

Water/Wastewater Industry Division

Calendar of WWID Events

Sept 26-30, 2015 WEFTEC 2015

Session 508: ISA Symposium Highlights "Alarm Management for Operations"

Chicago, Illinois, USA

Oct 10-13, 2015

ISA Fall Leaders Meeting & 53rd ISA Honors & Awards Gala

Louisville, Kentucky, USA

Aug 2-4, 2016

2016 ISA Water/Wastewater and Automatic Controls Symposium Wyndham Lake Buena Vista Resort

Orlando, Florida, USA

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PLUS:

2016 ISA WWAC Symposium - Exhibitor/Sponsor Brochure

Director's Welcome



Welcome to our Fall 2015 newsletter! In this issue you will read about our recently-held 2015 symposium and plans for our upcoming 2016 symposium. We also have a review on a recently released ISA book on the value of automation and an article about selecting fiber optic network cables.

This newsletter is also a special one for me personally. This will be my last newsletter where I am writing to you as the Director of the WWID. For the past three years, I have had the pleasure of helping steer the direction of our division but it is now time to pass on the torch. On January 1, 2016 our new WWID Director will be Kevin Patel. For the past four years, Kevin has been very active in our division and has held many positions, including being our general symposium chair for 2014-2015 and assistant symposium chair for two years prior. I wish Kevin all the best as he continues in my footsteps.

You will, however, still see me around. At Kevin's urging I will be staying on as our newsletter editor and also helping coordinate our annual WWID service awards. I look forward to continuing to serve the division in these capacities.

Within the ISA at the international level, I am also looking forward to my new role in January as the Vice-President-elect for Industries and Sciences. In this role I will be overseeing

Newsletter Fall 2015

approximately seven of the ISA's technical divisions, including our water/wastewater division. I look forward to being able to show-case our WWID as one of groups that the ISA's other technical divisions can use as a model for their operations.

I would like to offer a few words of advice to those of you who are considering getting involved in volunteer associations such as the ISA: It's worth the time and effort. Through my involvement with the ISA I have met many, many very nice and knowledgeable people. I now have a network of contacts that spans both North America and the globe. Through my work with the ISA, I have been able to broaden my horizons, learn a great deal, and have a lot of fun in the process. Ultimately, because of my exposure to other professionals in my field, I have also become much better at what I do for a living. In all, it has been a win-win experience for me so far, and I look forward to continuing my involvement with volunteer organizations

With all of this said, I encourage you to get involved. The ISA water/wastewater division has been a great boon to my career, and I hope you will consider enriching your career by also getting involved with volunteer technical associations.

Warmest Regards,

Graham Nasby, P.Eng, PMP, CAP WWID Director



Message from your Director-Elect



For the past 3 years I have had the privilege of serving you as the division's director elect. My goal was to understand what the members wanted from the division and welcome everyone with open arms. It will be soon time for me to take over the reins

from Graham and move into the role of Director. I look forward to the challenge and plan to keep our division moving forward.

I am also happy to say that I will also be passing the torch on for the ISA Water/Wastewater and Automatic Controls Symposium General Chair role to Pavol Segedy. He has been incredible to work with these past few years and I know he will do a great job in this new role.

Be sure to read in this newsletter about our upcoming 2016 WWAC Symposium that is scheduled for Aug 2-4, 2016 in Orlando, Florida. I also encourage you to submit an abstract for our call for papers which will be closing on December 15, 2015. The symposium is a great time to meet new professionals in our industry and share knowledge that will help you become better throughout your career. I hope to see you there!

Additionally, the student scholarship application is now open and we are currently taking all applications. 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. 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.

As for future division events, we have the upcoming Fall Leader's Meeting, where we will discuss the next division webinar for our members. During the meeting we will discuss future webinar topics and potential dates. If you're in the area be sure to stop by and put in your two cents.

In closing, it's been a privilege serving as the director-elect and as the general symposium chair. It has been quite an experience. I truly look forward to my new role next year but will still be around to help with the symposium planning.

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

Respectfully,

Kevin Patel, PE, MBA WWID Director-Elect knpatel@sig-auto.com

Upcoming Events

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

WEFTEC 2016 – Water Environment Federation (WEF)

Sept 26-28, 2016

New Orleans, Louisiana, USA

Venue: New Orleans Morial Convention Center

ACE 2016 – American Water Works Association (AWWA) June 19-22, 2016

> Chicago, Illinois, USA Venue: McCormick Center

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ISA WWAC Symposium 2016

August 2-4, 2016 Orlando, Florida, USA

Venue/Hotel: Wyndham Lake Buena Vista Resort

ISA WWAC Symposium 2017

August 8-10, 2017

Orlando, Florida, USA

Venue/Hotel: to be announced

ISA WWAC Symposium 2018 August 7-9, 2018

Orlando, Florida, USA

Venue/Hotel: to be announced



SAVE THE DATE August 2-4, 2016

2016 ISA Water/Wastewater and Automatic Controls Symposium

August 2 to 4, 2016 • 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



2016 TECHNICAL PROGRAM

The 2016 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, 2015. See the website for the full author kit, including the abstract submission template and paper topic ideas.

2016 REGISTRATION FEES:

Regular Rate\$425	Conference Hotel Rate\$89/night
ISA Member Rate\$325	Hotel Rate cut-off dateJuly 1, 2016
AWWA, WEF, FWEA, ITA Member Rate \$375	Discounted block of rooms are first-come, first-serve.
Author/Speaker Rate\$125	

2016 OPTIONAL SYMPOSIUM TRAINING COURSES

Wireless Networking

Applications of Industrial Wireless Systems (SP25C)

Date: August 2, 2015 (Tues)

Length: 1 day CEU Credits: 0.7

Cost: \$720 (\$575 for ISA members)

This course concentrates on industrial wireless applications. Using the broad range of wireless applications-such as video monitoring and security systems, asset tracking (which may rely on a multitude of wireless technologies), mobile operator needs (PDAs, tablet PCs), remote tank farm monitoring, wireless SCADA systems, Voice over wireless LAN- the multitude of operational considerations associated with industrial wireless field transmitter for monitoring, and even control systems are examined. The logical intersections with the plant's IT department are addressed.

In-Depth SCADA Cyber Security

Using the ANSI/ISA-99 Standard to Secure Your Control System / In-Depth SCADA Cyber Security (IC32)

Date: August 1-2, 2016 (Mon-Tues)

Length: 2 days CEU Credits: 1.4

Cost: \$1585 (\$1265 for ISA members)

This two day intensive course provides an overview of the ANSI/ISA-99 Security for Industrial Automation and Control Systems family of standards and how these can be applied in a typical water or wastewater district. You will be introduced to the terminology, concepts, and models of ANSI/ISA-99 Cyber Security. As well, the elements of creating a Cyber Security management system will be explained along with how these should be applied to commonly used SCADA, DCS and Automation Systems in the water and wastewater sectors.

2016 EXHIBITOR & SPONSORSHIP OPPORTUNTIES

Exhibitor booths for WWAC 2016 are priced at \$875 and come with 2 vendor passes.

Symposium sponsorships are available at \$500, \$1500 and \$3000 levels, with increasing numbers of free passes and pre/post-event exposure.

For more information visit www.isawwsymposium.com



Introducing the 2016 Symposium

By Pavol Segedy, 2016 Symposium Chair

After a successful 2015 WWAC symposium, I am pleased to announce that our 2016 WWAC symposium is now a planning mode. The 2016 symposium will be held on August 2-4, 2016 in Orlando, Florida at the Wyndham Lake Buena Vista Resort located on the Walt Disney World property.

