certainty in IIoT with Plantweb

Tony holds a BBA from Marshall University, a MBA from the University of Charleston and has worked in instrumentation and automation for six years. He has held multiple sales and management positions at two previous Fortune 500 companies before accepting a Sr. Instrumentation Consulting role at Emerson. After accepting a promotion in October 2017, Tony's current role is Sr. Business Development Manager of Wireless Technologies at Emerson Automation Solutions.

Chris Snell

Utilizing Coriolis for Accurate, Reliable and Maintenance Free Gas and Water Measurement

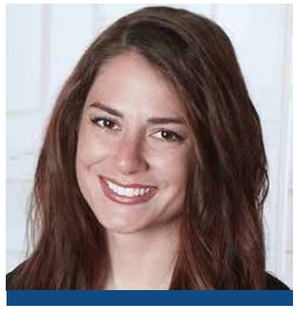
Chris Snell started with Seneca Resources Corp. as a Service rig operator in 2007. In 2008, he accepted a position as a Roustabout/ Meter technician. Late in 2008, he accepted a Warehouse Manager/Meter technician position. During this time he developed a maintenance program for meter testing. In 2010, Chris accepted a position of Meter Maintenance Foreman where his duties included overseeing measurement activity, wellsite Automation, and Communications. In 2013, Chris was promoted to Sr. Foreman of Measurement. His current duties include overseeing all East coast Measurement of oil, gas and water for Seneca Resources.



Mike Stappert

Terminal Manager Solutions Suite: Improving Terminal Operations While Reducing Risk

Mike Stappert is an Emerson Automation Solutions Director of Business Development for Pipelines and Terminals. Mike has more than 37 years of experience in all aspects of the petrochemical industry, involving solutions to support oil and gas production, liquid storage facilities, process plants and pipelines systems, which incorporate automation and business solutions to support operations, supply chain logistics, and enterprise infrastructure management and reporting.



Loren Stewart, CFSE

SIS 101: The Basics of Functional Safety
Comparing OREDA with FMEDA – Achieving Realistic Device Level Failure Data

Loren Stewart graduated from Virginia Tech with a BSME. She has 10 years of professional experience originating in custom design and manufacturing, where she managed and was responsible in supporting key clients. She currently works for exida consulting as a Safety Engineer, focusing on the mechanical aspects of their customers. Along with assessing the safety of products and certifications, she continually researches and publishes exida white papers, and teaches IEC 61508 and IEC 61511 courses.

Mike Sylvester

Inferred Mass Proving Best Practices for Coriolis Meter in NGL Service

Mike Sylvester is a Senior Field Sales Representative for Emerson Flow with over 25 years of Instrumentation field experience in the western Pennsylvania, eastern Ohio and northern West Virginia territories. Since 2012, he has gained extensive field experience in the Oil & Gas industry with Flow and Density applications. Mike holds a BS from Arizona State University.

Caleb Szajnuk

Control Valve Sizing & Selection

Caleb Szajnuk attended California University of PA to study Applied Mathematics and Statistics. During his four years of undergrad, he interned as a shop & field technician for ECI, repairing and building control valve assemblies. Before joining the Fisher inside group, Caleb spent 1.5 years working as Outside Sales for the Power Ignition & Controls group at ECI. He has a year of experience in the sizing and selection of control valves.

PRESENTER BIOS

Michael Szurkowski

AMS 2140 User Group: Advance Analysis – Coast Down Peak & Phase

Michael Szurkowski is the NA Business Development Manager for portable products in the Reliability Solutions department of Emerson Automation Solutions. He has worked for Emerson for the 13 years and previously worked for a large northeast utility for 23 years. Mike is a Vibration Institute Level III Analyst with 26 years of experience with Predictive technologies. He has worked in power, chemical & materials, paper, casting and pharmaceutical facilities.

