

2010 Pittsburgh ISA Education & Product Expo

INSTRUMENTATION AND AUTOMATION SYMPOSIA AND DISPLAYS

Tuesday, March 9th, 2010

**Instrumentation and Controls • Computer Systems
Test and Measurement Instrumentation • Software Manufacturers**

Over 12,000 square feet of exhibit space featuring a minimum of 1500 manufacturers exhibiting the newest and latest in process-related technologies.

Product Expo

Registration

Pre-Registration:	ISA Member	No Charge
	Non-Member	No Charge
At-The-Door:	ISA Member	\$10.00
	Non-Member	\$15.00

Hours

9:00 a.m. to 5:00 p.m.

Education Symposia Registration

(Includes attendance at Expo)

Pre-Registration:	One Class:	Two Classes:	
	ISA Member	\$60.00	ISA Member \$100.00
	Non-Member	\$90.00	Non-Member \$150.00

At The Door Symposia Registration One Class: \$100.00

Education Symposia Hours

Morning: 9:30 a.m. to 12:30 p.m. Afternoon: 1:30 p.m. to 4:30 p.m.

Location

Regional Learning Alliance at Cranberry Woods, 850 Cranberry Woods Drive, Cranberry Township, PA 16066.

Directions

From Pittsburgh and South:

Take Interstate 79 North to /exit 78 (Route 228) Cranberry/Mars. Turn right onto Route 228 East. At the first traffic light, turn right onto Cranberry Woods Drive (the Marriott Hotel will be on the Right). Follow Cranberry Woods Drive to the first stop sign. Continue straight through the stop sign. In 100 yards turn right (no street sign). The MSA building will be on the left. Follow drive straight ahead for 250 yards to the entrance to the RLA.

From Erie and North:

Take Interstate 79 South to Exit 78 (Route 228) Cranberry/Mars. Turn left onto Route 228 East. At the second traffic light, turn right onto Cranberry Woods Drive (the Marriott Hotel will be on the right). Follow Cranberry Woods Drive to the first stop sign. Continue straight through the stop sign. In 100 yards turn right (no street sign). The MSA building will be on your left. Follow drive straight ahead for 250 yards to the entrance to the RLA.

From Ohio and West:

Take Interstate 76 East to Exit 28 (Old Exit 3). Follow signs for Interstate 79 North. Take the second exit, Exit 78, Route 228, Cranberry/Mars. Turn right onto Route 228 East. At the second traffic light, turn right only Cranberry Wood Drive (the Marriott Hotel will be on the right). Follow Cranberry Woods Drive to the first stop sign. Continue straight through the stop sign. In 100 yards turn right (no street sign). The MSA building will be on your left. Follow drive straight ahead for 250 yards to the entrance to the RLA.

From Harrisburg and East:

Take Interstate 76 West to Exit 28 (Old Exit 3). Follow signs for Interstate 79 North. Take the first exit, Exit 78, Route 228, Cranberry/Mars. Turn right onto Route 228 East. At the second light, turn right only Cranberry Wood Drive (the Marriott Hotel will be on the right). Follow Cranberry Wood Drive to the first stop sign. Continue straight through the stop sign. In 100 yards turn right (no street sign). The MSA building will be on your left. Follow drive straight ahead for 250 yards to the entrance to the RLA.

Parking

Parking is FREE all day. No charge at any time.

Classrooms

The classrooms are state-of-the-art facilities that hold 25 people so attendance is limited. This will allow individual attention to participants. They are each private and separate rooms that will be removed from all noise from the exhibit hall. Each room is equipped with visual aid equipment of the highest quality.

Professional Development Hours

We offer Professional Development Hour Certificates for any symposium you attend. Please complete the information on the registration form. Certificates will be distributed immediately after the sessions.

Pre-Registration Forms

The Registration Form must be completed in its entirety. Or check our web site and complete the form there. Pre-registration forms must be received in our office no later than 5:00 p.m. Friday, March 5th, 2010. If you register for a class that is already full, we will immediately notify you. **CONFIRMATIONS ARE NOT MAILED.** You are able to print a confirmation on the web site.

Badges

Badges for those who register in advance can be picked up at the Pre-Registration Desk the day of the Show. Please do not complete another card when you arrive. **NO BADGES ARE MAILED.**

2010 Education

HELD IN CONJUNCTION WITH THE

Morning Seminars 9:30 a.m. to 12:30 p.m.