We have been able to keep a discounted hotel rate of \$89/night. Thanks to our sponsors, we have also been able to keep our attendee pricing low. List price for the 2.5 day symposium is only \$425 and includes breakfast, lunches, a general reception, plant tour, and a set of proceedings. ISA members can attend for \$325, and AWWA/WEF/ITA members can register for the discounted rate of \$375.

The theme for our 2016 symposium will be "High Performance Automation for Operations and Maintenance" Attendees will gain further insight into the evolving industry along with common problems that continue to be seen in our industry. Real-world applications, procedures and publications will be discussed that will help attendees not only become more informed, but also provide them with the tools to begin making their facility a more robust and efficient workplace.

I encourage you to read our Call for Abstracts and submit an abstract to share your knowledge and experience with others in the industry. Abstract submissions are due on December 15, 2015, so now is the time to start talking to your boss and coworkers if you are interested in presenting. As further incentive, speakers at the symposium receive a further discounted registration rate of \$125 (vs. the \$425 list price).

Don't forget to set aside your training dollars for 2016. The symposium offers a very cost effective way to get targeted and relevant training for the annual CEUs/and PDHs you need and learn valuable information targeted for your field of expertise. I look forward to seeing everyone at the 2016 ISA WWAC Symposium in Orlando.

Warmest Regards,

Pavol Segedy

General Symposium Chair 2016 ISA Water/Wastewater and Automatic Controls Symposium

Read about our 2016 Symposium
August 2-4, 2016

www.isawwsymposium.com

Introducing our 2016 Symposium Chair

By Graham Nasby, WWID Director

The board and I are pleased to announce that **Pavol Segedy** of HDR Inc. will be the general symposium chair for our 2016 and 2017 WWAC Symposiums.



Pavol has been a member of the WWID board since 2011, and was involved with the organizing and program committee for the WWAC 2012, 2013, 2014 symposia. In 2015 he was an Assistant Chair of 2015 WWAC

symposium and helped to organize this event. This is the first year of his two-year term as General symposium Chair.

Pavol is the lead automation engineer at HDR Inc located in Raleigh NC. The company specializes in engineering, architecture, environmental, construction and automation consulting services. It is dedicated to providing quality and reliable automation solutions and offers planning, assessments, programming, training, commissioning, documentation and project management services.

Prior to joining HDR Inc., Pavol was a project manager and a senior automation engineer with Brown and Caldwell for over seven years. He also worked at CITI-LLC as a system integrator. Within the ISA, Pavol has been involved with several standards committees most notably ISA101 and ISA99.

Joe Provenzano returns as Program Chair

We are delighted to announce that industry veteran Joe Provenzano will again be our program committee chair for the 2016 WWAC Symposium.



Since the start of his career in 1957, Joe has been involved in the automation, instrumentation and control sector for over 50 years. He has worked for companies large and small, and been involved in positions ranging from hands-on technical roles to being part of executive management teams.

Joe began his career with Sperry Gyroscope, where he started as an electronics test technician, and soon rose through the ranks to be manager of one of their naval electronics groups. He then moved onto ITT WorldCom for a short stint before joining Data Master Inc., a division of the Bristol Company. Joe ended up spending 29 years at Bristol where he became their VP of Systems Engineering. In 1994, Joe "retired" from Bristol to start what became a 15 year career as general manager for Aaron Associates – a Connecticut-based system integration firm. Since 2009, Joe has been working as a systems specialist and general manager for a number of small firms, and recently started KPRO Engineering Services.

2016 ISA Water/Wastewater and Automatic Controls Symposium

August 2 to 4, 2016.......Wyndham Lake Buena Vista Resort......Lake Buena Vista, 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 (\$125)
 - The speaker registration fee is a discounted conference rate (regular \$425)
- 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: abstracts@isawwsymposium.com AND provenzano2@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.

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Joe Provenzano, M.Sc. Symposium Program Chair KPRO Engineering Services +1 203-560-1816 Rodney Jones Staff Contact ISA Symposia +1 919-990-9418 rjones@isa.org

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 Case Studies

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

Process Optimization

Automated Control Techniques

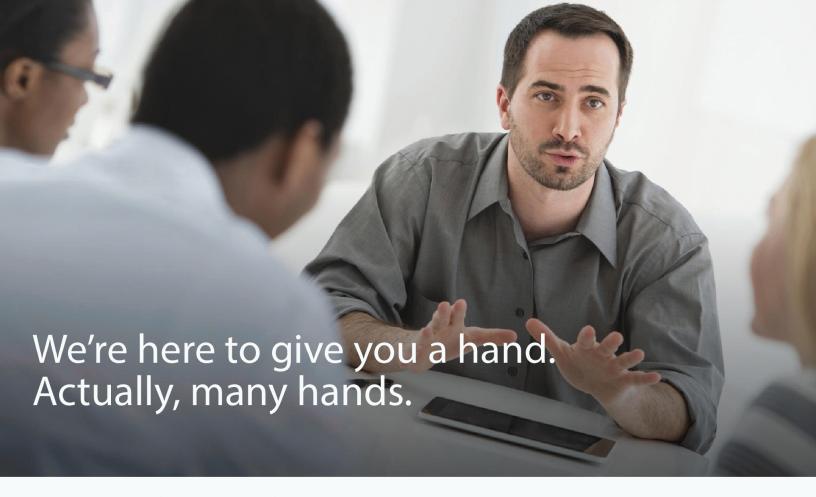
Project Management Lessons for Integration Projects Specific Water and Wastewater Challenges

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



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2015 Symposium Report

By Kevin Patel, 2015 General Symposium Chair

We are pleased to report that our 2015 ISA Water/Wastewater and Automatic Controls Symposium drew 187 attendees, 35 expert speakers and 35 exhibitors to Orlando, Florida, USA in early August to examine and confront the varied challenges associated with automation and instrumentation in the municipal water and wastewater sectors.

The three-day, highly targeted event—focusing entirely on the needs of automation professionals—included an extensive program of technical presentations; an interactive panel discussion; a tour of a local wastewater treatment plant; a vendor exposition; networking events; and two training courses—one on alarm management and the other on asset management and enterprise integration. The symposium was held 4-6 August at the Wyndham Lake Buena Vista Resort.

Attendees, speakers, exhibitors and sponsors all had positive things to say about the event.

"I found the symposium to be exactly what I was looking for, as it is focused almost entirely on SCADA which is a major part of my responsibilities," said Dan Machado, Technology Support Group Manager, Cobb County Water System, "This is the only conference I have found that truly speaks to the needs of SCADA professionals in the water/wastewater sector."

Speakers such as Maxym Lachance from Tetra Tech's Montreal Office expressed similar words, "The ISA WWAC Symposium is an event where I know I can talk with the folks who actually use SCADA in their daily operations. This was a great opportunity to converse one-on-one with both the designers and the operations teams who use SCADA on a regular basis to carry out their jobs."

In all, the symposium's technical speakers spoke to a packed audience of SCADA designers, programmers and users. Of particular note were talks about High Performance HMI design, cyber security, and looking towards how SCADA will be used in the utility of the future.

The symposium kicked off with a keynote address from Joe S. Young, a recently retired executive from American Water, who gave the keynote talk "The Water Industry – A Utility Perspective." In his remarks, Young talked about the changing priorities and challenges faced by many water/wastewater utilities over the past five years, including deteriorating infrastructure, funding challenges, and an aging workforce. Part of his talk also highlighted the increasing role that SCADA needs to play, providing process data which can be used to help utilities make better decisions, and how SCADA-provided automation can assist operations in more effectively operating their facilities.

