

Setting the Standard for Automation™ Calendar of WWID Events

May 6-8, 2017 ISA Spring Leaders Meeting

Raleigh, North Carolina, USA

Aug 8-10, 2017 2017 ISA Water/Wastewater and Automatic Controls Symposium

Wyndham Lake Buena Vista Resort

Orlando, Florida, USA

Oct 28-30, 2017 ISA Fall Leaders Meeting

& 55th ISA Honors & Awards Gala

Tampa Bay, Florida, USA

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Newsletter Fall/December 2016

Director's Welcome

Kevin Patel, Signature Automation



The 2016 year is coming to an end and as it does, we continue to reflect on all the great things the division has done with the annual symposium and then continue to discuss how we can make each year going forward even better. We have already started the process of planning for our 2017 Water/Wastewater and

Automatic Controls Symposium and are currently looking at potential locations for our 2018 event outside of the Orlando, Florida area.

I want to congratulate Pavol on leading the planning efforts of our 2016 symposium event. The event provided excellent technical content and was also co-located with the WEF Intelligent Water Systems Knowledge Development Forum. ISA and WEF continue to collaborate in an effort to strengthen our automation knowledge from each of our organizations' members.

Be sure to read about our 2016 symposium and how you can get involved or volunteer to assist for our 2017 event. Also, in this issue you will find information on our division's student scholarship and how any one of our members or their family members can apply. In an effort to make students aware of the water/wastewater automation profession, the student scholarship is a great benefit for our members and their relatives. ...continued on page 3

Newsletter Editor's Welcome

Graham Nasby, City of Guelph Water Services



Welcome to the Fall/December 2016 ISA water/wastewater division newsletter! In the past year we have undertaken a very successful 2016 symposium, attended two ISA society-level leader meetings, organized a technical session at the Water Environment Federation's WEFTEC 2016 show, and

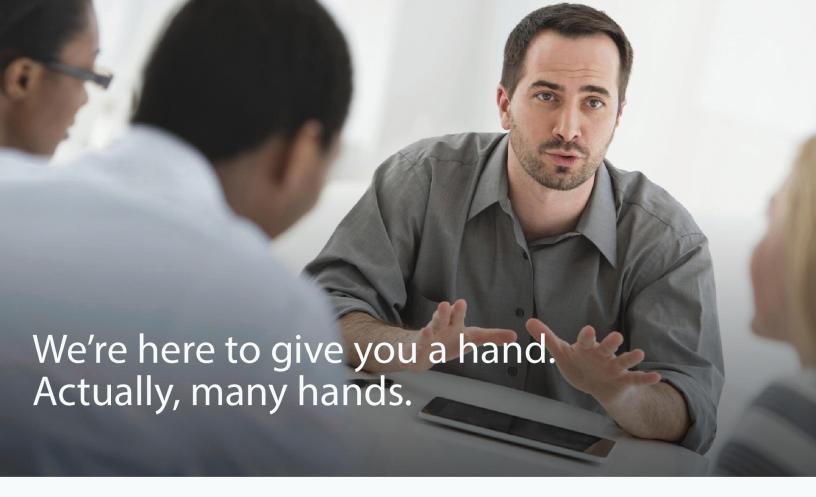
participated in municipal water/wastewater industry events.

In this issue you will read all about our recently-held 2016 ISA Water/Wastewater and Automatic Controls Symposium. You will also find articles about our annual WWID Student Scholarship, activities of the WWID in the municipal water sector, water industry developments, and a technical article about water instrumentation philosophy.

I encourage you to get involved with our upcoming 2017 symposium that is being held August 8-10, 2017 at the Wyndham Lake Buena Vista Resort Hotel in Orlando Florida, USA. In these pages you will find a Save the Date Poster and the Call for Abstracts. Our next issue will contain information about exhibiting and sponsoring our 2017 symposium.

Warmest Regards,

Graham Nasby, P.Eng. graham.nasby@guelph.ca



We've got the technology, experience and expertise. You'll find it all at our Water Wastewater Competency Center.

Nearly 150 water industry specialists make up the backbone of the Schneider Electric **Water Wastewater Competency Center (WWCC)**. It is a highly dedicated team that delivers everything from world-class integrated system design to continuous service – all designed to help you manage your energy for critical water treatment systems.

Every working day, the WWCC helps customers meet and exceed requirements for sustainability and energy efficiency, site and data security, process control and optimization, lighting, demand response and renewable energy. And that's just the start. We are also committed to providing you with local, face-to-face training on a wide variety of water industry topics to help you reach operational goals. Plus, with our trusted brands, you are guaranteed top-of-the-line products and solutions.

If you're looking to optimize energy usage in your facility, look no further than Schneider Electric.



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Message from your Director-Elect

Pavol Segedy, HDR Inc.



It has been my pleasure to serve you, our industry leaders, during this past year as division's director elect. My goal was to get to know as many of you as possible and understand the current needs from our members.

We had another great symposium this year that brought us all together again. I personally really enjoyed catching up with all the speakers, exhibitors and attendees. I learned a few new things from our presenters and exhibitors. Thank you, the readers of WWID newsletter, participants, members and volunteers of ISA for brining so much value to our water community.

I am happy to say that we are currently planning our next WWAC Symposium in 2017. We are looking to grow and expand this event. We are going through some growing pains and I would like to encourage you to come and join us during this event either by volunteering and/or by presenting. We all make a difference in what we do, and I would like to inspire you to share it with all of us. Interactions with people who have different life experiences and viewpoints present opportunities to challenge beliefs and reexamine the world in which we live.

As always, please do not hesitate to contact me with any of your suggestions, questions, or ideas for the symposium or WWID division in order to help it grow/benefit our members.

Respectfully, Pavol Segedy, PE WWID Director-elect psegedy@nc.rr.com

Director's Message (continued from page 1)

I began my career as a co-op student for a water/wastewater engineering firm and still look to that moment as the valuable knowledge I gained that helped me understand the industry and shape my career. The students are most impressionable during these years and helping them become aware of the work that has shaped all of our careers can only help our ever growing industry and allow them to share their knowledge and experience with ISA.

As always, please do not hesitate to contact me with any of your ideas and suggestions for the division to help it continue to be beneficial for our members.

