ABB MEASUREMENT & ANALYTICS

2018 Measurement and Automation Conference
Real Solutions. Real Results.
Real Solutions. Real Results.

Learn from industry and ABB experts on topics ranging from production automation and optimization, to instrumentation, to natural gas measurement. Attend one of over 20 breakout sessions, or chat with an expert at a listening post on topics from all four of our business pillars:

- Automation
- Measurement
- Analytics
- Liquids
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A deep dive into the operation and maintenance of our core Totalflow product line including FCUs, RTUs, GCs, and our new RMC / XCORE solution.

7 Listening posts
Visit a listening post to see product demonstrations, talk to experts, and follow up on any questions you may have from breakout sessions.

8 Breakout sessions
Classroom-style sessions focusing on measurement & automation products to help you automate and optimize your operations.

10 Conference schedule

15 Event sponsors
Major Dan Rooney, USAF
Keynote speaker

Major Dan Rooney, USAF is an Aggressor Fighter Pilot with the 301st Fighter Squadron for the United States Air Force located at Tyndall AFB, PGA Professional, Patriotic Philanthropist and Author, *A Patriot’s Calling: Living Life Between Fear and Faith.*

He is the founder of the Folds of Honor Foundation, served 3 combat tours in Iraq, founded of The Patriot Golf Club, is a PGA Professional, and an author. He was the only motivational team speaker for the U.S. Ryder Cup team in Wales.

Folds of Honor, a non-profit organization, provides scholarships to the spouses and children of military service members disabled or killed in action. In five short years Folds of Honor has raised over $70 million and awarded over 10,000 scholarships to the family members KIA or disabled in combat.

“It’s an amazing irony that when you reach out to help someone in need, you’re often the one being helped.”

A Major in the Air Force Reserve and a decorated military aviator, he is a two-time recipient of the Top Gun award and was honored with the Spirit of Attack award as a top graduate of F-16 training. He has received many decorations to include:

- Air Force Commendation Medal
- Air Medal
- Anti-terrorism Medal
- Combat Readiness Medal
- Air Expeditionary Medal.

For his service and patriotism, Rooney was presented the White House’s “Presidential Volunteer Service Award” by President George W. Bush, the Air National Guard’s “Distinguished Service Medal”, the Air National Guard’s “Directors Service Award” and the Ellis Island “Medal of Honor”.

He was honored at The Masters Invitational with the “William D. Richardson Award” for his outstanding contributions to golf and received the PGA of America’s first-ever “Patriot Award”.

He has been recognized as one of People Magazine’s “Heroes of the Year”, Money Magazines “Hero of the Year” and ABC World News Tonight’s “Persons of the Year”.

Major Rooney has also received one of golf’s most prestigious awards, the ASGCA’ S 2014 Donald Ross award and just recently the Kansas University Distinguished Alumni Award which recognizes alumni who have made remarkable contributions to their profession, the nation, and the world. He is a “Significant Sigma Chi” and was featured on NBC World News Making a Difference report.

Rooney founded The Patriot, a Robert Trent Jones, Jr.-designed course in Tulsa, Oklahoma. It is currently ranked 42nd among American golf courses in Golf Weeks Modern Top 100. The Patriot is home to the Folds of Honor Foundation headquarters.

ABB will be presenting a check to Folds of Honor at the conference.

In addition to this donation, we encourage YOU to donate as well. All contributions from MAC attendees will be matched – dollar for dollar – by ABB.

Help us support this wonderful cause.
Extended training
Complimentary hands-on sessions

In-depth, hands-on training will be offered on the topics listed below. Pre-registration is required. Classes will be Tuesday, February 13th from 1.00p – 5.00p and Thursday, February 15th from 8.00a – 12.00p.

**RTU / Flow computer**
**TRAINER – STEVE O’BANNON**
This class is an overview of the μFLO®s and XSeries flow computers and explores a history of the Flow Computer Unit (FCU) and the features of the FCU including applications and operations. This session covers the 32 Bit Loader, collecting and saving data, calibration, trending, display programming, operations, and Ethernet remote communications.

**RMC / Xcore automation**
**TRAINER – SHAWN RECTOR**
Discover ABB’s powerful new solution with the Remote Modular Controller. The class covers various aspects of the RMC configuration, such as functionality & performance, integration into ABB enclosures (Xcore), examples of different wellpad configuration files, interfacing with different instrumentation, host systems, and local HMIs.