Invited speaker John Krajewski highlighted how High Performance HMIs (HP-HMIs) – covered in the just-published ISA101 standard on HMI design – have started to gain a

foothold in the water/wastewater industry. He gave a tour of several projects where high performance HMIs have been used. John also talked about how HP-HMI projects can be approached in several ways, ranging from full-scale HMI replacements to just adding a few HP-HMI overview screens to an existing system. John showed how having a number of pre-built standardized screen modules in a SCADA software package or an HMI toolkit can often make building HP-HMIs easier.

On the second day of the symposium, Tom DeLaura from WEF led a panel discussion about the role of SCADA in the utility of the future. Entitled the "What is the Future of Automation Technologies in the Water Industry?", the session focused where SCADA technology is likely to be headed in the next 10-20 years.

The Symposium was also well-attended by both sponsors and exhibitors. Platinum sponsors for this year's event included Schneider Electric, Phoenix Contact, and General Electric. Gold sponsors were Eramosa and Industrial Video & Control. In total there were 35 different exhibitors who were at the symposium to show and tell attendees about their various products and services.

"We had a very positive experience at the 2015 ISA WWAC Symposium," remarked Tim Deschaines, Ph.D., a product manager at Process Analytics. "As an exhibitor, we had the opportunity to talk and meet with automation professionals from all over North America. Our conversations and interactions with key decision-makers in the water and wastewater sectors were highly educational, keeping us better informed of what's going on in the industry and how to address evolving changes. We look forward to continuing our involvement in and support of ISA and ISA symposia."

The event provided the ideal opportunity to gain the latest news and trends in automation and control systems, SCADA (supervisory control and data acquisition), instrumentation, systems integration, optimization, cybersecurity, alarm management, and emerging technologies across the water/wastewater industry.

The exhibit showcase featured the latest product and service information and daily networking luncheons while an evening reception set the stage for mingling, meeting new people and reconnecting with old friends.

"The 2015 symposium was a resounding success," said Kevin Patel, the 2015 general symposium chair. "I look forward to mentoring our incoming chair Pavol Segedy as he moves into the role of our 2016 general symposium chair."

Watch for details about the 2016 ISA WWAC Symposium, which will be held 2-4 August, also in Orlando. Stay updated by regularly visiting the conference website at www.isawwsymposium.com.



Photos from 2015 Symposium

Thanks to all the participants who contributed photos. Special thanks to our conference photographers Pavol Segedy, Bryan Sinkler, and Graham Nasby.



Attendees were welcomed by our very own Mr. Rodney Jones, our symposium coordinator from ISA staff.



Photo of the conference hotel – notice the large pool!



View from the 10th floor showing hotel grounds and pool area.



Our annual speakers dinenr the night before the symposium.



Before the symposium, John Bogdan taught the Introduction to Alarm Management ISA short course.



We had a packed hall as symposium general chair Kevin Patel introduced our keynote speaker Joe S. Young.



Program chair Joe Provenzano gave his opening remarks.



Joe S. Young talking the "infrastrucutre gap" that exists in our water/wastewater utilities and the associated challenges.



Emile Richard from Portland Water District talks about how to more effectively use the process data from SCADA systems

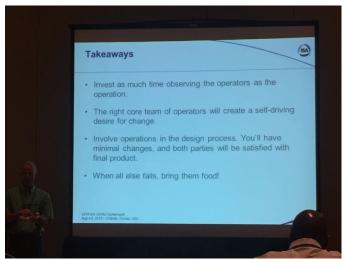


Bryan Singer from Kenexis gave an interesting talk about how to assess cybersecurity risks for SCADA networks

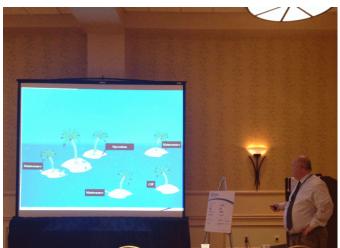


Jason Hamlin and Carter Farley gave a talk about how to achieve buy-in from operations when a building high performance HMI for a wastewater plant's SCADA system.





Jason's tip for introducing high performance HMI concepts to operators: When all else fails, bring them food!



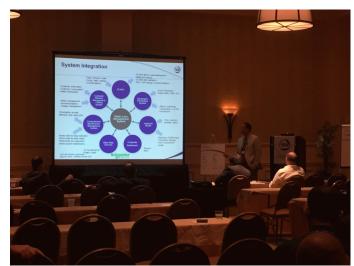
Barry Liner from WEF gave a talk about how to avoid the islands of automation that exist in many of our utilities.



While we had packed days the symposium, the evenings were still available to have a bit of fun! Notice our incoming symposium chair Pavol Segedy on the bottom right.



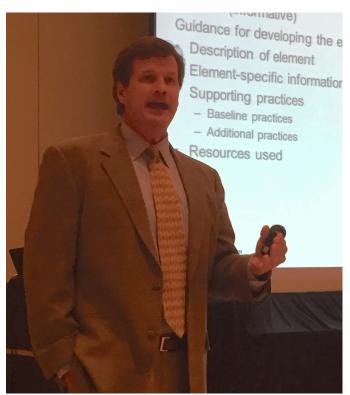
Alan Vance from E+H and Terry Sages from Rockwell gave a talk on wastewater lift station monitoring and control



Jeff Miller from Schneider Electric gave a presentation about the many, many aspects of successful automation systems.



Mike Sweeny from the Toho Water Authority gave us an update on all that is new with the AWWA.



Don Dickinson from PhoenixContact discussed how to establish a business case to invest in SCADA cybersecurity.



Symposium chair Kevin Patel giving an overview of how the presentations and papers at the ISA WWAC Symposium are subjected to a rigorous peer-review process. Each speaker's PowerPoint slides are carefully reviewed by the program committee before they can be presented at the symposium. Unlike many conferences, our WWAC symposium prides itself by only having peer-reviewed technical presentations



Tom DeLaura, past-chair of the WEF Automation and Info Tech Committee, moderated the utillity of the future forum.



Panel members checking their notes as Tom encourages the audience to ask panel members for their thoughts.



Invited speaker John Krajewski from Schneider Electric Invensys speaking about high performance HMI techniques.



Local symposium committee member Norm Anderson, from Polk County Utilities, gave a presentation with Manoj Yegnaraman on the benefits of SCADA master planning.



Maxym Lachance from TetraTech teamed up with Shree Lalgudi from EPCOR Utilities to give a talk on advanced control schemes for wastewater plant inlet gate flow control.



WWID Director, Graham Nasby, gave a talk on how to apply Alarm Management to SCADA software packages.



Symposium Chair Kevin Patel (left) receiving a thank you gift from our incoming 2016 symposium chair Pavol Segedy.



Committee volunteers Tony Morelli and Maxym Lachance enjoying a bite to eat at the volunteers dinner.



Photo of the symposium committee members at the volunteer dinner celebrating a job well done.



Photos of 2015 Symposium Award Winners

At the symposium, we were pleased to give out awards for best paper, best presentation and best poster from last year's 2014 symposium. We also awarded two ISA water/wastewater division service awards.



Paul Lanzilotta received a volunteer service award.



Juliana received the 2014 WWID Member of the Year



Carter Farley and Jason Hamlin won for best presentation.



Daniel Cote won the prize for best paper at WWAC2014.



Bryan Sinkler received Honorable Mention for Best Paper.