Thanks, **Kevin Patel, PE** 2016-2017 WWID Director knpatel@sig-auto.com

Upcoming Events

Here are some upcoming events for the Water/Wastewater Automation Professional:

AWWA ACE 2017

June 11-14, 2017

Philadelphia, Pennsylvania, USA

ISA WWAC Symposium 2017

August 8-10, 2017

Orlando, Florida, USA

Venue/Hotel: Wyndham Lake Buena Vista Resort

WEFTEC 2017

Sept 30 – Oct 4, 2017 Chicago, Illinois, USA

ISA WWAC Symposium 2018

August 7-9, 2018

Location to be announced Venue/Hotel: to be announced





SAVE THE DATE August 8-10, 2017

2017 ISA Water/Wastewater and Automatic Controls Symposium

August 8 to 10, 2017 • Wyndham Lake Buena Vista Resort • Orlando, Florida, USA
Presented by the ISA Water/Wastewater Industries Division – www.isawwsymposium.com
Technical co-sponsors: Florida AWWA Section, the WEF Automation and Info Tech Committee,
Florida Water Environment Association, Instrumentation Testing Association, and ISA Tampa Bay Section



2017 TECHNICAL PROGRAM

The 2017 symposium has a special focus on how automation will be involved and integrated into many of our day-to-day activities. The two day technical program will include a keynote address, a special welcome from the director of the ISA water/wastewater division, and an invited speaker. Guest speakers from the AWWA and WEF will also speak about the current advances in using instrumentation and SCADA in their sectors.

Interested in speaking at next year's symposium? Authors can present a 30-minute talk, 6-12 page paper, or a large format poster. The Call for Abstracts is now available at www.isawwsymposium.com/call-for-abstracts/. Abstract submissions (250 words) are due December 15, 2016. See the website for the full author kit, including the abstract submission template and paper topic ideas.

2017 REGISTRATION FEES:

Regular Rate \$450	Conference Hotel Rate \$109/night (no resort fee will charged at \$10)
ISA Member Rate\$350	Hotel Rate cut-off date July 15, 2017
AWWA, WEF, FWEA, ITA Member Rate \$400	Discounted block of rooms are first-come, first-serve.
Author/Speaker Rate \$150	

2017 OPTIONAL SYMPOSIUM TRAINING COURSES

SCADA Systems Integration

Introduction to SCADA Systems Integration (IC30C1)

Date: August 7, 2017 (Monday)

Length: 1 day CEU Credits: 0.7

Cost: to be announced. There will be a discount for ISA members.

This course explains the parts and technologies that make up a Supervisory Control and Data Acquisition (SCADA) system and shows you how to evaluate potential benefits of applying the technology to your process application. You will be able to explain the concepts of digital coding, protocols, and modulations methods and evaluate the benefits of several examples of Remote Terminal Units (RTUs), Master Terminal Units (MTUs), and communication methods.

SCADA Cyber Security

Using the ISA/IEC 62443 Standard to Secure Your Control System (IC32)

Date: August 7-8, 2017 (Mon-Tues)

Length: 2 days CEU Credits: 1.4

Cost: to be announced. There will be a discount for ISA members.

The move to using open standards such as Ethernet, TCP/IP, and web technologies in supervisory control and data acquisition (SCADA) and process control networks has begun to expose these systems to the same cyberattacks that have wreaked so much havoc on corporate information systems. This two day course provides a detailed look at how the ANSI/ISA99 standards can be used to protect your critical control systems. It also explores the procedural and technical differences between the security for traditional IT environments and those solutions appropriate for SCADA or plant floor environments.

2017 EXHIBITOR & SPONSORSHIP OPPORTUNTIES

Exhibitor booths for WWAC 2017 are priced at \$925 and come with 2 vendor passes.

Symposium sponsorships are available at \$750, \$1750 and \$3200 levels, with increasing numbers of free passes and pre/post-event exposure.

For more information visit

www.isawwsymposium.com

2017 ISA Water/Wastewater and Automatic Controls Symposium

August 8 to 10, 2017 • Wyndham Lake Buena Vista Resort • Orlando, Florida, USA

Presented by the ISA Water/Wastewater Industries Division – www.isawwsymposium.com

Technical co-sponsors: Florida AWWA Section, the WEF Automation and Info Tech Committee,

Florida Water Environment Association, Instrumentation Testing Association, and ISA Tampa Bay Section



Call for Abstracts

Presented by the ISA Water/Wastewater Industries Division, in collaboration with the Florida Section of the AWWA (FSAWWA), the Florida Water Environment Association (FWEA), the WEF Automation and Info Tech Committee, and the Instrumentation Testing Association (ITA), the WWAC Symposium helps professionals in the water and wastewater industries understand how instrumentation, SCADA (supervisory control and data acquisition), and automatic control applications are vital to the treatment and distribution of water, and the collection and treatment of wastewater. The symposium also provides an excellent opportunity to gain valuable technical information, networking, professional development, and continuing education credits (CEUs and PDHs).

This 3-day symposium is focused on the challenges associated with automation and instrumentation in the water and wastewater sector. It features: 2 full days of presentations, a tour of a local water/wastewater facility, a general reception, networking events, a poster session, and a supplier showcase. The first day begins with registration, an optional full-day short course on a current SCADA/automation related topic, and a plant tour. The second day kicks off with a keynote speaker, followed by presentations on general topics such as instrumentation, system integration, automation, plant case studies, new technologies and process optimization/automation. The third day starts with an invited speaker, guest speakers and is focused on topics geared towards SCADA, PLC, HMI, Expert Systems, Data Modelling, and Alarm Management. The Tuesday-Thursday timeslot has been selected so that families can easily take their kids to Disney World, both during and before/after the symposium. Proceedings will be published and made available to water/wastewater division members, and papers will be considered for publication in the ISA's technical journal, ISA Transactions (www.isa.org/isatrans/).

