Earn Valuable Continuing Education Unit (CEU) or Professional Development Hour (PDH) Credits

ISA enhances the value of attending this year's 2014 ISA Water/Wastewater and Automatic Controls Symposium (WWAC)—to be held 5–7 August 2014 in warm, inviting Orlando, Florida, USA—by offering two content-rich technical courses in conjunction with this industry event. Both of these courses qualify for IACET-approved and FDEP-approved CEUs or for professional development hours:

- **Introduction to Industrial Automation Security and the ANSI/ISA-62443 Standards (IC32C)**—Examines in detail how the ANSI/ISA99 standards can be used to protect critical control systems (Earn 0.7 CEUs/7 PDHs!)

- **Troubleshooting Instrumentation & Control Systems (TC10)**—presents a systematic approach to troubleshooting and start-up of single and multi-loop control loops. (Earn 1.4 CEUs/14 PDHs!)

Register today to get the most out of your WWAC Symposium experience, and to gain technical know-how and practical skills—direct from industry experts—you can immediately apply at your workplace.

ISA Training: World-class instruction with real-world application

ISA technical training is recognized globally for its unbiased, practical approach to learning. ISA courses draw on the in-depth marketplace experience of more than 100 prominent subject matter experts across virtually all technical fields in automation. Instruction is as innovative—continually reflecting emerging market dynamics and new technologies—as it is flexible—available in a variety of formats, from traditional classroom settings (both offsite and onsite) to online, instructor-assisted courses and live and pre-recorded webinars.

ISA Training:

- **Fills in** missing knowledge and skills gaps
- **Teaches** the hows and whys
- **Improves** the effectiveness of on-the-job training
- **Provides** continuing education credits
- **Expands** professional networks

2014 WWAC Symposium

Now in its ninth year, ISA's 2014 WWAC Symposium offers a unique opportunity for automation, instrumentation, and SCADA professionals in the water and wastewater sectors to gain best-practice insights, share ideas, network, and earn continuing education credits.

This three-day, solutions-focused gathering will outline the critical challenges affecting essential processing and distribution of water treatment, and showcase the strategies, techniques, technologies, and people at the forefront of success and innovation. Key topics covered include emerging trends, smart water optimization, system integration, alarm management, human factors, and plant successes.

When: 5–7 August 2014
Where: Crowne Plaza—Orlando Universal, 7800 Universal Blvd, Orlando, Florida, USA
Conference Registration: Pricing available online

Visit **www.isawwsymposium.com** for event details and to register.