Jeff Miller recevied a prize for his paper from WWAC2014.

Photos of all our WWAC2014 award winners can be found at www.isawwsymposium.com/blog



2015 Symposium Tour Report

By Bryan Sinkler, Trihedral Engineering

At this year's plant tour on August 4, 2015, attendees had the opportunity to visit the Harvest Power Energy Garden at Walt Disney World in Orlando FL. Harvest Power's Energy Garden in Central Florida is designed to simultaneously address four challenges – to recover energy and nutrients from food waste; manage odors; process biosolids beneficially; and improve the fertilizer end product quality – with one integrated solution. Located at Reedy Creek Improvement District, this anaerobic digester processes 130,000 tons per year of biosolids, fats, oils, grease, and food waste and has 3.2 MW of installed power generation capacity and 3.8 MW of recoverable heat from a biogas-fueled combined heat and power system (CHP), plus class AA granular fertilizer.

Approximately 24 pounds of food waste enters Central Florida's landfills every second. Organic material and food waste in landfills produce a potent greenhouse gas, known as methane. Methane is the second most prevalent greenhouse gas emitted in the United States from human activities and is a contributor to numerous environmental issues, such as global warming.

Harvest Power has found a higher and better use for Central Florida's pre and post-consumer food waste. Through a patented anaerobic digestion process, Orlando's food and organic waste can be recycled and converted into clean energy, effectively transforming the community's organic waste problem into a sustainable local resource.

Harvest Power's goal is to be the market leader for North America's 500M+ tons/year of organic materials by providing communities with tailored solutions. They harness additional value from organic materials through the production of renewable energy, soils, mulches, and natural fertilizers. Harvest Power operates three of North America's largest commercial anaerobic digestion facilities and have won awards for exceptional performance; are one of the top three organics consumer products companies in North America, providing bagged and bulk products millions of backyards; and are the largest processor of yard waste and food waste in North America, managing ~1.8 million tons of organic materials each year.

Tour attendees had the opportunity to learn about the plant's treatment process and its automated control system. Major pieces of equipment were explained, and insight was offered as to how the plant's automated control system works. The tour comprised of a walking tour where attendees had the chance to "walk through the process." This plant is controlled by Allen Bradley PLCs with a Factory Talk HMI for primarily monitoring purposes.

Special thanks to Harvest Power and especially our tour guides Jeremy Goodfellow, Mark Greiner and Kelly Saikkonen of Harvest Power for being such great hosts. This year we had 65 attendees and hope to have a great turn out again at next year's plant tour.

Many thanks to Bryan Sinkler from Trihedral Engineering for acting as our WWAC2015 Tour Coordinator. Bryan also provided this tour report and the photos. Bus transportation to/from the tour was kindly provided by Schneider Electric.



Tour group learning about the facility from tour guides Jeremy Goodfellow, Mark Greiner and Kelly Saikkonen.



One of the facilties many outdoor instrumentation cabinets.



Feestock line leading to the digesters.





One of Harvest Power's large anaerobic digesters Note the large emergency relief valve, safety ladder, and flare on the side of the digester.



Group shot near some of the waste gas turbines.



The outdoor tour made for plenty of walking around the Harvest Power Engery Garden. Attendees appreicated the summer weather – many brought their sunglasses.



Tour leader Jeremy tells the group about the digestion process.



Getting on the bus back to the symposium after the tour.

Step Up to the Plate, Recycle Organics!



Information about the plant's feedstock - organic food waste!



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WATER DESALINATION REPORT





2015 Symposium Exhibitor List



































































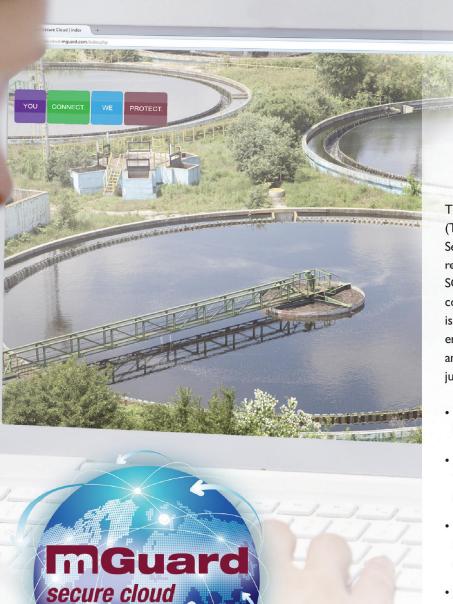
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For more information on how to exhibit and sponsor at the next year's 2016 symposium please visit our symposium website at www.isawwsymposium.com/exhibit-sponsor/.

The 2016 Symposium will be held on August 2-4, 2016 in Orlando Florida at the Wyndham Lake Buena Vista Resort (the same venue as this year's 2015 symposium).

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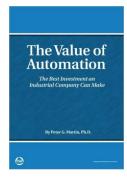
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ISA PUBLISHING

The Value of Automation

The ISA is pleased to announce it has published a new book written by renowned automation expert and innovator Peter G. Martin, Ph.D., which reveals how industrial companies can unlock the full power of automation systems to drive higher levels of industrial performance and also help solve many of the world's most critical challenges.



The Value of Automation

The Best Investment an Industrial Company Can Make

By Peter G. Martin, Ph.D.

Copyright 2015

ISBN: 978-0-87664-092-0

Length: 218 Pages Format: Softbound Book

Publisher - ISA

In his book, *The Value of Automation: The Best Investment an Industrial Company Can Make*, Dr. Martin contends that the immense capabilities of automation systems are untapped because their true potential value is not adequately measured or recognized.

"Industrial automation systems are underutilized and underappreciated for two critical reasons," points out Dr. Martin, widely recognized as one of the most influential professionals in automation and control. "First, the value provided by automation systems and solutions in brownfield environments is typically not measured and visible. This means that management does not know whether or not value is generated. Secondly, the business processes associated with capital budgeting are set up to limit the value delivered by automation systems. Both of these barriers to business value must be overcome to get the true potential value from automation."

Improved business value, he says, is attained by "measuring industrial businesses in real time and in an ongoing manner through real-time accounting. These measures make value visible and are essential for driving appropriate changes into traditional capital budget processes."

Leveraging automation systems' real-time control capabilities beyond their traditional role of improving operational efficiency is vital, Dr. Martin insists.

"Expanding the domain of real-time control to include security risk, safety risk, environmental risk, asset performance and profitability will drive much higher levels of industrial performance," he says. "As this takes place, industrial automation also will be in a much better position to help address and solve some of the most daunting challenges the world faces, such as low-cost globally available energy, clean water, food, clothing and consumer goods. In essence,

advanced automation may well be the key to solving world hunger, among the other 'mega challenges' before us."

Dr. Martin acknowledges that changing the ingrained business processes that are inhibiting measurable value generation will not always be quick or simple.

"Changing technology tends to be much easier than changing people and processes," he says. "Although the prescription presented in this book may appear to be very simple, it can work against the culture of many industrial businesses. As a result, the efforts involved with implementing the suggested approaches should not be underestimated."

To purchase a copy of *The Value of Automation: The Best Investment an Industrial Company Can Make*, visit www.isa.org/books/

Instantly Intuative SCADA







Announcing the 2016 ISA Water/Wastewater Division Student Scholarships

By Michael Fedenyszen, 2016 Scholarship Chair

The ISA water/wastewater industry division (WWID) is pleased to announce the 2016 ISA WWID Student Scholarship Program. Eligible students can win up to \$2000 in scholarship to 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, 2016.