Guidelines for Submission

- All authors/speakers must pay the speaker registration fee (\$150)
 - o The speaker registration fee is a discounted conference rate (regular \$450)
- 250 word (max 300 words) abstract in US English shall be submitted electronically
- Authors must indicate what format they wish to present in:
 - o 30 minute presentation (no paper)
 - o 6-12 page paper and 30-minute presentation
 - o Large format 3 foot wide x 4 foot high poster
- Final presentations must be on the supplied symposium PowerPoint template
- Final papers must be submitted in MS Word using supplied symposium template
- Papers/presentations/posters accepted for presentation and/or publication will require completion of ISA Rights and Responsibilities form
- Student papers and posters are welcome
- The lead author is the main contact

Submissions

Submit your abstract via email in MS Word format to: abstracts2017@isawwsymposium.com approvenzano2@comcast.net

Deadlines

A full author information package, along with sample abstracts, templates and a list of topic ideas can be found at www.isawwsymposium.com

For additional information, contact:

Pavol Segedy, P.E. General Symposium Chair HDR Inc. + 1 919-427-5313 psegedy@nc.rr.com Joe Provenzano Symposium Program Chair KPRO Engineering Services +1 203-560-1816

provenzano2@comcast.net

Staff Contact ISA Symposia +1 919-990-9418 kbelinsky@isa.org

Kimberly Belinsky

Topics include but are not limited to:

Speaking Track 1 - General Topics

Instrumentation: New Technologies and Applications SCADA Security, ISA99, CSET, and Mitigating Risks Control System Redundancy and Robust Design Wireless Technologies
System Integration
Automation Techniques for Existing Plants
New Control System Technologies

- Plant Upgrades & New Facilities
- Control System Upgrades & Replacements
- Lessons Learned

Process Optimization

Plant Case Studies

Automated Control Techniques

Project Management Lessons for Integration Projects Specific Water and Wastewater Challenges

Speaking Track 2 - Future of Automation

SCADA – Supervisory Control and Data Acquisition
Modelling Non-revenue water & collection networks
Energy use modelling and Optimization with SCADA
Capturing and Evaluating Stakeholder Needs
HMI Design for Operator Effectiveness
Effective Use of Multiple HMI Screens
Human Factors and Control Room Design
Intelligent & Expert Systems
Alarm Management & Alarm Rationalization
Implementing of ISA, EEMUA, WEF & AWWA Standards
Call-Out Alarm Rationalization and Techniques
Data Reporting & Presentation Techniques / Strategies
Data Management, Historians, and Data Retrieval
SCADA and the Current Regulatory Environment
Mobile HMIs, Tablets, Remote Access, and Dashboards

www.isawwsymposium.com



2017 Symposium Call for Abstracts

By Pavol Segedy, 2017 Symposium Chair

The 2017 symposium committee is pleased to announce that the 2017 call-for-abstracts is now available. Submissions are due January 31, 2017.

Prospective authors have the choice of presenting a 30 minutes PowerPoint presentation, a 6-12 page paper, or a large format 3ft x 4ft poster. The abstract is a brief 250-word proposal about what you would like to present.

The 2017 WWAC Symposium will be held on August 8-10, 2017 at the Wyndham Lake Buena Vista Resort – which is located in the heart of Walt Disney World near Orlando, Florida USA.

Visit <u>www.isawwsymposium.com/call-for-abstracts/</u> to download the abstract submission template (MS Word).

Abstracts must be sent using the abstract submission template via email to abstracts2017@isawwsymposium.com and provenzano2@comcast.net

The submission deadline is January 31, 2017.

2016 Symposium Wraps-up for Another Year

Our 2016 Symposium was held on August 2-4, 2016 at the Wyndham Lake Buena Vista Resort Hotel in Orlando, Florida. Nearly 200 attendees came to the 3-day symposium to learn about new technologies, techniques, and projects in the municipal water/wastewater sectors.

We look forward to seeing you at our 2017 WWAC Symposium, which is being held again in Orlando, Florida, USA at the Wyndham Lake Buena Vista Resort Hotel...right on the front steps of Walt Disney World Resort. Save the dates of August 8-10, 2017 in your calendar!



The 2016 symposium had a packed house!

Water/Wastewater Division was at ISA's 2016 Fall Leaders Meeting: Newport Beach California

As part of the ISA's society-level 2016 Fall Leaders Meeting, the **ISA Water/Wastewater Division** also held an executive meeting on Saturday, September 24, 2016. The face-to-face meeting took place in Newport Beach, California, USA.

At the meeting, leaders in attendance held a debriefing session on our recently held 2016 WWAC Symposium, and discussed planning for our upcoming 2017 ISA Water/Wastewater and Automatic Controls Symposium.

Many thanks to our 2016-2017 symposium general chair Pavol Segedy and assistant chair Norm Anderson for leading our symposium. The group also had a chance to go out for dinner and enjoy some of the California hospitality.

Interested individuals are always welcome to join the board and planning committee in our ISA Water/Wastewater Division. Interested in helping? See the last page of this newsletter for contact information.



The WWID committee and friends enjoyed a nice dinner together at the 2016 ISA Fall Leaders meeting in Newport Beach, California, USA.



Some the coastal scenery just outside of Newport Beach.



WWID OUTREACH

WWID was at WEFTEC 2016 in New Orleans

The ISA Water/Wastewater Division was at this year's Water Environment Federation's **2016 WEFTEC Show** in New Orleans, Louisiana on Sept 24-28, 2016. This year marks the fifth year anniversary of the ISA WWID hosting a special automation focused Technical Session at WEFTEC.

WEFTEC 2016 – New Orleans Morial Convention Center – New Orleans, Louisiana, USA

WEFTEC FEATURE SESSION 208

Practical Cyber Security for SCADA and Operations Mon, Sept 26, 2016 – Room 244 – 1:30pm to 3:00pm

How to identify threats and manage cyber security risks for SCADA systems used in Wastewater Operations, as well as building the business case for investing in cyber security

A special session focused on providing practical best practices for managing Cyber Security risks in SCADA Systems and Operations. Special focus is on identifying threats, managing risks, deploying best practices and establishing the business case for cyber security. The session highlights three top papers from the **ISA Water/Wastewater and Automatic Controls Symposium**, which is held each August in Orlando FL USA. The WEF Automation and Information Technology Committee has partnered with the ISA to present this niche ISA symposium which takes place during the first week of August each year. This WEFTEC feature session provides WEFTEC attendees the opportunity to listen to three of the best speakers from this joint ISA-WEF event.

Session Speakers

Three speakers (in order, 30 minutes each):

- Looking for Trouble on OT Networks: Tools and Techniques to Identify Threats to ICS Communications Bryan L Singer, CISSP, CAP, Kenexis
- No compromises for secure SCADA Communications

 even over 3rd Party Networks

 Norm Anderson, P.E., Polk County Utilities Division, and Sokha Hay, Tempered Networks
- 3. First Make A Business Case For Cybersecurity
 Don Dickinson, Phoenix Contact

Moderators:

- 1. Tom DeLaura, Past Chair, WEF Automation and Information Technology Committee
- Pavol Segedy, General Symposium Chair, ISA Water/Wastewater & Automatic Controls Symposium, International Society of Automation

SOCIETY NEWS

2016 ISA Society-Level Election Results

Results from the 2016 Elections for our incoming 2017 ISA Society-Level Officers and VPs were officially announced on October 1, 2016. All will take office in January 2017.

