



# OWWA'S AUTOMATION COMMITTEE

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**A**s part of its mandate to support the Ontario drinking water sector, the OWWA has a wide variety of volunteer committees, each focused on a specific aspect of drinking water systems. One of these is the OWWA Automation Committee.

First formed in 2015, the Automation Committee is focused on supporting the advancement of effectively automating processes associated with treatment, distribution, water quality and power management through sharing of knowledge via different stakeholders, and providing high quality knowledge-sharing events.

Though small in size – just under 20 members – the Automation Committee prides itself on maintaining a balance of membership that includes utilities, consultants, vendors, contractors, and system integrators. Through the various insight of its balanced membership, the committee is able to come up with innovative solutions and best practices that serve the common needs of the municipal water sector in Ontario. The committee has also been happy to recently welcome a number of young professionals to its ranks. The Automation Committee strives to provide an inclusive environment for SCADA professionals across the province to share ideas.

The role played by automation in modern water facilities is broad, so the committee strives to provide a wide range of automation

guidance, including process control, SCADA systems, instrumentation, data collection and management, power distribution and management, security, cyber security, safety systems, computer optimization systems, and information technology.

The Automation Committee has also been attentive to the increasing use of the term *OT* (operational technology) when it is applied to process control systems such as SCADA. OT systems typically have very high up-times (99.999%, or only a few minutes of downtime per year) and are critical utility operations, which makes them challenging to design, build and maintain.

From a service perspective, the Automation Committee hosts several annual events and regularly takes on automation-related special projects. Some of the long-standing programs and special projects that the OWWA Automation Committee has been working on recently include:

- As part of the annual Ontario's Water Conference, the Automation Committee presents a series of automation-focused conference tracks. In past years these have covered such topics as plant upgrades, technical standards for SCADA systems, high performance HMI, alarm management, and automated meter reading systems.
- Every fall, the Automation Committee hosts the OWWA Automation Workshop, a day-long event focused on providing SCADA-specific technical presentations

and panel discussions so that SCADA staff at Ontario water utilities can learn about industry developments specific to their area of SCADA expertise. In past years, the fall Automation Workshop themes have included: emerging technologies, virtualization, virtual reality systems, high performance HMI, datalogging for compliance, cyber security and even a (friendly) SCADA software show-down between our sector's leading vendors. The committee is proud to share that the annual Automation Workshop has been a sell-out event for more than five years running!

- The Automation Committee performs a vital role in providing background and advice to the MECP in developing effective regulations for SCADA systems. For example, in 2021, the MECP published a technical bulletin to provide clarification on when Form 2 compliance paperwork is needed for upgrades to SCADA systems – this was a joint project between the MECP and the OWWA Automation Committee.
- Currently, the Automation Committee is working with the MECP to develop a compliance datalogging best practices document, so that utilities can have access to a water-sector-specific technical guide to help them implement effective and robust datalogging systems for recording compliance data using SCADA systems.
- The Automation Committee has a healthy tradition of developing best

practice documents and writing articles for industry publications. For example, each year the Automation Committee contributes one or more articles to *Ontario Pipeline* on a variety of automation topics. The Committee also works to promote well-written industry standards and best practices for SCADA system design, programming, construction and operations/maintenance.

As a committee that regularly meets throughout the year, the OWWA Automation Committee continues to be on the look out for new and interesting automation technologies and provides a venue for SCADA professionals to share and learn from each other's automation best practices.

## Committee Members



**Brian Sudic, P. Eng., Vice President, Infrastructure Ontario, CIMA+**

Brian was one of the founding partners of CIMA's Toronto office established over ten years ago. He leads a large team of dedicated water professionals that provide engineering services for clients across Ontario, serving as the Vice President, Infrastructure Ontario for CIMA+.



**Andreas Musing, B.A.Sc., Manager, Instrumentation & Automation, AECOM**

Andreas is the manager of the Instrumentation and Automation department at AECOM's Markham office. As a consultant and developer, Andreas has

designed and implemented several controls and automation solutions for a wide range of clients encompassing several industries including water/wastewater, food and beverage, pharmaceutical, automotive, and other manufacturing. He has over 30 years of experience, including project management, design management, instrument selection, detail design drawings and specifications, PLC and SCADA programming, commissioning/troubleshooting, and training.



**Dale Barker, SCADA Specialist, Ontario Clean Water Agency**

Dale Barker has more than 26 years of experience in Industrial Automation systems. He has designed, programmed and commissioned systems in automotive, food and beverage, pharmaceutical, and other manufacturing industries and has spent the last 12 years as a SCADA Specialist supporting water and wastewater systems for the Ontario Clean Water Agency. Dale has been a member of the Automation Committee since the committee began and is a past chair.