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, 2016. Winners will be notified by February 28, 2016 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 Last Year's 2015 Recipients



Ka Yee Lam University of Toronto Toronto, Ontario, Canada Chemical Engineering PhD student



Charles Viola
Pennsylvania State University
State College Pennsylvania, USA
Chemical Engineering undergraduate student

Ka Yee Lam was a first year PhD student at the University of Toronto (Canada) studying chemical engineering. She graduated from the University of Guelph (Canada) with a Master of Applied Science in 2014 and a Bachelor of Engineering in 2012 for environmental engineering. After her studies, she hopes to become a professor in the field of wastewater and surface water research.

Charles Viola was a junior majoring in chemical engineering at The Pennsylvania State University. He has also worked for an integrator, Allied Control Services, Inc., that specializes in water and wastewater control systems. Using this work experience along with my academic knowledge, he hopes to one day design water treatment systems that are not only on the cutting edge of the automation industry but are also models of sustainability.





2016 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, 2016. Winners will be notified by February 28, 2016 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.

	<u>y (check one)</u>			
	WWID member, ISA Member #			
	WWID student member, ISA Member #	NI	0. 104 March 11	
	Parent/Guardian is a WWID member, Parent			
	WWID member recommendation (letter attack	nea), Member Name:	& ISA Member #	_
Other cr	iteria (check off each one)			
	Currently attending 2-4 year university/college	e curriculum		
	Confirmation of enrollment letter (or scan of s			
	200 word essay about "Why I should win the s	scholarship" attached		
	Copy of previous year's academic transcript a	attached		
	A P D. Nie			
	Applicant's Name:			
	Program of Study:			
	Institute Address:			
	Dean of Admissions Name:			
	Institute Phone:			
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eMail:		eMail:		

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, 2016



TECHNICAL ARTICLE

Selecting the Right Fiber Optic Cable for Water/Wastewater Plant Applications

By Kyle Mrkva, Belden

Every industrial environment imposes its own kind of harsh conditions on system components. In water and wastewater treatment plants, networking devices must endure extreme temperatures, high levels of humidity, grit, sludge and lime, and withstand exposure to methane, hydrogen, sulfide and chlorine gases. Exposure to such elements can contribute to erosion, wreaking havoc on mission critical networks.

In addition, remote pumping stations are frequently understaffed, requiring a high degree of automation to improve their efficiency. This typically involves computer-controlled devices and remote monitoring over fast, reliable networks.

Proper selection of control and monitoring components are therefore essential for success in this industry, as water and wastewater applications need solutions that will increase reliability and withstand harsh conditions at every stage of the process.

Advantages of fiber optic cabling

Fiber optic cabling is an ideal choice for applications requiring high bandwidth, low attenuation and complete electrical noise immunity. These cables are typically used in demanding environments and over long distances, allowing more information to be carried across the network without interruption. Fiber optic cables are also smaller and lighter than copper cables, extremely durable and intrinsically safe, with no risk of spark hazards.

Facilities with multiple buildings or outdoor production equipment, such as wastewater treatment plants, can be assured of high-reliability when industrial fiber optic cables are used.

Different types of fiber optic cables

Fiber optic cabling can be segmented into two categories based on design criteria and the installation environment:

Loose tube cables lay thinly coated fiber strands into unitized thermoplastic tubes, giving the fiber strands flexibility to move within the tubes and the cable the ability to stand up to outdoor temperatures and harsh environments.

Tight buffered cables contain an individual buffer on each fiber strand, allowing for easy handling and quick termination. For common small fiber counts, this design delivers a smaller cable diameter than loose tube cables and is best suited for indoor environments.

Single-mode fiber strands interface with laser optic light sources for distances beyond 300 meters, while multi-mode strands are designed to interface with LED and vertical-cavity surface emitting laser (VCSEL) light sources for short-distance cabling runs.

Critical features for external protection

When installing fiber optic cabling in wet environments, external protection is very important. Chlorinated polyethylene (CPE) cable jackets are used extensively in water and wastewater applications due to the corrosive nature of the elements and chemicals integral to the water reclamation process. Ruggedized jacketing protects from temperature extremes, UV/sunlight, solvents and crushing impact.

Additional external construction features to consider for allaround network protection include:

- Armoring: Steel corrugated and aluminum interlock armoring will protect the network amid the most demanding conditions, and should be considered standard cable features for water and wastewater applications.
- 2. Low smoke zero halogen (LSZH): To protect engineers and equipment from damaging acid and smoke, LSZH cables void of halogens such as fluorine, chlorine and bromine are an attractive option. Should a fire occur, LSZH cables don't produce acid when burnt or emit toxic fumes when combined with water, making them a safe choice for water and wastewater networks.
- 3. **Industry certified**: Cables should meet or exceed critical, third-party certifications and standards required by water and wastewater companies. Choosing cables that meet these certifications streamlines the process of obtaining the approvals required for the particular project and ensures the overall safety and performance of the network.

Like plants in any industry, facilities in the water and wastewater sector are constantly under pressure to perform at optimal efficiency and remain profitable. A majority of networks fail due to signal transmission issues, making it imperative to select the right cable when operating in these mission critical situations. Industrial grade products purposely designed to stand up to the demands of the water and wastewater industry will set engineering teams up for success in the field.

About the Author:



Kyle Mrkva is a product line manager for industrial cable at *Belden*. Kyle has worked with Belden for more than six years and has managed a variety of cabling products during his tenure, including Belden's classics, MarineTuff, lead wire, CSA control and instrumentation, LSZH and industrial fiber

optic cabling. Mrkva earned a B.A. in Marketing from Michigan State University's Eli Broad College of Business. Contact: kyle.mrkva@belden.com





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ASSOCIATION NEWS

ISA is leveraging data to become a smarter, more skillful organization

By Rick Roop, 2015 ISA President



In the world we live in, data is everywhere. And along with advances in technology, the amount of available data keeps growing—more than doubling every two years according to IDC, a leading technology research firm.

Virtually all businesses today regard data as an increasingly valuable commodity. ISA is no different. As you know, one of

the Society's five strategic goals is to "use data to understand trends, make decisions, and develop products and services that align with market needs."

In this month's column, I'll briefly explain why data is so important to businesses today and how ISA plans to utilize data moving forward. In addition, I will highlight the progress the Society has made to date in 2015 on its data goal.

It's important to recognize that data alone has limited value. To become actionable information, data has to be properly captured, processed, and analyzed to ensure context, relevance, and purpose. The key is converting data into knowledge so that you gain the clarity and insights needed to make more effective, informed decisions.

The ability to analyze and act on data is vital in business, whether the goal is tracking purchasing behaviors among subsets of consumers, detecting trends in website usage, or gauging interest in a potential new product. This is especially true given the rapid pace of change in the marketplace, which requires organizations to quickly react to shifting demands from customers and operating conditions.

The right data also can help organizations improve operational efficiency and reduce costs. For instance, by examining survey results, sales figures, and buying preferences among customers and prospects, companies can move to discontinue certain products or services that are no longer regarded as relevant or essential.