**Gas chromatograph**
**TRAINER – JEFF CUSHING**
The NGC training class is designed to equip students with a basic understanding of how to configure and work with ABB’s natural gas chromatographs. This class includes a comprehensive overview of chromatography, installation of the NGC, identification of the hardware components, Collection Unit Software (PCCU) setup, and NGC setup. This training utilizes ABB’s NGC simulator.
Listening posts
Ask questions and chat with experts

Analytical measurement
Experts will be available for discussion, assistance, and to help answer questions about the NGC8200 Series, and the PGC1000 Series, and the various applications available for both chromatographs.

B&R automation
B&R combines state-of-the-art technology with advanced engineering to provide customers in virtually every industry with complete solutions for machine and factory automation, motion control, HMI and integrated safety technology.

Flow computers and RTUs
Flow computer and RTU experts will be available at the booth for discussion, assistance, and will help answer questions about the various XSeries flow computers, remote computers, and applications.

Flow, pressure, and temperature
See measurement solutions for oil & gas with flow, pressure, temperature, and other field devices. See the Coriolis, Wedge, Swirl, Mag, & Orifice flow meters, the 266 pressure line, temperature transmitters, valve positioners, & more.

Host software
Experts will be available for discussion, assistance, and will help answer questions about Totalflow host software systems. Included in this list are WinCCU, TF.net, VAS, TDS and TCI Toolkit.

Inside sales and training
Stop by and inquire about our training classes and enrollment process. While you are here, ask us about our various service offerings, and learn how we can meet your needs.

Level measurement
See & discuss continuous and point level instrumentation & the communication options available to integrate these into your process control systems. Technologies include: Ultrasonic, LMT, Magnetic, Magnetostrictive, Laser level, & more.

Liquid measurement
Stop by to see how Spirit IT can create a simple, seamless measurement solution with ABB’s innovative Flow-X flow computer and our new measurement management system, eXLent.

Los Gatos Research
See & discuss new LGR ICOS series analyzers and various applications available for these exciting new products. Laser analyzers allow simultaneous measurements in seconds without any scrubbing or pretreatment.

RMC / Xcore
An overview of the features & functionality of the RMC / Xcore solution, our next generation RTU platform. This new package allows ABB to provide a centralized solution for all of your optimization, reporting, and measurement needs.

Wireless communications
Experts from the ABB Wireless group will be on hand to describe how modern networks can meet the needs of today’s demanding oilfield applications while reducing operating costs.

Wellhead automation
Experts will discuss common scenarios where ABB products are the most beneficial to the user. This includes such topics as artificial lift apps & software, pump control, wellhead control, datalogging, and energy station apps.

Enjoy a warm cup of TOPECA coffee, an in-depth conversation with an ABB specialist, or study product demonstrations with replicas of various field instrumentation.
Breakout sessions

**Advanced FCU/RTU applications**
Operations and trending including NGC  
**TRAINERS – DAN ROECKER**  
Learn the basic functions and controls available utilizing the Totalflow operations and trending applications. A general explanation of these functions will be presented, as well as a “real world” custom configuration that will demonstrate how an advanced function can be developed and implemented.

**Artificial lift: Gas lift**
Getting the most from your well with the gas lift application  
**TRAINER – DOUG WOHLLEKING**  
An in-depth look at the Gas Lift application, including theory & concepts, hardware and automation and Valve Control/PID set-up. Learn basic/advanced options in the app, as well as how to set up GAPL/PAGL systems.

**Artificial lift: PAS 2.0**
Using Plunger Analysis Software (PAS) for artificial lift  
**TRAINERS – BRADEN ROBINSON**  
Intro to the new PAS 2.0 software and how to optimize, Lift theory, concepts, & best practices. Learn how the logic for this app functions, the “how-to’s” on set-up for plunger control, and parameter set-up for On/Off times.

**Automatic applications**
Automation applications for the XSeries platform  
**TRAINER – BRADEN ROBINSON**  
Participants learn about the automation applications available for Totalflow Products products. Emphasis is on I/O communications plus system and utility applications including trending, alarms, valve control, pid, shutdowns, artificial lift, and more.