Mike Taccino

Introducing the FB Flow Computer
Emerson's New Family of Flow Computers the FB1000 & FB2000

Mike Taccino is a Product Marketing Engineer at Emerson, specializing in flow computer technology as well as oil and gas measurement applications. He has worked with many end users to better understand application requirements, subsequently providing expert guidance to Emerson's hardware and software engineers to improve product features and functions. Mike joined Emerson in 2014 and has had an integral role in the development and testing of Emerson's FB1000 and FB2000-Series Flow Computers, as well as FBxConnect configuration software. He is now dedicated to educating customers on this new technology along with continuing his support of ongoing product development efforts. He holds a Bachelor's Degree in Electrical Engineering from Texas A&M University.

Robert Wojewodka

On-line Batch Analytics – Redeployment

Bob is the Corporate Technology Manager and Statistician for Lubrizol. He has degrees in chemistry, biology, and statistics with emphasis on design of experiments and multivariate analysis and is versed in Six Sigma and other problem-solving methodologies. He heads up Lubrizol's Global Process Improvement, Operations Management System, Operations Statistics and Data Science support teams and is advancing Lubrizol's use of statistics and big data analytics. Bob has over 39 years of experience in manufacturing, automation, statistics and process improvement.

EXHIBITORS

ASCO

ASCO is the worldwide leader in the design and manufacturing of quality solenoid valves and is part of Emerson. ASCO products are designed to control the flow of air, gas, water, oil and steam and the ASCO products range from two position on/off valves to entire flow control solutions. Whether you need a minor modification of a core product or a complete flow control solution, ASCO can help.
www.asco.com/en-us

Atrex Energy

Atrex Energy designs and manufactures remote power generators using Solid Oxide Fuel Cell (SOFC) technology. Atrex SOFCs are state-of-the-art, 21st century technology ideal for powering remote infrastructure with loads up to 3kW continuous. SOFCs are widely deployed in the gas and oil industry along pipelines and at wellheads for cathodic protection, chemical injection pumping, SCADA/instrumentation and critical telecommunications applications. Atrex SOFCs, in full-scale production since early 2011, provide levels of efficiency and environmental friendliness previously unobtainable for remote power applications while providing the levels of system availability such applications have come to expect. Atrex's SOFC is now CSA certified to the FC-1 standard and comes in 500W, 1kW and 1.5kW sizes with adjustable output voltages of 5 to 60 VDC. SOFCs can run off natural gas or propane and are capable of remote monitoring, control and diagnostics.
www.atrexenergy.com

Beijer Electronics

Beijer Electronics is a multinational, cross-industry innovator of flexible solutions to CONTROL, CONNECT and PRESENT data for industrial applications. Its open software, hardware and IIoT solutions help customers optimize processes and create reliable secure communication. By making the complex simple, its passion is to work with customers to capture the opportunities of tomorrow. Beijer's X2 and QTERM HMIs, IEC 61131-3 PLC offerings, remote I/O modules, iX software, and WARP Engineering Studio provide machine builders and OEMs the tools needed to get the job done. Its full range of products are available globally from authorized distribution partners, system integrators, or directly from a regional sales office.
www.beijerelectronics.com

Cyclonic

Focused on Quality, Flexibility, and Customer Service, Cyclonic manufactures some of the most advanced Multi-Orifice Control Valves in the industry. With truly unique patented features like our gear-drive system, which drastically reduces stem torque and enhances controllability, and our "Side-Entry" design, which allows for complete service and repair of the valve without removal from the line, all in under 30 minutes, our valves continue to raise the bar on many different levels.
www.cyclonic.com

DeltaV – Emerson Automation Solutions

The DeltaV digital automation system helps you improve your operations by harnessing today's predictive technologies in an easy, intuitive, and interoperable way to connect your people, processes and production.
www.emerson.com/en-us/automation/deltav

Educational Services – Emerson Automation Solutions

Emerson Educational Services, with over 60 training centers, is available to work with customers in defining the appropriate subject matter and right approach to satisfy their training needs. Each year thousands of individuals attend courses at one of our regional training centers, or participate in classes tailored to their particular need and conducted locally at their plant. With over 65 years of training experience, Emerson Educational Services remains committed to helping our customers maximize their investment and solve their problems by providing world class training solutions, when and where they need it.
www.emerson.com/en-us/automation/services-consulting/educational-services