ISA is committed to utilizing data to drive more purposeful and disciplined product development and management strategies and decisions, such as:

- Determining what types of new products to develop
- Evaluating the efficacy of products over their lifecycle
- Forging a more balanced portfolio of products
- Pinpointing which products to discontinue

 Staying abreast of key industry trends and topics covered by traditional and social media channels

Within the data goal, ISA has five formal objectives (below). At the Spring Leaders Meeting held in June, Jennifer Infantino Halsey, the Society's Director of Marketing & Communications who is directing ISA's data initiative, outlined progress to date in 2015 toward achieving these five objectives:

- Objective #1, Plan and initiate development of dashboards to visually track key metrics, starting with one product area and using lessons learned to develop dashboards for other groups, is 30 percent complete.
- Objective #2, Develop a list of external data sources to track and identify areas where we can correlate external data to internal data to learn more about our business, is 60 percent complete.
- Objective #3, Develop a portfolio evaluation model to help us make decisions about adding and sunsetting products, is 60 percent complete.
- Objective #4, Determine resources needed and best practices for data management, is 75 percent complete.
- Objective #5, Determine metrics for evaluating progress on five strategic goals, is 60 percent complete.

For more specifics on progress achieved to date, <u>review this</u> <u>summary report</u>.

Objective #3 involves the development of a data-driven product portfolio evaluation tool. Instrumental to this concept is a Focus Review Team, which will continually meet to collect and evaluate product-related data across a range of preapproved criteria. The Focus Review Team would consist of senior staff representatives from all ISA departments and product areas. Ongoing input from other ISA staff members as well as Society leaders and volunteers also will be gathered.

During the first phase of product evaluation, the Focus Review Team would analyze product:

- Characteristics (attributes and benefits, innovation, competitive factors, differentiation, etc.)
- Budget and performance prediction (financial assessment relating to profitability, labor and support costs, forecast of future performance, etc.)
- Strategic alignment and market viability (alignment with ISA mission and goals, market data and trend tracking, market reach, input from volunteer leader groups and SMEs, etc.)



During the second phase, the team would score or rank a product along the following proposed criteria:

- Strategic fit
- Member needs
- Market viability
- Feasibility
- Innovation
- Projected net income
- Red flags
- Lifecycle stage

Based on the accumulated scores, the team will issue one of three possible decisions:

- Green light (Go)
- Green light with revisions (Proceed with caution)
- Red light (Stop)

As our understanding and utilization of data and data analytics evolve, we'll become a smarter and more skillful organization. We'll be more in tune with our customers' needs and expectations, more efficient with our resources, and more capable of targeting and capitalizing on growth opportunities.

Moving forward, I encourage all ISA members, volunteers, and staff to consider how you can assist the Society in becoming a more data-driven organization. Explore how you can put ISA data and analysis to work for your fellow members and within Society sections and divisions. In addition, don't hesitate to conduct surveys, focus groups, and interviews on your own. The insights you gain will help you better connect with and stay relevant to your constituent professionals and more precisely address their particular interests and career needs.

In conclusion, I leave you with a quote by Arthur Conan Doyle, the well-known Scottish writer and physician: "It is a capital mistake to theorize before one has data."

As always, thank you for your support of and contributions to ISA.

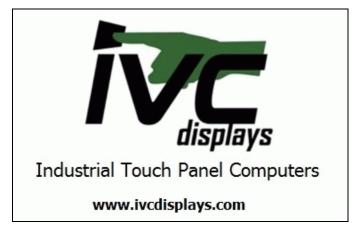
Rick Roop 2015 ISA President

Note: This article previously appeared in ISA Insights in August 2015. Reprinted with permission.











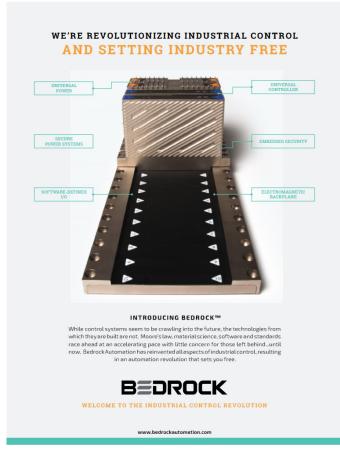
WWID is on LinkedIn

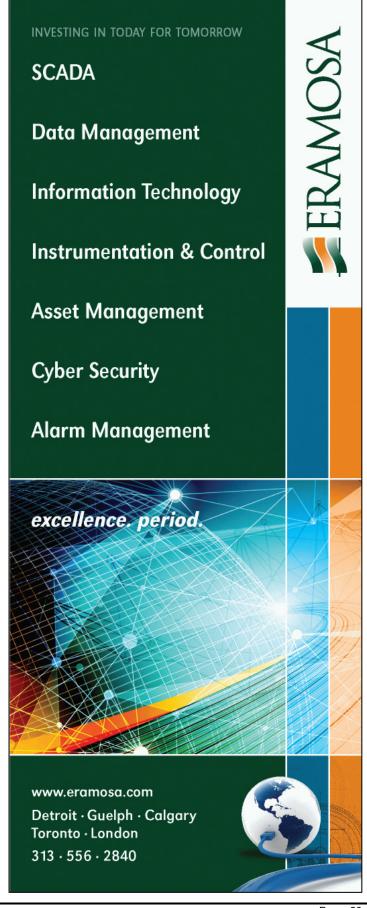
LinkedIn is a social media site that is geared towards professionals and business people. Located at **www.LinkedIn.com**, the site features online profiles, discussion groups and tools for identifying and keeping track of contacts. As of January 2014, LinkedIn has over 300 million members in more than 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









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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 is 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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2016 Symposium Details

Date: August 2-4, 2016 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

WWAC2017:

August 8-10, 2017 in Orlando, Florida, USA WWAC 2018:

August 7-9, 2018 in Orlando, Florida, USA

About the ISA Water/Wastewater Division

The ISA Water and 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

Founded in 1945, the International Society of Automation is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts conferences and exhibitions for automation professionals. For more information see www.isa.org

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Sponsorship and Exhibitor Opportunities



ABOUT THE SYMPOSIUM

Presented by the ISA Water and Wastewater Industries Division, in collaboration with WEF Automation and Info Tech Committee, the Florida AWWA Section, Florida Water Environment Association, and Instrumentation Testing Association, the WWAC symposium helps professionals in the water and wastewater sectors understand how instrumentation, SCADA (supervisory control and data acquisition), and automatic control applications are vital to the treatment and distribution of water; the collection and treatment of wastewater; and the management of stormwater. 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 sectors. It features 2 full days of presentations (two speaking tracks), a tour of a local water/wastewater facility, a general reception, networking events, a poster session, and a supplier showcase.



- 2 full days of speakers/presentations
- Track 1 Instrumentation, System Integration, Automation, Plant Case Studies, New Technologies, Process Optimization
- Track 2 SCADA Workplace Integration, HMI, Human Factors, Alarm Management
- Two Optional ISA Training Courses before the symposium
- Plant Tour of a local Water/Wastewater Facility
- Trade Show, Reception & Networking Event
- Affordable Professional Development for Plant Operations/ Maintenance Staff, Plant Managers, Plant Designers, Engineers, System Integrators
- CEUs Continuing Education Units
- PDHs Professional Development Hours

ATTENDEE PROFILE

The symposium is targeted at anyone involved with automation, instrumentation, and/or control systems in the water/wastewater sectors. Attendees typically range from plant operators, maintenance, and technical personnel to engineers, programmers and system integrators.

Meet and network with professionals who are responsible for the automation, instrumentation and operating aspects of water and wastewater facilities across North America. According to a recent US EPA study there are over 16,000 publicly-owned water plants across the USA, and another 21,000+ wastewater treatment plants throughout the country.

This symposium focuses on bringing together individuals who are looking for technical solutions to their water and wastewater challenges. They are looking for products, services, and partners they can trust to make their jobs easier.