**Zack Sayevich, Manager Process Control Systems Unit, Toronto Water**

Zack Sayevich is the Manager of the Process Control Systems (PCS) Unit in Toronto Water. He graduated from Toronto Metropolitan University's Chemical Engineering Co-op Program in 2001

and is a professional engineer with over 20 years of project management, engineering, and commissioning experience in the water and wastewater industry. Prior to working at the City of Toronto, Zack worked at Zenon Environmental Inc. and has commissioned membrane water and wastewater treatment plants for both municipal and industrial clients. Zack is currently the chair of the OWWA Automation Committee.



**Frank Cosentino, President at SPD Sales Limited**

In 1975, Frank Cosentino graduated from Toronto Metropolitan University in Electrical Technology –Electronic major and started his career at Honeywell. He worked in the research lab and after two years, he started his career in the water and wastewater industry by accepting a position at Control and Metering in the field as startup and commission of instrumentation and control systems. He continued his studies at night by attending courses in accounting, business management and sales and marketing.

In 1980, he co-founded Summa Engineering Limited. Today, Summa Engineering is a market leading systems integrator (SI) specializing in water and wastewater treatment process controls. Frank has over 42 years of leadership experience and success in production, cost control and deliverables. He is known for his high productivity and culture-building vision. He leads a staff of professional engineers, programmers, field technical specialists and a manufacturing facility with a goal to provide expertise in product integration that will help to automate projects. A recognized SI leader, Frank is known for having a strategic vision to achieve successful business goals.



**Nick Hallas, P.Eng., President,  
Eramosa Engineering Inc.**

Nick Hallas, P.Eng. is the current President of Eramosa Engineering Inc. Nick graduated from the University of Western Ontario in 1996 with an Electrical Engineering degree and after working for four years as a hardware designer for 8-bit embedded custom applications, he joined Eramosa in 2001 as an Electrical/Instrumentation & Controls designer and system integrator. Over his 20+ years at Eramosa, he has gained a wealth of experience in the municipal water & wastewater industry across Canada and the US. Nick has played key roles in many water & wastewater projects ranging from small single stations and treatment plants to large multi-year projects involving 100+ facilities designing electrical, I&C and network systems and SCADA architectures as well as the development and implementation of Automation/SCADA applications. In addition to being a member of the OWWA Automation Committee, Nick also sits on the OWWA Automation MECP subcommittee, which acts as a liaison between the OWWA Automation Committee and the MECP.



**Jason Brenzil, Environmental Services,  
Maintenance Electrician/SCADA  
Technician, City of Stratford**

Jason has been with the City of Stratford for 13 years as a Maintenance Electrician/SCADA Technician. He also holds a Class 3 Water Distribution and Supply license. He

is responsible for maintaining all electrical, instrumentation and SCADA systems associated with the city's water and wastewater facilities. As a new member of the Automation Committee, Jason is keen to contribute to the team.



**Shawn Xiong, M.Eng.Sc., P.Eng., PMP**

Shawn is co-founder and President of ETO Engineering. Shawn graduated with degrees in both chemical engineering and computer science. Shawn is a professional engineer with over 22 years of experience, specialising in project management, construction administration, process engineering and SCADA systems in water and wastewater industry. At ETO Engineering, Shawn leads a multi-disciplinary engineering team that is committed to providing superb services to our clients across southern Ontario.



**Matt Spitzig, PCS SCADA Supervisor,  
York Region**

Matt Spitzig has been with the Region of York for 16 years. During this time, he has held several positions within the PCS/SCADA group and is currently the PCS/SCADA Supervisor. Prior to working for the Region Matt worked for several Tier 1 automotive suppliers including Magna International. Matt holds Class 1 Water and Wastewater Treatment licenses. During Matt's time at the Region he has been instrumental in several key projects including SCADA standards development, replacement of 100+ RPU's to current

standards, SCADA Master Plan development and a key stakeholder in many water and wastewater infrastructure development projects.



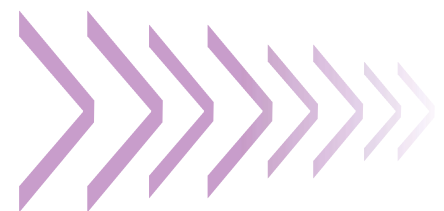
**Roberto Diaz, Supervisor, Maintenance,  
Water and Wastewater, Town  
of New Tecumseth**

Roberto has over 35 years of experience in Controls, Project Management and Maintenance in a variety of industries such as plastic manufacturing, forest, and automotive. He has managed projects in Cuba, Canada, USA, and Sweden. Roberto joined the Town of New Tecumseth in 2010 and continues his work there today. He holds a Master of Science in Engineering Degree from a Military Academy in the USSR.