**Coriolis measurement & applications**
Gas/Liquid Coriolis interfaces and measurement applications  
**TRAINERS – FRANK FRENZEL**  
Explore how the Coriolis works, and how to choose the right one based on the application. Discussions include LACT, allocation metering, (produced water, oil) or from a separator, etc.

**Field instrumentation devices**
Pressure, level & temperature measurement solutions  
**TRAINER – JIM HOLDEN**  
Reviews the available technologies being used for level measurement, and studies how these devices can be used in custody transfer, manage inventories applications, and potential ABB solutions.

**Field troubleshooting: NGC**
Field troubleshooting techniques for the NGC  
**TRAINERS – CALEB NORTINGTON**  
Topics include PCCU, what to expect when hardware fails, and proper setup and maintenance for preventing sample handling problems. Come prepared to participate during the Q&A session.

**Grounding / Wiring**
Protecting electronic devices in high transient environments  
**TRAINER – LEON BLACK**  
Explore simple to complex ideas for installation of equipment in transient environments. Learn how transients originate, how they impact equipment, and how to minimize their impact. Emphasis is given to wiring of ABB devices, but can also be applied to other instruments.
IEC program
Controlling the cost of chemicals in the field & LACT
TRAINER – B.J. WALKER
Discover an integrated solution for inventory, management, and optimal chemical injection across a site and a field. Learn how this system helps you better manage inventory/well optimization and site operation with meaningful data, event logging, and how it can be joined with artificial lift applications to optimize production.

Magmeter measurement
Introduction to electromagnetic flow meters
TRAINER – ANTHONY BIONDO
Attendees will cover the principles of electromagnetic induction, how the flow of conductive fluids is measured using this principle, and learn the components of the meter. How to identify installation requirements and learn basic troubleshooting will also be covered.

Programming with IEC
Custom programming with IEC 61131
TRAINER – BROCK PATTERSON
Learn PLC programming to create your own custom solution while having access to existing applications. Through our implementation of the IsaGraf IEC-61131 industry standard you can now measure, control and automate all in one.

Remote modular controller (RMC)
ABB product updates
TRAINER – B.J. WALKER
The class covers functionality & performance, integration into ABB enclosures (Xcos), examples of different wellpad configuration files, interfacing with instrumentation, host systems, and local HMIs.

Spirit IT hardware / software
Exploring the Spirit IT hardware & software
TRAINERS – BRENT PALMER
This class covers liquid custody transfer applications such as LACTs, crude oil gathering stations, and pipeline metering stations along with an in depth look at configuring the Flow-X flow computer.

Wireless field networking systems
Building blocks for the modern field network
TRAINER – RENNER VAUGHN
Learn about ABB’s modern wireless architecture and purpose-built solutions for the well pad that enable real-time SCADA, video, and mobile work order applications anywhere in the field.

LGR analytical measurement
TDL (Tunable Diode Laser) pipeline integrity & process control
TRAINER – JESSE ZAPIEN & MARC-ANDRE LALIBERTE
Intro to measuring various components with Model 950 OA-ICOS Tunable Diode Laser analyzer. Includes sample considerations and challenges in measuring in a hydrocarbon stream with a focus on H₂S, H₂O, CO₂, and O₂. Explore application examples in natural gas transport & processes.

Measurement applications
New enhancements in measurement applications (BLM, +)
TRAINER – BARRY BALZER
Describe and setup the ABB measurement applications as it relates to field measurement including AGA3, AGA7, V-Cone, NIST 14 gas SU, NIST 14 Liquids SU, Wedge gas SU, Nozzle SU, API Liquid SU, and Gas Coriolis SU.

Recent product solutions
ABB product updates
TRAINER – GIULIA SEIKEL
Overview of the various updates and features that will be available through 2018 such as ABB Digital (Lighthouse) and wireless instrumentation.

SCADAvantage Cloud
Cloud based Metering and Analytics
TRAINER – DARREN SCHULTZ
Attendees will study the use of SCADAvantage Cloud to schedule collections, review KPIs (based on Cloud analytics), validate and reporting of well site measurement data to minimize the reporting effort and maximize field system performance.