SCHEDULE OF EVENTS

Monday - Tuesday, August 1-2, 2016

- Optional full-day training courses
- Symposium Registration
- Local Water/Wastewater Plant Tour (late afternoon Tuesday)

Wednesday, August 3, 2016

- Keynote Speaker
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Supplier Showcase & Vendor Presentations
- Evening Reception

Thursday, August 4, 2016

- Invited Speaker
- Presentations and Papers
- Light Breakfast, Coffee Breaks and Buffet Lunch Provided
- Poster Session
- Supplier Showcase



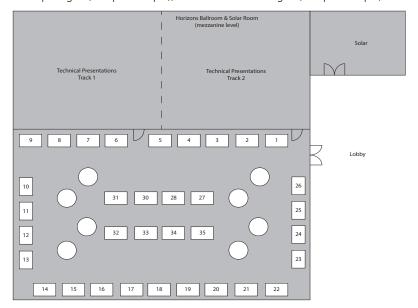
SPONSORSHIP OPPORTUNITIES

Sponsorship Leve	Platinum \$3000	Gold \$1500	Silver \$500			
General Information						
Number of Sponsorship Opportunities	5	10	20			
Number of Full Conference Passes	2	1				
Cost of Exhibitor Booth - comes with 2 additional vendor passes (Note: Regular cost of an exhibitor booth with 2 passes is \$875)	Included	Add \$500	Add \$700			
On-site Visibility						
Logo on signage near registration desk, speakers room and hallways	Top Tier	Middle Tier	Lower Tier			
Company logo in the 16 page Symposium Program Booklet	Large	Medium	Small			
Advertisement in the 16 page Symposium Program Booklet	1/2 page	1/4 page	1/8 page			
Symposium Website						
Logo with web link on Symposium website	Top Tier	Middle Tier	Lower Tier			
Logo in online Symposium program	Large	Medium	Small			
Pre-Event Visibility						
Logo in pre-event emails to 2000+ prospective customers Emails to announce: Early-bird registration, Keynote, Invited Speakers, Sponsor Announcements, Seminar Schedule, Advance Program, Early-bird registration reminder, Tour Information, Onsite program, etc.	8 emails	4 emails	2 emails			
Logo in 16 page Symposium Advance Program	Large	Medium	Small			
Advertisement in Symposium Advance Program	1/2 page	1/4 page	1/8 page			
Post Event Visibility						
Company and logo listed in post-event email to attendees	Yes	Yes	Yes			
Logo in post-event email announcing proceedings	Large	Medium				
Company logo and link retained on WWAC 2016 website	Yes	Yes	Yes			
ISA Water / Wastewater Newsletter - published quarterly						
Company name and logo in 2 newsletters prior to event	Yes	Yes	Yes			
Advertisements in 2 newsletters before and 1 newsletter after	Full Page	1/2 page	1/4 page			

EXHIBITOR OPPORUNITIES

Exhibitor tables are priced at \$875 each which includes:

- one six foot table with skirting, 2 chairs, duplex electrical outlet
- two vendor passes, which include ID badges and full conference access
- additional vendor passes can be purchased for \$200/each
- breakfasts, coffee breaks, and lunches on Aug. 3 & 4
- admission to the general reception with cash bar on the evening of Aug. 3rd
- exhibit room hours: Aug. 3 & 4 (8:00am-5:00pm), and during Aug. 3rd evening reception
- exhibit setup: Aug. 2 (6:00pm-9:00pm); exhibit take down Aug. 4 (5:00pm-8:00pm)



Why sponsor the WWAC

Build and maintain brand recoginition by being a sponsor for the 2016 ISA Water/ Wastewater and Automatic Controls (WWAC) Symposium. This focused event allows you to reach out to both the water and wastewater sectors with one integrated message.

Advantages of sponsorship include:

- Pre and post event visibility
- Exposure in the quarterly ISA water/wastewater newsletter
- Advertising in symposium programs
- Sponsor profiles on symposium website
- Visibility in symposium-related emails to attendees and ISA membership

Why exhibit at WWAC

Exhibiting at the 2016 ISA Water/
Wastewater and Automatic Controls
Symposium (WWAC) puts you faceto-face with a variety of industry
professionals searching for your
products, services, and insights. Use
this focused event to build key business
alliances and meet new prospects.

Network with the operators, maintenance managers and facility owners who are responsble for the smooth operation of water/wastewater facilties, as well as the engineers, technicians and programmers who build and develop automated plants.

2016 Water / Wastewater and Automatic Controls Symposium

Founded in 1945, the International Society of Automation is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts conferences and exhibitions for automation professionals.



CONTACTS

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International Society of Automation

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Sponsorship and Exhibit Space Contract

International Society of Automation

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2016 ISA Water / Wastewater and Automatic Controls (WWAC) Symposium

2-4 August 2016 • Wyndham Lake Buena Vista Resort • 1850 Hotel Plaza Blvd, Lake Buena Vista, FL, USA

Instructions: Review the Spor	nsorship & Exhibitor Prospectus. Complete this	form, Sign it, and Fax it ISA h	eadquarters at +1 (919)-549-8288	
1. Applicant Information				
Company Name:				
Street Address:				
City:	State/Province:	Country:		
Phone:	Fax:	Postal Code:		
Contact Person:		Position:		
ISA Member # (if applicable):	Email:			
2. Sponsorship Opportunitie	es (check all that apply)	3. Exhibitor Opportunitie	es (Table-Top Exhibits)	
☐ Platinum Level	•	Do you wish to exhibit at the symposium? YES NO		
includes 2 full conference passe includes 1 exhibitor table with t		An Exhibit Table includes a 6' and two vendor passes.	skirted table, two chairs, duplex outlet,	
□ Gold Level includes 1 full conference pass	\$1500	☐ Regular Price		
□ Silver Level	\$500	☐ Price for Platinum Sponsors☐ Price for Gold Sponsors	N/A, included \$500	
☐ Breakfast Sponsor	\$750	☐ Price for Silver Sponsors		
a breaklast sponsor		Preferred Exhibit Table Location: ISA reserves the right to assign comparable space if the preferred location is not available.		
Names of Conference Atten	dees	Names for Vendor Passes	5	
1 :	Add \$400 if not Platinum/Gold sponsor	1 :	Included with exhibit table	
2 :	Add \$400 if not Platinum sponsor	□ 2:	Included with exhibit table	
3 :	Add \$400	3:	Add \$200	
	Conditions are on the reverse of this page. These rules a nt the sponsor/exhibitor agrees to be bound t			
Authorized Signature:	Print Name:	Position:		
Technologies and/or products to be dis	played/promoted:			
For exhibitors: We request that, if poss	ible, space assignment near the following potential exhib	itors be avoided:		
5. Payment for Sponsorship				
Total Amount:	To p US Dollars (from sections 2 and 3)	To pay by credit card, complete the following: ns 2 and 3)		
Payment in US currency only.		rge: 🗖 Visa 🗖 Mastercard	☐ Amex ☐ Discover	
Full payment required with application. Make check or money order payable to ISA. Call ISA Customer Services for wire transfer information.		Charge Account Number:		
		Expiry Date:		
www.isawwsvmposium.com		Signature:		

Exhibit Space Contract Terms and Conditions

 APPLICATIONS. Applications for exhibit space must be made on the form printed on the reverse hereof, completed as requested, and accompanied by the required payment.

Products and services to be displayed must be specified on the application.

ISA reserves the absolute right to decline any application for space if, in ISA's judgment, the products or services to be shown or demonstrated are unrelated to the scientific and educational purposes of the Conference. This application becomes a contract only when accepted by ISA by notifying applicant of the assignment of a specified exhibit table.