EXHIBITORS

exida

Founded by the world's top reliability and safety experts, exida is a certification and knowledge company specializing in automation system safety, security, reliability, and availability. Companies around the world turn to exida for help and guidance related to functional safety, alarm management, and ICS cybersecurity training, products and services.
www.exida.com

Fisher Control Valves/Regulator Technologies – Emerson Automation Solutions

Emerson delivers time-tested and innovative solutions designed to help customers reduce plant maintenance cost, reduce capital requirements, reduce cost of regulatory compliance and increase process availability. This is enabled by world class products such as Fisher® control valves, regulators, instrumentation and performance services which are the most reliable in the process control industry.
www.eci.us

Fisher Lifecycle Services – Emerson Automation Solutions

Emerson's Instrument & Valve Services is the largest supplier in North America and helps customers avoid unplanned costs and unscheduled maintenance through its comprehensive start-up, diagnostic, repair and maintenance services. Instrument and Valve Services is part of Emerson's Asset Optimization business unit and combines world- class services with innovative technologies to improve the availability and performance of production assets.
www.eci.us

ICE

ICE, a division of ECI, is the number one distributor of engineered products, supported by full services, in our marketplace. ICE serves Western Pennsylvania, West Virginia and northern and central Ohio, and Maryland. Our local, 135,000 square-foot warehouse and service center enables us to maintain product inventory to meet customer needs and deliver full service support for every product we sell. State-of-the art computerized inventory tracking and order programs guarantee we can provide the right product to you in the quickest turn-around time. We excel when it comes to helping you streamline your operations to improve your bottom line.
www.eci.us/ice

Industrial Video and Control

Industrial Video & Control (IVC) manufactures industrial video solutions – including IP cameras and video management software – that help Emerson customers improve operational awareness, site safety, and facility security. Built to withstand harsh and hazardous environments, our IP cameras are certified for use in Class I Division 1, ATEX and IECEx areas. IVC's Relay Server, View Station, and Longwatch software products include APIs to easily integrate live video into DeltaV Operate HMI screens and correlate stored video clips with historical SCADA data. IVC customers include major oil and gas producers, metals processing companies, and a variety of major product manufacturers.
www.ivcco.com

Micro Motion/Emerson Flow

Flow Measurement is the process of measuring fluid in your plant or industry. You can measure flow through a variety of different devices such as Coriolis, differential pressure, magmeter and vortex. Emerson's Micro Motion Coriolis, Rosemount Magmeter and Vortex along with density and viscosity technologies deliver superior flow measurement expertise while providing customers with the confidence and insight they need to continuously improve safety and efficiency in the most critical process applications. **www.MicroMotion.com**

EXHIBITORS

Modernization – Emerson Automation Solutions

The Emerson DeltaV™ digital automation system helps you improve your operations by harnessing today's predictive technologies in an easy, intuitive, and interoperable way to connect your people, processes and production.
www.emerson.com

Panel Shop

The ECI Panel Shop designs and creates custom process control panels for a variety of customers and applications. ECI offers a range of custom sized enclosures to meet your unique needs. Our experienced technicians, deep process knowledge and industry-leading equipment in our local, 5,000 square-foot shop help ensure that every panel is built to your satisfaction. Every cabinet that leaves the shop undergoes an internal Factory Acceptance Test (F.A.T.) out through the terminals to make sure all the equipment works correctly.
www.eci.us

Phoenix Contact

Phoenix Contact is a global market leader and innovator in the field of electrical engineering. Phoenix Contact develops and manufactures innovative products, technology solutions, industrial electrical and electronic technology products that power, protect, connect and automate systems and equipment. We are also a family company working responsibly to shape the future.
www.phoenixcontact.com