Society President-elect Secretary:

Brian Curtis, Cobh, County Cork, Ireland

Society Treasurer:

Thomas W. Devine, Cazenovia, New York, USA

Executive Board Member: Geographic (2 seats)Carlos Eduardo Rodrigues Mandolesi, Itatiba, SP, Brazil

Executive Board Member: Operational (1 seat) This position remains open, as there were no candidates.

Executive Board Member: Technical (1 seat)Jeremey Steven (Steve) Mustard, Houston, Texas, USA

Automation & Technology Dept. Vice President-elect: Grant T. Patterson, Tullahoma, Tennessee, USA

Publications Department Vice President-elect: Michael B. Fedenyszen, Boston, Massachusetts, USA

Standards & Practices Department Vice President-elect: Christian (Chris) Monchinski, Neptune, NJ, USA

Strategic Planning Department Vice President-elect Yesid Alberto Yermanos Aldana, Bogota, Colombia





Publicity shot: Pavol Segedy & Norma Anderson at WEFTEC



2016 WWAC Symposium Report & Photos

The 2016 ISA Water/Wastewater and Automatic Controls Symposium is now wrapped up for another year. Held on August 2-4, close to 200 attendees came to the symposium, with over 30 speakers, a plant tour, and several keynote talks.

After a hearty speaker's dinner and plant tour on the Tuesday, general symposium chair Pavol Segedy kicked off the technical program which was held over the Wednesday and Thursday. Attendees were treated to 2 speaking tracks which ran in parallel plus an exhibition hall with 20+ vendors.



Smiling faces at the Tuesday night speakers dinner.



Symposium chair Pavol Segedy kicks off the symposium



David Hobart (left) helped moderate several of the sessions.



Attendees were treated to boxed lunches in the exhibit hall.



Lunch time was used for networking by symposium attendees.



Dean Ford (goofy shirt) from Westin shares a laugh



The catering featured a wide range of tropical delicacies.





The exhibition hall had tables and chairs for discussions.



Licensed water operators trading stories over lunch.



Break time was always a busy time with lots chatting



Folks taking a break in the lobby between speakers.



Norm introducing a techincal talk from AE Solutions



The program included talks about the future of SCADA.



Exhibitor Rockwell Automation talking with end users.



Sympoisum chair introducing our guest speaker from AWWA.





Kevin Morley from AWWA gives talk on cybersecurity risks



Program Chair (Joe Provenzano) checks schedule with Pavol.



Jeff from Schneider Electric speaks during panel session.



Don from Phoenix Contact (middle) in panel session.



Jeff and Don look to Mike Sweeny from Toho in panel.



Exhibitor Gray Matter Systems discussing new technologies



The exhibit hall included numerous product displays.



For the speaker tracks we had a full house.



Photos from 2016 Symposium Tour

At our symposium, attendees had the option of going on a plant tour of SeaWorld's in-house water treatment plant for the penguin exhibit. The plant is used to treat and maintain the water chemistry for SeaWorld's famous Empire of the Penguin display. Many thanks to the kind folks at SeaWorld for hosting this year's behind the scenes tour.





Getting off the bus to visit the Empire of the Penguin





The display that the public sees





The water treatment plant that makes it all work





Behind the scenes views marine life





Learning how the treatment plant works for SeaWorld staff





Photos from inside the plant and of our tour guide.



Some of the plant's many pressure filters.



We had a full turnout of symposium attendees for the tour.



Awards Presented at our 2016 Symposium

Part of the 2016 Symposium included giving out both service wards and best paper/presentation awards from last year's symposium.





Pavol Segedy giving opening remarks, and later checking the award winners names with program chair Joe Provenzano.





Don Dickinson and Francisco Alcala receiving awards from Division Director Kevin Patel





Carter Farley and Bryan Sinkler receiving awards.





David Hobart and Emile Richard receiving awards.

List of our 2016 Symposium Award Winners

2015 Symposium: Prizes for Best Paper

1st Prize: "All Aboard the SCADA Mothership"

- Patrick Cooke

2nd Prize: "First – Make a Business Case for

Cybersecurity"

- Don Dickinson

3rd Prize: "Challenges and Lessons Learned for the Design and Implementation of Large PROFIBUS Network"

- Francisco Alcalá, PE and James Powell, P.Eng.

2015 Symposium: Prizes for Best Presentation

1st Prize: "Getting the Most from Your SCADA Data"

- Emile Richard, CCST

2nd Prize "Achieving Operator Buy-In of High Performance Graphics: Lessons Learned In Lynchburg, Virginia"

- Jason Hamlin and Carter Farley, PE

3rd Prize: "Why HMI/SCADA is Key in Preventing Unplanned Downtime"

- Matthew Wells

2016 WWID Service Awards

2016 WWID Member of the Year **Dan Machado, CCST III**

For his many volunteer efforts towards the ISA Water/Wastewater and Automatic Controls Symposium, including acting as the 2014 symposium honors and awards chairman.

2016 WWID Service Award **David Hobart, P.Eng., CAP**

For dedicated service to the ISA Water/Wastewater and Automatic Controls Symposium as a paper reviewer, moderator and organizing committee member for the past five years.



Missed the Symposium? Check out our new 2016 Symposium App!

ISA has created an app for our 2016 WWAC symposium. The WWAC mobile app features a wide range of interactive features to enhance your event experience.

Download the App to Discover:

- All event information, schedules, and topics in one location
- Minute-to-minute updates
- Interactive floor maps
- Agenda personalization
- Interactive functionality with other event attendees
- Posting capability to Facebook, Twitter, and LinkedIn
- Convenient way to rate and comment on event sessions
- Access to exclusive discounts on ISA offerings
- And more...

Through our 2016 symposium is now over, the app was continuously updated and features new content and promotions leading up to and throughout the entire event.

How to download the app:

From your smartphone visit the iTunes and Google Play stores and search "ISA Events," then look for the ISA Events logo. Once you have downloaded the app, simply enter your email address and create your profile.



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WEF Knowledge Development Forum was held in conjunction with 2016 Symposium

As part of our partnerships with the Water Environment Federation (WEF), the ISA water/wastewater division held a joint Knowledge Development Forum (KDF) on the Mon-Tues prior to the start of our 2016 symposium's technical program. Held on Aug 1-2, 2016 the KDF focussed on the topic of Smart water.