Earn IACET and FDEP-approved CEUs or PDHs while learning about troubleshooting instrumentation & control systems or the ANSI/ISA99 (IEC 62443) security standard!
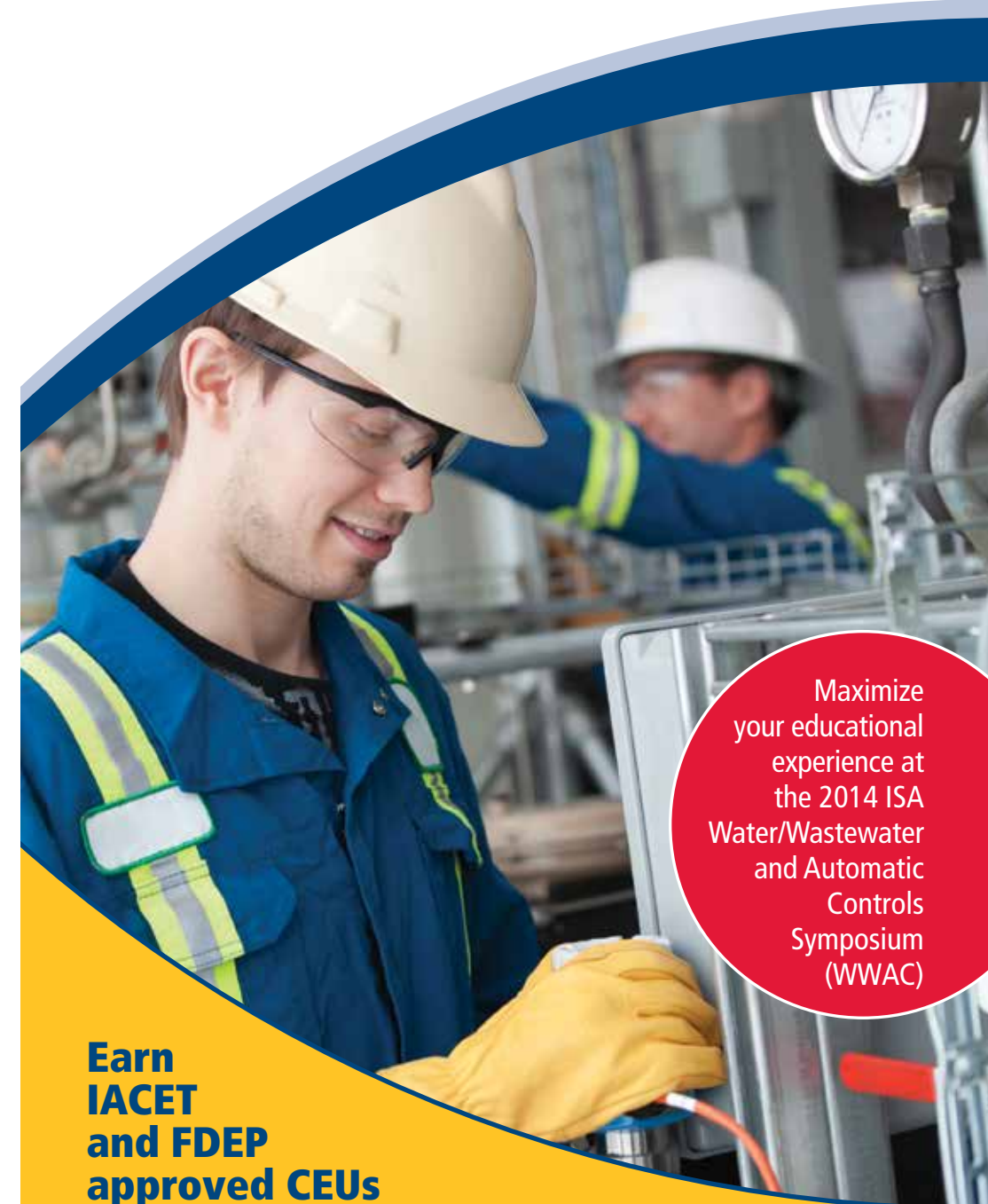
Maximize your educational experience at the 2014 ISA Water/Wastewater and Automatic Controls Symposium (WWAC)

Earn IACET and FDEP approved CEUs

when you attend either of these two valuable ISA training courses to be conducted at the event:

- Introduction to Industrial Automation Security and the ANSI/ISA-62443 Standards (IC32C) — *0.7 CEUs*
- Troubleshooting Instrumentation & Control Systems (TC10)—*1.4 CEUs*

Setting the Standard for Automation™

Earn CEUs or PDHs while you expand your skills and knowledge!

Course attendees will receive a certificate for IACET-approved and FDEP-approved CEUs issued by ISA and the FSAWWA.

Introduction to Industrial Automation Security and the ANSI/ISA-62443 Standards (IC32C)

Earn 0.7 CEUs!

Date: 5 August 2014   **Instructor:** John Cusimano, CFSE, CISSP

Understanding how to secure factory automation, process control, and Supervisory Control and Data Acquisition (SCADA) networks is critical if you want to protect them from viruses, hackers, spies, and saboteurs.

This seminar teaches you the basics of the ISA/IEC 62443 standards and how these can be applied in the typical factory or plant. In this seminar, you will be introduced to the terminology, concepts, and models, as well as the element of creating a cyber-security management system will be explained along with how these should be applied to industrial automation and control systems.

You Will Be Able To:
- Discuss why improving industrial security is necessary to protect people, property, and profits
- Define the terminology, concepts, and models for electronic security in the industrial automation and control systems environment
- Define the elements of the ANSI/ISA-62443-2-1 (ANSI/ISA-99.02.01-2009)-Security for Industrial Automation and Control Systems: Establishing an Industrial Automation and Control Systems Security Program
- Define the core concepts of risk and vulnerability analysis methodologies
- Define the concepts of defense in depth and the zone/conduit models of security
- Explain the basic principles behind the policy development and key risk mitigation techniques
- Explain why improving industrial security will be necessary to protect people, property, and profits