Platinum Control

Platinum Control's Burner Management Systems (BMS) provide automated remote burner management, ignition and temperature controls. The systems enable you to record essential data and safely automate heating processes, decreasing injury risk, maximizing well production and facilitating environmental compliance.
www.platinumcontrol.com

Power and Ignition Controls Appalachia

Power Ignition and Controls Appalachia, an Equipment & Controls, Inc. company, provides engine and compressor control products and solutions to the natural gas industry. Based in Monessen, Pennsylvania, PIC offers products and services to help keep your gas compression facility up and running. In addition, we offer solutions for optimizing engine and compressor performance as well as environmental regulatory compliance.
www.pic-appalachia.com

Reliability Solutions Group – ECI/Emerson Automation Solutions

From portable vibration analysis through the CSI 2140 Machinery Health Analyzer to continuous online monitoring from the CSI 6500 Machinery Health Monitor, Emerson is the single source for optimizing mechanical assets. With plant-wide predictive diagnostic solutions, Emerson can unlock the potential in your machinery, increasing effectiveness, reliability and performance. AMS Suite: Machinery Health Manager software integrates information from robust diagnostic technologies. The powerful combination of software, online and portable technologies, and training builds predictive diagnostics. With Emerson's Smart Machinery Health Management solution, you have a comprehensive view of every machine, allowing you to diagnose problems before they become an issue.
www.eci.us

Remote Automation Solutions – Emerson Automation Solutions

Emerson's Remote Automation Solutions is the leading global supplier of automation, software and services, delivering cutting-edge solutions at the wellpad, pipeline and terminal segments. Our complete solutions drive greater profitability, operations efficiency and safety for wellpads, pipelines, storage terminals and distribution systems worldwide.
www.emerson.com/remoteautomation

EXHIBITORS

Rosemount Measurement and Rosemount Analytical – Emerson Automation Solutions

Emerson Automation Solution's Rosemount Measurement and Rosemount Analytical provide innovative measurement and analytical technology. Emerson's tireless pursuit of innovation drives the Rosemount™ portfolio of superior quality measurement and analytical technologies to provide customers with insight across all touch points needed to operate efficiently, safely and with peace of mind. Consider it solved with Rosemount solutions from Emerson.
www.emerson.com/en-us/automation/rosemount

Skid Tech – ECI

Skid-Tech provides customized skid systems including LACT skids, filtering skids, metering systems, gas injection skids and other fabricated solutions. Our manufactured systems eliminate risk from customer timelines and budgets. Skid Tech combines more than 30 years of marketplace experience with high technology manufacturing and ISO 9001 Certified Quality Management System to exceed customer expectations.
www.eci.us/services-solutions/fabrication/skid-technologies

SunWize Power & Battery

SunWize Power & Battery designs and builds reliable, stand-alone industrial power solutions and electronic assemblies for integration into OEM products and off-grid field applications. With over 25 years of proven reliability in extreme environments, our solar, battery backup, and hybrid power systems are always pre-engineered, assembled and tested for easy installation and minimal maintenance. SunWize provides autonomous power solutions to a multitude of industries: Oil & Gas, Telecommunications, Water & Wastewater, and many others. Our expertise enables us to distill complex energy projects for our customers into simple solutions, assisting them at every step from design to delivery.
www.sunwize.com

UE Systems

Ultrasonic test equipment for early detection of bearing failure and condition based lubrication, different models include hand held route based data collectors and software as well as the 4Cast a 24/7 monitoring system.
www.uesystems.com

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Equipment & Controls, Inc.