Title: Smart Water Knowledge Development Forum

Dates: August 1-2, 2016

Location: Lake Buena Vista Resort, Orlando FL

Water & Wastewater utilities are rapidly evolving, and the areas of concern that need addressing are increasing in number and complexity. Smart Water is potentially the solution to these issues providing a platform for more efficient technology use and more informed decision making. The Smart Water Knowledge Development Forum provided an opportunity for industry leaders to collaborate and discuss the vision of Smart Water, improvements to technology and practices, and steps to set the future of Smart Water in motion.

The Water Environment Federation (WEF) and the Water Environment Research Foundation (WERF) are collaborated in 2016 to host several Knowledge Development Forums (KDF's). A KDF is a participatory forum whose purpose is to advance the state of knowledge on a particular topic, going beyond the traditional educational objectives of a technical session or workshop. More KDF events are planned for 2017.





Thanks to 2016 Exhibitors and Sponsors

2016 Symposium Exhibitors

- Schneider Electric
- Phoenix Contact
- VT Scada
- Bedrock Automation
- Owl Computing Technologies
- Viatran
- Ultra-Electronics
- Belden
- Imagine Instruments
- Data Flow Systems
- SEL
- BCI Technologies
- Giant Gray
- Gray Matter Systems LLC
- Rockwell Automation
- Pollution Equipment News
- Kenexsis
- AWC
- Star Controls
- Water Environment Federation
- AWWA Florida Section
- ISA Tampa Bay Section

2016 Platinum Sponsors





2016 Gold Sponsor



2016 Symposium Tour sponsor



2016 Silver Sponsors





2016 Symposium Technical Co-Sponsors









2016 Symposium Media Partners

Special thanks to our Media Partners who help promote our symposium:



















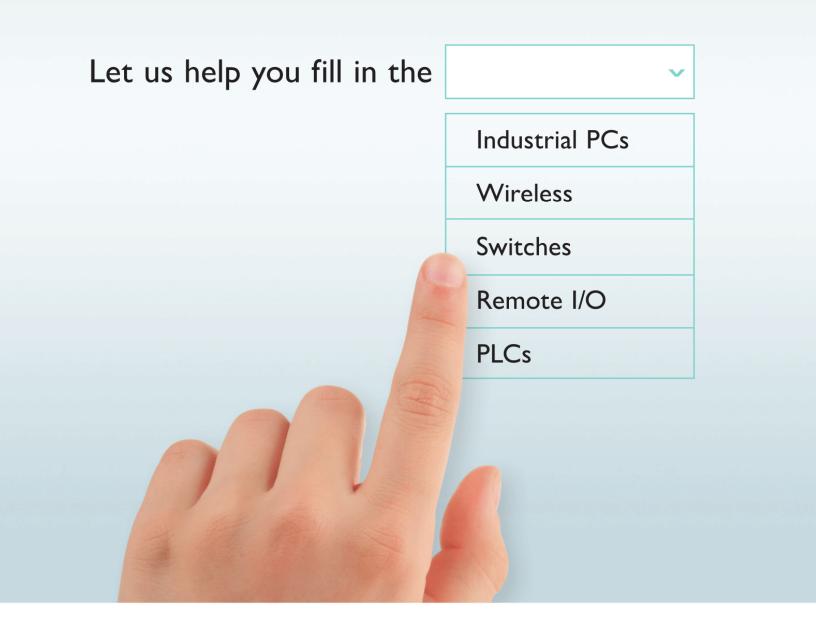














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Download our free "HMIs and Industrial PCs" brochure: www.phoenixcontact.com/ipc





WWID SCHOLARSHIPS

Announcing the 2017 ISA Water/Wastewater Division Student Scholarships

By Michael Fedenyszen, 2017 Scholarship Chair

The ISA water/wastewater industry division (WWID) is pleased to announce the 2017 ISA WWID Student Scholarship Program. Eligible students can win up to \$2000 in scholarship money to help them pursue higher education.

Students can apply by filling out the application form, accompanied by:

- 200-word essay on why they should win
- a copy of their academic transcript
- confirmation of enrollment form/letter

The application deadline is January 31, 2017.

The division is pleased to continue to providing up to \$2000 of scholarship money to encourage WWID members and their sons/daughters to pursue higher education. In addition, winners will receive a complementary 2-year student ISA membership.

Applications are due by email by January 31, 2017. Winners will be notified by February 28, 2017 via telephone and email, and will be required to provide a photo and short biography that can be used for publicity reasons. Scholarship money will be distributed by check and mailed after the winner is contacted and has supplied the required photo/bio.

Scholarships will be awarded at the sole discretion of the WWID scholarship committee, with preference being given to students enrolled in technical programs that lead to careers in the water/wastewater sector.

Download and view the student scholarship application form at www.isa.org/wwid .

Please email completed application form, along with 200 word essay, confirmation of enrollment and copy of academic transcript to:

scholarship@isawwsymposium.com AND mfedenyszen@vanderweil.com

All applications must be submitted by email (with PDF scans of documents). We do not accept submissions by postal mail.



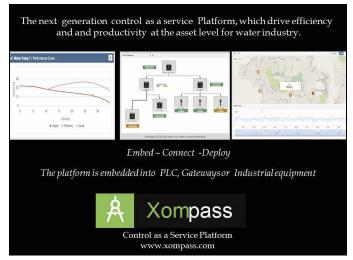
WWID Student Scholarship: 2016 Winners

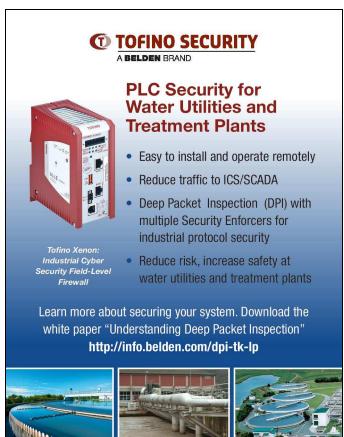


Jessica Shane Valencia Community College Saint Cloud, Florida, USA



Eric RydquistMontana State University-Bozeman
Bozeman, Montana, USA







2017 WWID Student Scholarship

APPLICATION FORM

The ISA Water & Wastewater Division (WWID) is pleased to award up to \$2000 of scholarship money to encourage WWID members and their sons/daughters to pursue higher education. Students recommended by a WWID member may also apply. Winners will also receive a complementary 2-year student ISA membership, which includes a print subscription to ISA *InTech* magazine. Applications will be accepted via email through January 31, 2017. Winners will be notified by February 28, 2017 via telephone and email, and will be required to provide a digital photo, a 3-4 sentence biography, and a 1-2 sentence "thank you note" that can be quoted for publicity purposes. Scholarships will be dispersed by check and mailed after the winners are selected and the required documentation is received. Scholarships will be awarded at the sole discretion of the WWID scholarship committee with preference being given to students enrolled in technical programs that lead to careers in the water/wastewater industry.