Best Practices for Applying EtherNet/IP

Richard Pontello, Solution Architect, Automation and Software, Rockwell Automation and Jim Ralston, Northeast Regional Manager, Prosoft Technology

You will learn how to successfully apply Ethernet in automation applications. This session gives information about key network design and architecture considerations, including information on network infrastructure and available technical resources. Additionally, you will learn about the different wireless technologies that can be applied today as well as the many application considerations to take into account when selecting which technology best fits your application.

Improving Calibration Productivity

Kim Anderson, Regional Sales Manager, FasTEST, INC.

In today's economy we are faced with tighter budgets, down sizing and higher energy costs. These issues impact the process control industry and looking for ways to reduce costs and improve productivity is important. Calibrated instruments can reduce variability, reduce energy costs or in some cases insure the quality of the products being produced. We will explore the challenges faced by technicians and managers regarding calibration. We will also review techniques to impact the bottom line by improving technician's efficiency.

Instrument & Control Drawings and Symbology

(Including a detailed Discussion of recent updates made to ANSI/ISA5.1-2009)

James Federlein, P.E., Federlein and Associates

Symbology specific to instrumentation and control plays an important role in a wide range of drawings (e.g. P&IDs, loop drawings, logic, elementaries, etc.) and other documents throughout the life cycle of that hardware. Because of the fact that many people utilize these drawings through the equipment life cycle, use of standard symbology is important for clearly communicating and understanding the concepts and details of these technical documents. ANSI/ISA5.1 is a widely recognized instrument symbology standard. In September 2009 significant revision to this standard was approved and published, expanding the content, adding new symbols and revising old symbols. This seminar will discuss the purpose and content of various instrumentation and control drawings, the use of ANSI/ISA5.1 and other standards, and the impact of the recent changes to ANSI/ISA5.1.

Introduction to Control Valve Architecture and Selection

Lance Conklin, Sales Engineer, Equipment and Controls

The class will include a review of the different styles of control valve architecture and how they are best applied in process applications. The process engineer has many choices when it comes to control valve styles. Which is the best control valve for a particular application? The discussion will include a review of ball valves, butterfly valves, sliding valves, plug valves, and several other valve styles, along with information for function and cost consideration for each

type. A review of different actuator and positioner types will be included as they relate to a control valve package.

Troubleshooting Tools for Hi Volume Batch Process in Food Industry

Karen Walder, Project Manager, Advanced Control Solutions, Inc.

Troubleshooting tools assist a large-scale producer in responding to process upsets and reduce downtime. Implemented as part of the control system's HMI (Human Machine Interface), the tools serve the multiple disciplines of plant-floor resources and combines documents and drawings, prior upset/response history, and real-time control system diagnostics. By quickly locating and presenting relevant data, plant service personnel have significantly improved response time for this high food production facility.

Wireless Mesh Networking with I/O Radios

John Balanetsky, EIPro

Driven by the ISA SP100 committee, the wireless industry has moved into the mesh networking area. Not only wireless modems, but I/O radios can now be part of the mesh network. Mesh technology brings a number of unique features including a masterless node network with redundancy being an important aspect. This as well as other aspects will be discussed, including the features of the ISA100 wireless standard which is the opposing standard to WirelessHART.

Afternoon Seminars 1:30 p.m. to 4:30 p.m.

Introduction to Regulator Types and Applications

Steve Ludtman, Regulator Division, Fisher Controls

This class will be a discussion focused on styles of regulators, operational issues, sizing parameters, and cost considerations for both pressure reducing and pressure relief applications. This will include a review of self-operated versus pilot operated units and issues of off-set and capacity. Other issues to be presented are over pressure protection, and learning how to select the best regulator for your natural gas or process application.

Level Measurement Best Practices

Dan Armstrong, Business Development Manager, Rosemount Division, Emerson

This session will include a discussion of level technologies, advantages and disadvantages of key technologies and recent developments. Focus will be given to application parameters and installation considerations when considering these technologies. Technologies include non contacting radar, ultrasonic, guided wave radar, D/P, level, capacitance and displacer.

Nuclear Renaissance II

Keith Newmyer, Project Manager, Westinghouse and Art Wharton, Sr. Project Risk Engineer, Westinghouse

This session was requested as a continuation of our popular October Technical Meeting. Nuclear Renaissance is the current catch phrase in the power industry. The U. S. President and global leaders are tak-

onal Symposia

PITTSBURGH ISA PRODUCT EXPO

ing a fresh perspective to a once low key power generation source as a solution to future power needs. This presentation will include: why is nuclear power on a comeback; the safety record of the nuclear industry; nuclear power basics; basic nuclear power plant types; pros and cons of all forms of power; and, passive safety aspects of the new AP1000. Because of the number of questions in October the speakers will allow significant time for your questions so come prepared.