You Will Cover:
- What is Electronic Security for Industrial Automation and Control Systems? | Trends in Security Incidents
- How IT and the Plant Floor are Different and How They are the Same
- Creating A Security Program: Critical Factors for Success
- Risk Analysis: Business Rationale | Risk Identification, Classification, and Assessment
- Addressing Risk with Security Policy, Organization, and Awareness
- Addressing Risk with Selected Security Counter Measures
- Account Administration, Authentication, and Authorization
- Addressing Risk with Implementation Measures
- Monitoring and Improving the CSMS

Includes ISA Standards:
- ANSI/ISA-62443-1-1; ANSI/ISA-62443-2-1; and ANSI/ISA-62443-3-3

Course Details:
Course No.: IC32C
Course Hours: 8:00 a.m.–4:00 p.m. (Lunch included with registration)
CEUs (PDHs): 0.7 (7)

Register or learn more at:
www.isa.org/2014/IC32C/WWAC

Troubleshooting Instrumentation & Control Systems (TC10)

Earn 1.4 CEUs!

Date: 4–5 August 2014   **Instructor:** Don Lovell

This course presents a systematic approach to troubleshooting and start-up of single and multi-loop control loops. You'll see how pressure, level, flow, and temperature loops operate to maintain good process control systems. A knowledge of instrumentation and control is assumed.

You Will Be Able To:
- Develop a systematic approach to troubleshooting
- Identify why a systematic approach to troubleshooting is most effective
- Follow specified procedures for proper loop check-out
- Verify, locate, and identify performance problems and the causes of the problems
- Take or recommend appropriate follow-up procedures to minimize problem recurrence
- Identify the common causes of sensor, transmitter, controller, and final control element problems
- Troubleshoot control systems
- Apply distributed control system (DCS) functions for troubleshooting
- Interpret pneumatic and electronic loops
- Apply safety practices for start-up
- Check and utilize control loop documentation
- Discuss applications and procedures to troubleshoot conventional analog control systems
- State the general operation features of a HART™ control system
- State the general operations features of a FIELDBUS control system
- Compare general troubleshooting procedures for conventional, FIELDBUS, and HART™ control systems

You Will Cover:
- Purpose and reasons for Troubleshooting
- Approaches to Troubleshooting
- Logical Analysis Troubleshooting
- Review of ISA Standard Diagrams and Symbols
- Single-Loop Feedback Control Troubleshooting
- Multi-Loop Control Systems Troubleshooting
- Introduction to Digital Control Systems
- Distributed Control Functions for Troubleshooting
- Start-up Concerns

Classroom/Laboratory Exercises:
- Diagnose and solve problems with single-loop control loops
- Diagnose and solve problems with ratio, cascade, and three-element control loop systems
- Diagnose problems using DCS displays for information
- Troubleshoot several single control loop problems

Course Details:
Length: 2 day
Course No.: TC10
CEUs (PDHs) Credits: 1.4 (14)
Course Hours: 8:00 a.m.–4:00 p.m. (Lunch included with registration.)

Register or learn more at:
www.isa.org/2014/TC10/WWAC

Leverage the experience of our expert instructors!

John Cusimano, CFSE, CISSP is director of exida's security services division. A process automation safety, security, and reliability expert with more than 20 years of experience, Cusimano leads a team devoted to improving the security of control systems for companies worldwide. He has conducted or supervised numerous cybersecurity assessments of control system products, systems, sites, and corporations. Cusimano is chairman of ISA99 WG4 TG2 Zones & Conduits committee and co-chair of ISA99 WG4 TG6 Product Development committee. Cusimano is involved in the ISA99 standards committee on control system security; the ISA Security Compliance Institute; and a variety of other ISA99, ISA84, and ICSJWG working groups. He is a qualified Achilles™ communication robustness test engineer. Cusimano has a Bachelor of Science in Electrical & Computer Engineering from Clarkson University.

Don Lovell is a Senior Life member of ISA, having served in local and national positions. Currently, he is an automation consultant assisting customers in defining their automation road map to meet their business objectives. Don has been involved in the process automation field for 40 years with experience in batch and continuous applications. Industries included beverage, cement, fine chemical, food, paper and industrial boilers. Employer history includes Honeywell, ITT Education Services, Kellogg, Invensys and Rockwell Automation.

Don has a degree in Electronics Engineering and has authored numerous papers and presentations, process/operational training and maintenance manuals, and developed a four-year apprentice program for automation technicians

Space is limited— register early!
To register or learn more, visit **www.isa.org/WWAC/T2014** or call **+1 919-549-8411.**