2018 EDUCATION PROGRAM

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DATE	COURSE	DAY/S	PRICE
January 9-11, 2018	ROC Configuration and Operations ROC800L Series – RA1244 (Lawrence, PA)	2.5 day course	$2,350.00
January 15-19, 2018	DeltaV Implementation I Course 7009 (Lawrence, PA)	4.5 day course	$3,650.00
January 22-26, 2018	FloBoss Configuration and Operations – RA1220 (Lawrence, PA)	4.5 day course	$2,650.00
January 30-Feb.1, 2018	AMS Device Manager Course 7020 (Solon, OH)	3 day course	$2,650.00
February 5-8, 2018	DeltaV Hardware and Troubleshooting Course 7018 (Lawrence, PA)	4 day course	$3,550.00
February 13, 2018	Control Valve & Regulator Application & Selection (Lawrence, PA)	1 day course	No Charge
February 20-22, 2018	Gas Regulator Technician Course 1100 (Monessen, PA)	3 day course	$2,400.00
Feb. 27-March 1, 2018	Valve Technician I Course 1400 (Monessen, PA)	3 day course	$2,650.00
March 5-9, 2018	ROC Configuration & Operations – ROC800 Series (Lawrence, PA)	4.5 day course	$2,650.00
March 12-16, 2018	DeltaV System Administration 7027 – Windows 7/Server 2008 (Lawrence, PA)	4.5 day course	$3,650.00
March 12-16, 2018	DeltaV Implementation I Course 7009 (Solon, OH)	4.5 day course	$3,650.00
April 17-19, 2018	Valve Technician I Course 1400 (Solon, OH)	3 day course	$2,650.00
April 17, 2018	Process Control Fundamentals I (Lawrence, PA)	1 day course	$450.00
April 18, 2018	Process Control Fundamentals II (Lawrence, PA)	1 day course	$450.00
April 19, 2018	Basic Hardware & Troubleshooting Course (Lawrence, PA)	1 day course	$450.00
April 23-27, 2018	DeltaV Implementation I Course 7009 (Lawrence, PA)	4.5 day course	$3,650.00
April 30-May 4, 2018	FloBoss Configuration and Operations – RA1220 (Lawrence, PA)	4.5 day course	$2,650.00
May 7-10, 2018	DeltaV Hardware and Troubleshooting Course 7018 (Lawrence, PA)	4.5 day course	$3,550.00
May 15-17, 2018	Valve Technician I Course 1400 (Monessen, PA)	3 day course	$2,650.00
May 16, 2018	Control Valve & Regulator Application Sizing & Selection (Solon, OH)	1 day course	No Charge
June 4-8, 2018	DeltaV Systems Batch Implementation Course 7016 (Solon, OH)	4.5 day course	$3,650.00
June 26-28, 2018	AMS Device Manager Course 7020 (Lawrence, PA)	2.5 day course	$2,650.00
July 16-20, 2018	DeltaV Implementation I Course 7009 (Solon, OH)	4.5 day course	$3,650.00
July 23-27, 2018	ROC Configuration & Operations – ROC800 Series (Lawrence, PA)	4.5 day course	$2,650.00
August 6-9, 2018	DeltaV Hardware and Troubleshooting Course 7018 (Solon, OH)	4 day course	$3,550.00
August 13-17, 2018	DeltaV Implementation II Course 7017 (Solon, OH)	4.5 day course	$3,650.00
August 27-31, 2018	FloBoss Configuration and Operations – RA1220 (Lawrence, PA)	4.5 day course	$2,650.00
September 10-14, 2018	DeltaV Implementation I Course 7009 (Lawrence, PA)	4.5 day course	$3,650.00
September 11-13, 2018	Valve Technician I Course 1400 (Monessen, PA)	3 day course	$2,650.00
October 8-11, 2018	DeltaV Hardware and Troubleshooting Course 7018 (Solon, OH)	4 day course	$3,550.00
October 15-19, 2018	ROC Configuration & Operations – ROC800 Series (Lawrence, PA)	4.5 day course	$2,650.00
October 22-26, 2018	DeltaV Systems Batch Implementation Course 7016 (Lawrence, PA)	4.5 day course	$3,650.00
October 23-25, 2018	Valve Technician I Course 1400 (Monessen, PA)	3 day course	$2,650.00
December 3-7, 2018	DeltaV Implementation I Course 7009 (Solon, OH)	4.5 day course	$3,650.00

For additional information please contact: Lori Gillis—Education Program Manager
Phone: 724-820-2024 • e-mail: lori.gillis@eci.us

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