WinCCU
Implementation and composition of WinCCU host software
TRAINERS – ANDREW MUNN
Attendees study the use of Windows Central Collection Unit (WinCCU) software to schedule, collect, configure, edit, and report on data coming in from the well sites to maximize field system performance.
Conference schedule

Overview

Important places

- Registration
- Dining area
- Coffee Shop
- General session
- Hands-on training
- Breakout sessions
- Restrooms
- Hotel lobby
- Restrooms

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**Tuesday, February 13**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00a – 5.00p</td>
<td>Registration</td>
<td>Ballroom Foyer</td>
</tr>
<tr>
<td>1.00p – 5.00p</td>
<td>Hands-on training classes</td>
<td>Madrid I, II, &amp; III</td>
</tr>
<tr>
<td>5.15p – 6.30p</td>
<td>Welcome reception</td>
<td>Grand Ballroom</td>
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</tbody>
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**Wednesday, February 14**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
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<tbody>
<tr>
<td>6.30a – 5.00p</td>
<td>Registration</td>
<td>Ballroom Foyer</td>
</tr>
<tr>
<td>7.00a – 8.00a</td>
<td>Breakfast</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>7.45a – 9.00a</td>
<td>General session</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>9.00a – 12.00p</td>
<td>Listening posts</td>
<td>Main hallways</td>
</tr>
<tr>
<td>9.10a – 10.30a</td>
<td>Breakout sessions</td>
<td>Classrooms</td>
</tr>
<tr>
<td>10.45a – 12.00p</td>
<td>Breakout sessions</td>
<td>Classrooms</td>
</tr>
<tr>
<td>12.00p – 1.00p</td>
<td>Lunch</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>1.00p – 5.15p</td>
<td>Listening posts</td>
<td>Main hallways</td>
</tr>
<tr>
<td>1.00p – 2.15p</td>
<td>Breakout sessions</td>
<td>Classrooms</td>
</tr>
<tr>
<td>2.30p – 3.45p</td>
<td>Breakout sessions</td>
<td>Classrooms</td>
</tr>
<tr>
<td>4.00p – 5.15p</td>
<td>Breakout sessions</td>
<td>Classrooms</td>
</tr>
<tr>
<td>5.30p – 5.45p</td>
<td>XWorks drone demo</td>
<td>Outside</td>
</tr>
<tr>
<td>5.30p – 8.00p</td>
<td>Entertainment/Casino</td>
<td>Grand Ballroom</td>
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**Thursday, February 15**

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.00a – 8.00a</td>
<td>Continental breakfast</td>
<td>Grand Ballroom</td>
</tr>
<tr>
<td>8.00a – 12.00p</td>
<td>Hands-on training classes</td>
<td>Madrid I, II, &amp; III</td>
</tr>
<tr>
<td>8.00a – 9.15a</td>
<td>Breakout sessions</td>
<td>Seville I, II, &amp; III &amp; Salon II</td>
</tr>
</tbody>
</table>
Daily class schedule
Tuesday, February 13

REGISTRATION

Ballroom lobby
10.00a – 5.00p

GAS CHROMATOGRAPH TRAINING

Madrid I
1.00p – 5.00p

RMC / XCORE TRAINING

Madrid II
1.00p – 5.00p

FLOW COMPUTER / RTU TRAINING

Madrid III
1.00p – 5.00p

WELCOME RECEPTION

Grand Ballroom
5.15p – 6.30p

Enjoy cocktails and hors d’oeuvres before the conference begins.
Daily class schedule
Wednesday, February 14

REGISTRATION
- Ballroom lobby
  6.30a – 5.00p

BREAKFAST
- Grand Ballroom
  7.00a – 8.00a

LISTENING POSTS
- Main hallways
  9.00a – 12.00p

MAJOR DAN ROONEY
- Grand Ballroom
  7.45a – 9.00a

BREAKOUT SESSIONS
- 9.10a – 10.30a
  Field troubleshooting: NGC Madrid I
  Field troubleshooting: FCU Madrid III
  Field instrumentation devices Seville I
  Grounding / Wiring Seville II
  Remote modular controller (RMC) Seville III
  Advanced RTU / FCU Salon VII

BREAKOUT SESSIONS
- 10.45a – 12.00p
  Gas chromatograph Madrid I
  Artificial lift: Plunger lift Madrid III
  Communications / Power Seville I
  IEC program Seville II
  Measurement applications Seville III
  Spirit IT hardware / software Salon VII
  WinCCU Salon VIIIX-IIX