PLC-Based Simulation Speeds Operator Training and Certification

Karen Walder, Project Manager, Advanced Control Solutions, Inc.

While the value of simulation prior to the roll-out of a new control system is well known, a strong simulation platform also proves of value for on-going Operator Training and Certification. Day-to-Day, an Operator may face a critical upset just once in months; however timely and effective response to that upset can decide the difference between costly downtime and/or equipment repairs and smooth return to production and a safe environment for employees. Likewise, ensuring Operation staff on all shifts is trained in acceptable responses for specific scenarios is accomplished using effective simulation. This presentation covers the development and deployment of a PLC-resident simulator that is currently used for Operator Training (and may ultimately be qualified for Certification). It also addresses the importance of simulating both single and multiple-failure scenarios.

Screw It In, Don't Screw It Up. Quick Disconnects and Digital Buses Even in Classified Areas

Kelli Ruble, Business Development Manager, Process Automation, Turck

This session will cover three aspects, the first area being classification overview: 2008 NEC requirements for FM classified areas; methods of protection for these areas; and, how to meet class 1, division 1 or class 1 division 2 without pouring seals. The second area is the subject of using quick disconnects: retrofitting existing, rigid conduit installations with water tight quick disconnects; and, reducing costs in new installations using quick disconnect. The third topic to be covered is digital bus protocol overview: why use digital buses; what are the topologies of typical digital buses; how do you choose a digital bus network protocol; and, bus to bus communication versus point to bus communication.

WirelessHART Device Networks

John Kuloszewski, Wireless Specialist Leader, Rosemount Division, Emerson

All industries are quickly leveraging the value of wireless networks. This seminar will provide attendees with a better understanding of WirelessHART technology. Topics will include: wireless system terminology, the fundamentals of smart WirelessHART device networks, best practices, application of smart WirelessHART device networks, wireless system topography, configuration of smart WirelessHART device networks, and, real-time device diagnostic capabilities of smart WirelessHART networks. The objective of this training is to provide attendees with a better understanding of device networks, on-line device diagnostics and associated best practices.

ISA National Sponsored Class Safety Instrumented Systems – The Must know for Implementation (EC50C)

Tuesday, March 9th, 2010

Location: Regional Learning Alliance
*In conjunction with the ISA Pittsburgh
Education and Product Expo*

Time: 8:00 a.m. to 4:00 p.m.

CEU Credits: 0.7

Cost: ISA Member \$445.00

Non-Member \$545.00

Register on line at: www.isa.org

There are many different ways of designing a safety instrumented systems (SIS). Questions like these are being asked by users and engineering firms alike:

- Which technology should be used (electric, electronic, or programmable)?
- What level of redundancy is appropriate (single, dual, or triple)?
- How often should systems be tested (monthly, quarterly, yearly, or once per shutdown)?
- What about field devices (technology, level of redundancy, and test intervals)?

Debate continues as to how one even makes these choices (past experience, qualitative judgment, quantitative analysis, etc.). This seminar will cover the basis of what needs to be done in the design and selection of safety systems.

You will be able to:

- Recognize the design basics of recent standards, guidelines, and recommended practices;
- Describe the differences between process control and safety control;
- Describe the life cycle set of activities that are necessary to design, implement, And maintain safety systems;
- Discuss the basics of evaluating process risk levels;

Safety Instrumented Systems

Continued from previous page

- Discuss the basics of determining Safety Integrity Levels (SILs);
- Describe the failure modes of safety systems;
- Recognize the real impact of redundancy;
- Describe the pros and cons of various logic system technologies;
- Explain the impact of field on system performance;
- Identify documentation requirements.

The instructor is Paul Gruhn who is well known in ISA National circles. He is a Safety Product Specialist at ICS Triplex, a control and safety system manufacturer and integrator in Houston, TX. Gruhn is a member of the ISA84 committee, co-author of the ISA textbook Safety Instrumented Systems: Design, Analysis and Justification, and the developer of a control and safety system modeling software package. He is a registered professional engineer in Texas, a Certified Functional Safety Expert and an ISA Fellow.