	y (check one)			
	WWID member, ISA Member # WWID student member, ISA Member #			
	Parent/Guardian is a WWID member, Pare	ent Name:	& ISA Member #	
	WWID member recommendation (letter att			
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	riteria (check off each one)			
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Applications must be submitted as scanned PDFs and emailed to the scholarship committee at: scholarship@isawwsymposium.com AND mfedenyszen@vanderweil.com

APPLICATIONS MUST BE RECEIVED BY JANUARY 31, 2017



TECHNICAL ARTICLE

Quo Vadis Water Treatment – Where It Comes from, Where It Goes

By Matthias Kremer, JUMO GmbH & Co

An increased recycling rate, more flexibility and quality with regard to measurement parameters, and reduced costs – these are the tasks that process engineers, measurement technology providers, and plant engineers are currently faced with.

Anyone who visits trade fairs concerned with the topic of water, wastewater, and the environment can see that the industry is adjusting to some new requirements and challenges. Treating and providing clean drinking water or technically perfected wastewater purification no longer hold the sole focus. In reality the questions, "where does it come from" and "where does it go" are being asked:

- Where is water taken from so that it can be treated?
- Where is wastewater sent to, what state should it be in?

Plant manufacturers are increasingly pushing for water recycling. Through clever recirculation of the valuable resource, as little "wastewater" as possible should be created with integrated processing.

Interestingly both questions – with regard to the "source" and the "destination" – are equally on the agenda in very different regions of the planet with very different climactic characteristics.



Figure 1 – A highlight at the WETEX in Dubai: A multichannel measuring device with sensor technology for pH, redox, free chlorine, and temperature, tackling the topic of water disinfection with the new multifunction valve for sensors

This was the case at the WASSER trade fair in Berlin, a typically "German" and maybe "Central European" trade fair, despite a stronger international emphasis. This means that the topic is presented from a relatively local, Central European perspective. Ample groundwater is implied. Rain and river water to feed water reservoirs is also available in sufficient amounts. The message and presentation of many exhibitors clearly corresponded: well construction, drilling and reservoir technology, mechanical filtering plants, and classic wastewater engineering were the focus. "Dischargeable" still seems to be the desired quality to a great extent. And yet – upon closer inspection and in niche areas new approaches could also be discovered: where should water be taken from, where should it go after use? Is it possible to do even more? The way schools in Berlin grappled with the topic of water as

a resource in a dedicated hall was beautiful. Solid ground for important insights is being created here.

The WETEX, the most important trade fair in the Arab region for water, environment, and energy, put another focus. Europeans always immediately associate the oil and natural gas industry with the UAE – which is certainly correct. Perhaps they also associate it with gold and luxury – which is also correct. Associations with palm trees, sandy beaches, and crashing waves are also allowed. The current ambient temperatures of 32 °C are considered "too cold for this time of year" by the locals; people are more used to 35 °C, 40 °C, or more in April.

The main topic at WETEX was, of course: water. During the region's boom years, people only thought about how large the system for desalination of seawater should be – cost what it may – now holistic environmental awareness has become the focus when it comes to the topic of water. Anyone who has experienced the rare rainfall in Dubai is familiar with the issue: there is extensive flooding in the streets because, unlike in Europe, there is practically no sewage system. And even with the ever-present off-road vehicles, people use caution when venturing through the mass of water waiting to evaporate. City planners focused on the visible aspects: opulent buildings and skyscrapers, a metro train on stilts, and wide streets for fast cars bursting with horsepower.

Arguably, in the past people gave too little thought to wastewater or rainwater drainage. The theme of the trade fair, "At the forefront of sustainability," also demonstrates the will of the Sheik to play a leading role when it comes to topics of sustainability. His Highness Sheik Hamdan bin Rashid Al Maktoum, representative Emir of Dubai, Finance Minister of the UAE, and President of the DEWA (Dubai Electricity & Water Authority) was the personal patron of the trade fair and is considered knowledgeable about important environmental problems and possible solutions in the country.

Measures are becoming noticeable throughout the country. For example, extracting water from the ground is forbidden and only allowed in exceptional cases now. Extraction of groundwater or well water that is too intensive can lead to more than just a shortage. For example, salination due to pressure from seawater is also a problem. This is why maintaining a minimum level in the subterranean water reservoirs is an important aspect.

So the "source" is already coming into focus. The "destination" too: recirculation and zero liquid discharge (ZLD) are being propagated. Both the local manufacturers and the international water treatment technology suppliers previously paid more attention to purification, desalination, and filtering of brackish and seawater, thus focusing on supply. What happened to the water afterwards was not taken into consideration. Now things need to be relearned. Wastewater treatment is the key word – for instance, as a holistic concept for lossless water use in technical processes.



Treat it so that, after it is used, it can supply the original process as losslessly as possible again.

German and European plant engineering certainly remains at the forefront when it comes to the topic of water/wastewater treatment. Considerable interest was also openly shown and expressed in measurement and control technology and German-made plants in Dubai. ZLD offers new opportunities to set itself apart again from the unfortunately much copied state-of-the-art here and help the environment in the process.

Recirculation according to the zero liquid discharge system means coupling different water treatment processes or steps. In every process step, diverse parameters are measured, regulated, and monitored. Actuators such as pumps, valves, and dispensing technology are controlled. ZLD only functions if both the process steps and the measurement parameters of the steps are combined and evaluated. The same applies here: a holistic view of the process must be the goal. It is a matter of recording and evaluating as many parameters as possible at the same time and automatically generating guidelines for control and regulation technology. Intelligent multichannel measuring devices take on local subtasks here. The results are combined in the central control systems.

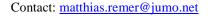


Figure 2 –Modularly constructed measuring, control, and automation system suitable for all water treatment tasks.