- 2. EXHIBIT SPACE AND FLOOR PLAN. Exhibit tabletop space includes 6ft table, 2 chairs, one trash can,
 and duplex outlet. No rent allowance will be made if
 standard equipment is not desired. The exhibit floor
 plan for this Exhibition will normally be maintained as
 initially offered. ISA reserves the right to modify the
 plan to the extent necessary for the best interests of
 the Exhibitors and ISA or to correct inaccuracies or
 errors. ISA also reserves the right to modify the plan
 to the extent necessary for the best interests of the
 Exhibition.
- SPACE ASSIGNMENT. Space available will be allocated on a first come basis.
- **4. EXHIBIT SPACE PAYMENT SCHEDULE.** 100% of total exhibit fee must be paid with application.
- 5. CANCELLATION. An Applicant may cancel the contract by giving written notice of cancellation received by ISA on or before 2 months ahead of conference start date. Upon receipt of a timely notice of cancellation, ISA will refund the exhibit table fee previously paid by Applicant. Applicant agrees that any cancellation after 2 months ahead of conference start date, withdrawal from the event, or failure to show at the event is a material breach of this agreement and ISA will retain the entire exhibit fee paid by Applicant in such event. Applicant agrees that the amount of the exhibit fee is a reasonable measure of the damages to ISA in the event of such breach. ISA agrees that the retention of the fee is Applicant's sole liability in the event of such breach. All notices of cancellation must be delivered to ISA before 2 months ahead of conference start date. No notice is effective unless submitted to ISA in a manner in which proof of receipt by the deadline can be shown, such as certified mail with a return receipt, courier with signed receipt, or an acknowledged e-mail from ISA.
- 6. SUBLETTING EXHIBIT SPACE. No Applicant shall assign, sublet or apportion the whole or any part of the space allotted. Applicant may not display equipment or materials from other than its own firm or joint Applicants' firms in said space, without the consent of ISA.
- 7. INDEMNITY AND LIMITATION ON LIABILITY.

Applicant covenants and agrees to hold and save harmless ISA; the owners, operators, and managers of the Exhibit Facility; and the respective officers, agents and employees of each (collectively referred to as Exhibit Management) from any and all claims of liability, damage, or expense resulting from any injury to or death of any person, including Applicant's employees,

agents, and contractors, occurring within Applicant's exhibit table or resulting directly or indirectly from any act or omission of Applicant or any loss of, damage to, or theft of any property. An omission of Applicant includes any failure of Applicant to comply with any of the terms and conditions of this Contract; any of the Conference and Exhibit Rules and Regulations; any Rules and Regulations of the Exhibit Facility: and any laws of the City of the conference location. Applicant agrees to indemnify each and every member of the Exhibit Management group for any and all costs and liabilities incurred in defense of any such claim, including all expenses, attorney's fees, and any judgments awarded or settlement amounts agreed to. It is agreed that ISA Exhibit Management shall not be responsible for any loss, damage, or theft of any property of any persons, including the Exhibitor and its employees, agents, and contractors, while in transit to or from the Exhibit Facility, while in the Exhibit Facility, or otherwise.

Except for cancellations and withdrawals permitted by Paragraph 5 above, the Applicant is responsible for total rent for exhibit space irrespective of any reason for such cancellation and withdrawal, including cancellation and withdrawal by the Applicant because of failure of product showcase to arrive for any reason or cancellation by the Sponsors as the result of action by the Exhibit Facility Management or the result of strikes, lock-outs, act of God, inability to obtain labor or materials, government action of whatsoever nature, war, civil disturbance, fire, unavoidable casualty or other causes, whether similar or dissimilar, beyond the control of ISA. In the event of cancellation by ISA as a result of the aforesaid causes, the Applicant expressly waives such liability and releases ISA of and from all claims for damages and agrees ISA shall have no obligation to Applicant.

Applicant is a licensee of exhibit only and not an agent, employee, partner or joint venturer of or with ISA. Applicant agrees that it is solely responsible for its costs of doing business and agrees to hold ISA harmless from any obligations incurred by the Applicant as a result of contracting for any goods or services connected with the Exhibitor or with the Exhibit Facility, service contractors, or other persons or companies and to indemnify ISA for any costs or liabilities incurred in defending any such claims against ISA, including attorneys' fees, expenses, and any judgments awarded or settlement amounts agreed to.

8. GOVERNING DOCUMENTS AND LAWS. Applicant expressly understands and agrees to be bound by all terms and conditions and rules and regulations contained in this Exhibit Space Contract, the Exhibit Space Rules and Regulations, including any amendments which may be issued; the master lease between ISA and the Exhibit Facility; and the Exhibit Facility Rules and Regulations, copies or pertinent extracts of which are attached and/or available for inspection at ISA during normal business hours. Applicant also agrees to be bound by any deadlines or policies stated in the Exhibitor information which will be provided by ISA.

Such documents are made an integral part of this Contract by reference as if set forth in full in the Contract. Applicant is further charged with the knowledge of, and agrees to comply with, all local, state and federal laws, regulations, and codes pertaining to health and safety and promotions, marketing, and advertising, including activities requiring copyright licenses or permission and constituting a lottery, applicable to Applicant's Exhibit.

Compliance is Applicant's sole responsibility. This Contract will be interpreted and governed by the laws of North Carolina applicable to contracts signed and be wholly performed within North Carolina.

- 9. EXHIBITOR EVENT CONFLICTS. Exhibitor will not schedule any receptions, hospitality suites, social functions, exhibits, product demonstrations, technical seminars, training sessions, or other event or function for attendees (or potential attendees) outside of the exhibit facility during the Conference and Exhibit activity hours.
- 10. SURRENDER OF SPACE. If not cancelled as provided in this contract, Applicant's license for the exhibit space expires at the earlier deadline for move-out or actual vacation of the exhibit space. Applicant will surrender the space occupied by Applicant at the expiration of the license in the same condition as it was at the commencement of occupation. Applicant assumes sole and total responsibility for any damage to the Exhibit Facility due to construction, use, or dismantlement of Applicant's Exhibit and will reimburse ISA for any charges assessed by Exhibit Facility caused by Applicant paid by ISA, including charges for failing to vacate the premises in a timely manner.
- 11. VIOLATIONS. The interpretation and application of these Terms and Conditions and documents incorporated by reference are the sole responsibility of ISA. Violation by Applicant of these Terms and Conditions shall subject the Applicant to cancellation of its contract to occupy exhibit table and to retention by ISA of all moneys paid. Upon due notice to Applicant of such cancellation, ISA will have the right to take possession of the Applicant's space, remove all persons and properties of the Applicant, and hold the Applicant accountable for all risks and expenses incurred as a result of such re-entry and removal.

ISA reserves the right to restrict exhibits which become objectionable because of noise, operational methods, rules violations, or any other reason and may prohibit or evict any Exhibit, which in ISA's sole opinion, may detract from the general character of the Exhibition as a whole. In the event of such restriction or eviction, ISA will not be liable for any refunds or expenses of Applicant.

If ISA must engage an attorney to collect any amounts due under this Agreement, Applicant agrees to pay all reasonable attorneys' fees and expenses incurred by ISA.

12. AMENDMENTS. If any unforeseen event renders it necessary, ISA may amend these Terms and Conditions and those documents included by reference. All amendments will be published and mailed to each Applicant who shall be bound thereby. Any other changes in the terms and conditions and rules and regulations must be in writing and signed by both parties.