“Jobs” Booth

If you are in search of a job, drop off your resume at the Registration Booth. Leave a copy of your resume, with your name and address on file at the booth. Or you can leave a confidential copy and have a number assigned to it. In the latter case, Pittsburgh ISA will keep a confidential listing of your name and the number assigned to your resume and no personal information will be given to the companies who review the resumes.

Employers looking for new employees in the automation, controls and instrumentation field are encouraged to stop by the Registration Booth and look over the resumes.

Pittsburgh ISA will keep these resumes on file for a few months in the event that additional companies would like to review them. After the Expo, please contact Mariruth at 412-828-4565.



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REGISTRATION FORM

Please complete form entirely. **ONLY ONE NAME PER COPY.** Duplicated copies are acceptable. Additional copies are available from our office at 412-828-4565. Or register via our website at www.isapgh.org. Please NO telephone registrations are accepted.

Name _____

Title _____

Firm _____

E-mail Address _____

Address _____

City _____ State _____ Zip _____

Telephone _____

ISA Membership Number _____

Product Expo Registration:

<i>In Advance:</i>	ISA Member	No Charge
	Non-Member	No Charge
<i>At the Door:</i>	ISA Member	\$10.00
	Non-Member	\$15.00

Please indicate which symposia you plan to attend.

9:30 a.m. to 12:30 p.m.

- Best Practices for Applying EtherNetIP
- Improving Calibration Productivity
- Instrument & Control Drawings & Symbology
- Intro. To Control Valve Architecture & Selection
- Troubleshooting Tools for Hi Volume Batch in Food Industry
- Wireless Mesh Networking with I/O Radios

1:30 p.m. to 4:30 p.m.

- Intro. To Regulator Types and Applications
- Level Measurement Best Practices
- Nuclear Renaissance II
- PLC-Based Simulation Speeds Operator Training & Cert.
- Screw It In, Don't Screw It Up. Quick Disconnects
- WirelessHART Device Networks

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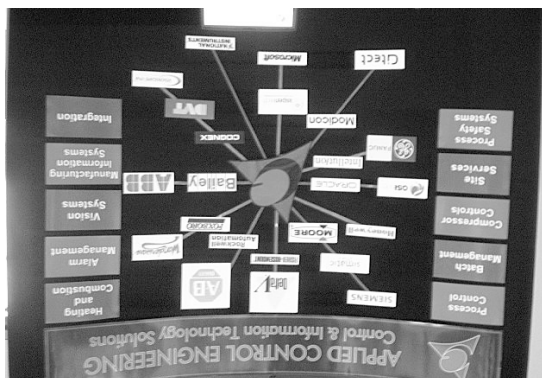
Please fold registration card in half, place in envelope and mail to:
ISA Pittsburgh, 6949 Sisto Street, Verona, PA 15147

Registration Form Courtesy of:

Registration Information and Symposia Details Inside
Location: Regional Learning Alliance, Cranberry Township
Tuesday, March 9th, 2010
Instrumentation & Automation Symposia and Displays

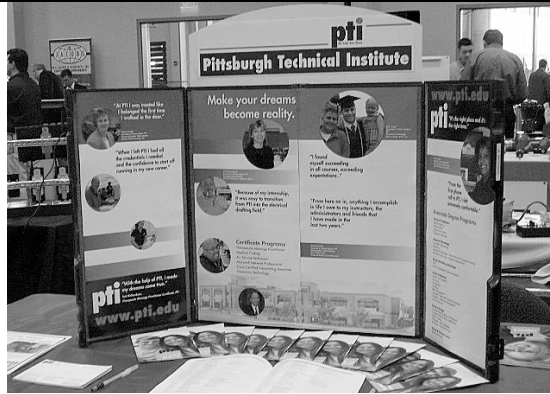
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If your occupation involves any aspect of Process Control, Do Not Miss the



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Instrumentation and Automation Symposia and Displays



Location:

Regional Learning Alliance at Cranberry Woods

850 Cranberry Woods Drive, Cranberry Township, PA 16066

(Directions can be found on our website www.isapgh.org)

12 three hour symposia dedicated to our industry topics, given in state-of-the-art class rooms. Each class is limited to 25 students. New this year – National ISA Sponsored Class “Safety Instrumented Systems – The Must Know for Implementation (EC50C)

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Tabletop Product Expo all day featuring rep and manufacturing companies from the local tri-state area.

For additional information contact:

Pittsburgh ISA Education and Product Expo

6949 Sisto Street, Verona, PA 15147



TELEPHONE: **412-828-4565** | E-MAIL: isapgh@comcast.net | WEB SITE: www.isapgh.org