LUNCH
- Grand Ballroom
  12.00p – 1.00p

REGISTRATION
- Ballroom lobby
  6.30a – 5.00p
LISTENING POSTS

Main hallways
1.00p – 5.15p

BREAKOUT SESSIONS

1.00p – 2.15p
Field troubleshooting: NGC Madrid I
Artificial lift: PAS 2.0 Madrid III
Coriolis measurement & apps Seville I
Magmeter measurement Seville II
LGR analytical measurement Seville III
Advanced RTU / FCU Salon VII
Wireless communications Salon VII-IX

2.30p – 3.45p
Gas chromatograph Madrid I
Artificial lift: Gas lift Madrid III
Field instrumentation devices Seville I
Communications / Power Seville III
Spirit IT hardware / software Salon VII
SCADA Advantage Cloud Salon VII-IX

4.00p – 5.15p
Automation applications Madrid III
Recent product solutions Seville I
Coriolis measurement & apps Seville II
Remote modular controller (RMC) Seville III

XWORKS DRONE DEMO
Outside: NE corner of hotel
5.30p – 5.45p

ENTERTAINMENT

Grand Ballroom
5.30p – 8.00p

SMITH BROTHERS BAND
The Smith Brothers Band is back again for 2017!
Enjoy the sounds of classic rock throughout the party.

DIRT ROAD DETOURS
This local band takes playing very seriously, but don’t worry, it’s not all business on the stage.

LIVE DIGITAL CARICATURES
Have your picture drawn by the world’s first iPad caricaturist! Sketches are drawn in minutes and printed instantly.

CASINO NIGHTS OF TULSA
The Measurement & Automation Conference wouldn’t be the same without Casino Night!
Daily class schedule
Thursday, February 15

CONTINENTAL BREAKFAST
- Ballroom lobby
  7.00a – 8.00a

BREAKOUT SESSIONS
- 8.00a – 9.15a
  Programming with IEC
  Artificial lift: Plunger lift
  Measurement applications
  Recent product solutions
  - Seville I
  - Seville II
  - Seville III
  - Salon II

GAS CHROMATOGRAPH TRAINING
- Madrid I
  8.00a – 12.00p

RMC / XCORE TRAINING
- Madrid II
  8.00a – 12.00p

FLOW COMPUTER / RTU TRAINING
- Madrid III
  8.00a – 12.00p
Event sponsors
Visit their booths for more information

A+ CORPORATION
www.geniefilters.com
A+ will display the Analytically Correct Engineered Systems (ACES) which create a simple solution for a complex problem by combining industry leading sample extraction conditioning components with application specific problem solving expertise.

AUTOSOL
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AutoSol leads the way in secure, reliable data transmission providing data solutions that communicate via IIoT. Our comprehensive suite of products improve data performance and ensure its reliable, secure collection and delivery.

FLOW-CAL
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Flow-Cal, Inc.’s software is used to validate, recalculate, store, and report gas and liquid measurement data. Our line of measurement software applications range from simple data management and reporting to enterprise applications.

MUSTANG SAMPLING
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Mustang Sampling, LLC is the innovator of Analytically Accurate solutions within sample conditioning systems. We provide custom solutions of products and services globally to the Natural Gas, NGL, and LNG industries.

CANADA PIPELINE
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Canada Pipeline is dedicated to the improvement of flow measurement accuracy through leading-edge equipment and engineering services. We offer consultations on meter station designs using our extensive fluid dynamic experience.

DEEP FORK AUTOMATION
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Specializing in fit for purpose solutions, SCADA and Automation is now available. Anytime service cancellation coupled with in-house system conversion are just a few of the benefits which you won’t find anywhere else.

EXODUS STORED ENERGY
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Exodus’ provides advanced power solutions centered on a Lithium-ion power unit called Lithium Iron Phosphate (LFP) for the commercial market. LFP batteries are one of the most advanced forms of these batteries commercially available.

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XWORKS
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XWorks is a manufacturer and provider that is integrating drones into a global service and stewardship role. XWorks has manufactured a drone landing station that launches, recovers, replenishes power supply, and relaunches drones.