Summary: Whether in Central Europe or Arabia – the topic of water as a limited resource has now become an issue everywhere. And this is a good thing. The active approach of children and youth (Berlin school activities at the WASSER trade fair in Berlin) regarding the topic is welcome and important – ultimately, the problems will only intensify. ZLD – the "perpetual motion machine" of water technology – must be further developed and implemented. Intelligent measurement technology and robust sensor technology are available. Industry 4.0 or a robot is not what is needed now: humans have to apply themselves here and use their intelligence. The source and the destination have to be found.

About the Author

Matthias Kremer is the Water/Wastewater Industry Manager for JUMO GmbH & Co in Fulda Germany.





ISA launches SCADA Systems Standards Committee: ISA-112

ISA's Standards & Practices (S&P) Board has approved a new committee to be designated ISA112, SCADA Systems. This approval follows widespread support for the idea from a survey conducted via ISA's *InTech* magazine and online media.

ISA112 will develop standards and technical reports intended to improve the overall reliability of supervisory control and data acquisition (SCADA) system design, installation, integration and operation of the infrastructure for pipelines, water and wastewater, power, oil and gas, and other industries. The standards and technical reports will provide guidance for implementing effective and reliable SCADA systems by documenting best practices in a range of industries.

S&P Board member Greg Lehmann will serve as ISA112 managing director, overseeing the startup of the new committee by drawing on his experience as founding co-chair of ISA101, Human-Machine Interface. Lehmann is Process Automation Technical Manager, Engineering and O&M, Oil & Gas, at AECOM.

"Documenting best practices in a range of industries will likely end up being the lion's share of the work in ISA112," points out Lehmann. "However, the first order will be to focus on the basics and the multi-industry and inter-industry aspects of SCADA systems—that is, definitions, terminology, normative/informative references and common hardware."

S&P Board Member Ian Verhappen, Senior Project Manager of Automation at CIMA, led the survey and analysis for the S&P Board. "With the increased connectivity of the wide range of devices used to monitor and control our environment, SCADA systems are becoming a more important part of today's control infrastructure," Verhappen notes. "For this reason, ISA has identified a requirement for a series of standards to capture best practices on how to build a system from the many individual parts."

An initial meeting of ISA112 was held by Lehmann on 27 September 2016, from 8 a.m. to noon PT, US in Newport Beach, California in conjunction with the ISA Leaders Meeting (www.isa.org/flm2016).

For information on serving as an active member of ISA112, contact Linda Wolffe, ISA Standards, at lwolffe@isa.org.





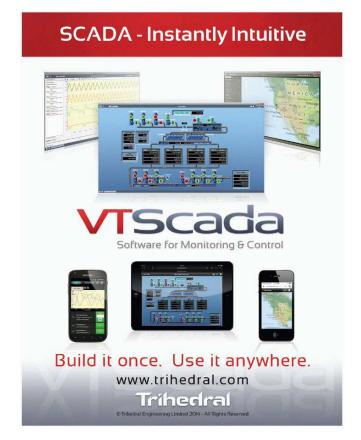
WWID is on LinkedIn

LinkedIn is a social media site that is geared towards professionals and business people. Located at **www.LinkedIn.com**, the site features online profiles, discussion groups and tools for identifying and keeping track of contacts. As of mid-2016, LinkedIn has over 460 million members in more than 200 countries and territories.

In an effort to provide the latest news and information relating to instrumentation and control systems in water and wastewater management, the Water and Wastewater Industry Division has created a LinkedIn group. We invite anyone affiliated with or interested in the water and/or wastewater industries to join the group and participate in the dialog.

You may use the following link to join the group http://www.linkedin.com/groupRegistration?gid=2031271







www.isa.org/wwid/ Page 20

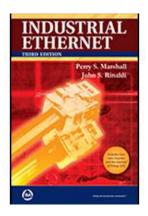
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New ISA Book on Industrial Ethernet

Our friends at ISA headquarters are pleased to announce the third edition release of <u>Industrial Ethernet</u>: <u>How to Plan, Install, and Maintain TCP/IP Ethernet Networks</u> by John Rinaldi and Perry Marshall.

Rinaldi, an industrial networking expert and owner and CEO of a company that supplies networking technology throughout the world, says an updated edition of the popular book was needed in light of the growing and increasingly complex number of networking technologies, standards and requirements.



Title: Industrial Ethernet, 3rd

Edition

Copyright: 2017 Length: 217 pages

ISBN: 978-1-945541-04-9

Selected Format: Paperback

Publisher: International Society

of Automation

"There have been a vast number of changes since the previous revision. Industrial automation is changing faster than ever. There are new networking technologies, new hardware platforms, new software standards, and new organizations," Rinaldi explains. "Not only do users have more technology options and more available products to choose from, they now have vastly new and difficult-to-achieve requirements from their management, their sales teams, and their customers."

The book addresses these changes by covering the latest advances and issues in Ethernet Ring Protection Switching, daisy-chaining Ethernet devices, synchronizing devices over Ethernet, Ethernet security and perhaps the hottest topic in automation-implementing the Industrial Internet of Things (IIoT).

The book also serves as an excellent reference tool on networking in industrial environments. Best-practice recommendations for installation, maintenance, security, and troubleshooting are clearly outlined.

To purchase a copy of the third edition of *Industrial Ethernet:* How to Plan, Install, and Maintain TCP/IP Ethernet Networks, visit www.isa.org/books/

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ISA to Participate in the National-Level Canadian Cybersecurity Alliance

From ISA news release on August 29, 2016

The International Society of Automation (ISA) announces that it will participate in the Canadian Cybersecurity Alliance (CCA) /Alliance canadienne sur la cybersécurité (ACC).

The CCA-ACC (originally initiated as the Inter-Association Working Group on Cyber Security - IAWGCS) is a voluntary, non-hierarchical, not-for-profit agile network, founded by Grant Lecky in 2013. The primary purpose of the CCA-ACC is to enhance the professionalization of the Canadian cyber domain through effective inter-association engagement and knowledge-sharing.

To date, more than 90 associations with a stake in cybersecurity have confirmed their participation in the CCA-ACC. Each of the participating associations contributes their own unique perspective on the Canadian cyber landscape.

The CCA-ACC is administered by a National Council, whose role includes maintaining the structure of the CCA-ACC and facilitating inter-association dialogue.

ISA: At the vanguard of protecting critical infrastructure from cyberattack

ISA has developed the world's only consensus-based series of industrial cybersecurity standards. These series of standards—known as <u>ISA/IEC 62443</u>—are integral components of the US government's current and future plans to combat industrial cyberattack. They define requirements and procedures for

implementing electronically secure automation and control systems and security practices, and assessing electronic security performance.

Representing a comprehensive approach to cybersecurity, the ISA/IEC 62443 set of standards is designed to prevent and mitigate industrial control system security vulnerabilities across all key industry sectors and critical infrastructure. Reducing these vulnerabilities is crucial since they can open the door to potentially devastating cyber damage to the industrial plant systems and networks used in power generation, water treatment, refineries and other essential industrial facilities.

ISA leverages the ISA/IEC 62443 series of standards to offer the most comprehensive set of industrial cybersecurity certificate programming and aligned training courses in the marketplace—covering the complete lifecycle of industrial automation and control system (IACS) assessment, design, implementation, operations and maintenance.

In mid-April of this year, ISA provided industrial control systems cybersecurity training for the US National Guard during its nationwide Cyber Shield exercise, which was held at Camp Atterbury, Indiana. More than 900 soldiers, airmen, Marines, sailors and civilians representing 47 states and territories participated in the training event to assess their skills in responding to cyber-incidents.

To learn more about ISA's comprehensive capabilities in industrial cybersecurity, visit https://www.isa.org/technical-topics/cybersecurity/cybersecurity-resources/



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Call for Newsletter Articles

The WWID newsletter is published four times a year (winter, spring, summer, and fall) and reaches the WWID's over 1,600 members. Each issue is approximately 32-44 pages long, and is electronically printed in color PDF format. A notification email goes out to all WWID members and it is available for public download at www.isa.org/wwid/.

We are always on the lookout for good articles, and we welcome both solicited and unsolicited submissions.

Article submissions should be 500-2000 words in length and be written for a general audience. While it is understood that the articles are technical in nature, the use of technical jargon and/or unexplained acronyms should be avoided. We actively encourage authors to include several photos and/or figures to go along with their article.

We actively welcome articles from all of our members. However, we do ask that articles be non-commercial in nature wherever possible. One or two mentions of company and/or product names for the purposes of identification are acceptable, but the focus of the article should be technical content and not just sales literature. If you are unsure of whether your article idea is workable, please contact our newsletter editor for more information – we are here to help.

Some examples of the types of articles we are looking for include:

- Explanatory/teaching articles that are meant to introduce or explain a technical aspect of automation and/or instrumentation in the water/wastewater sector.
- Biographical stories about personalities and/or leaders in the water/wastewater sector.
- Case Studies about plant upgrades and/or the application of new technologies and techniques. This type of article must include at least two photos along with the article text.
- Pictorial Case Studies about a plant upgrade consisting of 4-6 photos plus a brief 200-500 word description of the project undertaken. The article should ideally include one to two paragraphs about lessons learned and/or advice for other automation professionals.
- Historical reflections on changes in technology pertaining to specific aspects of instrumentation or automation, and how these changes point to the future.
- Discussions about changes in the water/wastewater sector and how these affect the automation professionals.

Once we receive a submission, we will work with you to edit it so it is suitable for publication in the newsletter.

Article submissions can be sent to the WWID newsletter editor Graham Nasby at graham.nasby@grahamnasby.com.

WWID Newsletter Advertising

The WWID newsletter is an excellent way to announce new products and services to the water/wastewater automation community. With a distribution of 2,000+ professionals in the automation, instrumentation and SCADA fields, the WWID newsletter is an effective targeted advertising tool.

The WWID newsletter is published quarterly, on the following approximate publication schedule:

- Winter Issue published in January/February
- Spring Issue published in May/June
- Summer Issue published in August/September
- Fall Issue published in October/November

Advertising in the newsletter is offered in full page and quarter page formats. Advertisements can be purchased on a per issue basis or for four issues at a time. The newsletter itself is distributed as a full-color PDF, so both color and black/white artwork is acceptable.

The current advertising rates are as follows:

Per Issue:

- Full page, full color (7" x 9"): \$400
- Half page, full color (7"x4.5" or 3.5"x9"): \$200
- Quarter page, full color (3.5" W x 4.5" H): \$100

Per year (4 issues):

- Full page, full color, 4 issues (40% discount): \$1200
- Half page, full color, 4 issues (25% discount): \$600
- Quarter page, full color, 4 issues (25% discount): \$300

Other sizes of advertisements are available, but are priced on an individual basis. Contact us for more information.

Please book advertising space as early as possible before the intended publication date. Artwork for advertisements should be submitted a minimum of two weeks prior to the publication date; earlier is always better than later. Artwork for advertisements can be submitted in EPS, PDF, PNG, JPG or GIF formats. EPS, PDF and PNG formats are preferred. Images should be at least 300dpi resolution if possible.

The ISA Water/Wastewater Industry Division is run on a non-profit basis for the benefit of its members. Monies raised from the sale of advertising in the newsletter are used to help offset the cost of division programming and events. Like its parent organization, the ISA, the WWID is a non-profit member-driven organization.

For more information, or to discuss other advertisement sizes not outlined above, please contact the WWID newsletter editor Graham Nasby at graham.nasby@grahamnasby.com.



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Fax: (919) 549-8288 kbelinsky@isa.org

2017 Symposium Details

Date: August 8-10, 2017 Location: Orlando, Florida, USA

Venue: Wyndham Lake Buena Vista Resort General Symposium Chair: Pavol Segedy, PE Website: www.isawwsymposium.com

Future Symposium Dates – Save the Date

WWAC 2018: August 7-9, 2018 in Location to be announced

About the ISA Water/Wastewater Division

The ISA Water / Wastewater Industry Division (WWID) is concerned with all aspects of instrumentation and automated-control related to commercial and public systems associated with water and wastewater management. Membership in the WWID provides the latest news and information relating to instrumentation and control systems in water and wastewater management, including water processing and distribution, as well as wastewater collection and treatment. The division holds the annual ISA Water/Wastewater and Automatic Controls Symposium each summer, which features presentations by industry practitioners and published proceedings. For more information see www.isa.org/wwid/

About the ISA

The International Society of Automation (www.isa.org) is a nonprofit professional association that sets the standard for those who apply engineering and technology to improve the management, safety, and cybersecurity of modern automation and control systems used across industry and critical infrastructure. Founded in 1945, ISA develops widely used global standards; certifies industry professionals; provides education and training; publishes books and technical articles; hosts conferences and exhibits; and provides networking and career development programs for its 40,000 members and 400,000 customers around the world. For more information see www.isa.org