**Sandy Moore, master electrician,  
309a construction and maintenance,  
442 industrial, General Manager,  
Lexasan Electrical Inc.**

Sandy was the founder of Lexasan Electrical in 1996. He has worked in the water and wastewater industry since 1982 and has a team of 55 electrical staff. Lexasan has specialized in water and wastewater only, allowing him to service key customers.







**Robert Chung, P. Eng., Project Manager Automation and Data Solutions, Region of Peel**

Robert Chung, P. Eng., is a project manager of the Automation and Data Solutions team at the Region of Peel. He graduated from the University of Toronto's Electrical Engineering program in 2007 and has been with the Region of Peel since 2011. He is a professional engineer with 15 years of experience in project management, automation and controls engineering in the water and wastewater industry.




**Jason Little, P.Eng., Advisor – Automation and Data Solutions, Region of Peel**

Jason Little is an Automation Professional with over 15 years experience in the water/wastewater industry. Jason is an active member of the ISA112 SCADA systems management committee and is one of the founding members of the OWWA Automation Committee. He studied electrical engineering at McMaster University, and is a licensed professional engineer in Ontario. He began his career at Earthtech and AECOM, and then joined the Regional Municipality of Peel. Since 2009, Jason has held a number of senior positions at Peel Region's public works department including SCADA Advisor, SCADA manager, and various project management roles for capital projects. In his spare time, he also leads Triple Point Solutions, a SCADA software company that provides the Neptune Cluster family of IIoT-based data-logging, reporting and dashboarding solutions.



**Trevor Marks, Senior Project Manager, Water/Wastewater Capital Projects Department, City of Hamilton**

Trevor Marks is a senior project manager with the City of Hamilton's water/wastewater capital projects department. Prior to joining the City of Hamilton, he was a Project Manager at Region of Peel from 2009 to 2018, and worked for a number of consulting engineering companies from 2000 to 2009. In the past, he has worked as a control systems specialist and I&C systems designer for ATS Automation, GES Controls and AECOM. In all, Trevor has been involved with automation, SCADA systems, and capital projects for over 20 years. 



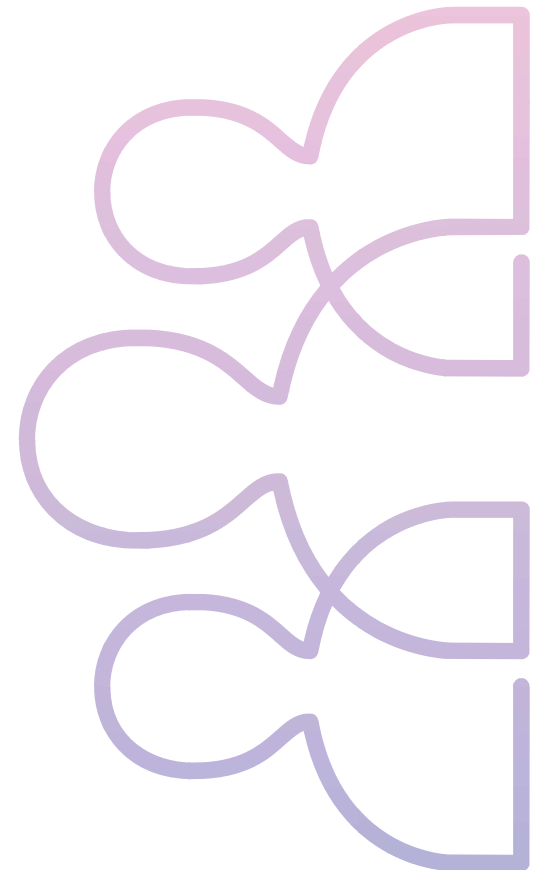
**Gluzen Ramos, Remote Operator, Regional Municipality of York**

Gluzen Ramos is a Remote Operator at York Region, primarily providing remote operational support to the Region's water and wastewater systems on SCADA. Other responsibilities include implementing alarm management strategies, analyzing SCADA data trending, and ensuring storage and quality parameters. Starting her career at York Region in 2018, Gluzen has since obtained Ministry licenses including Class III Water Distribution and Supply, Class II Water Treatment and Water Quality Analyst. Gluzen is the Vice-Chair of the Young Professionals Committee and serves as the YP Liaison for the Automation Committee. She is also YP co-chair of Local Host Committee for ACE2023.



**Scott McCook, SCADA specialist, Halton Region**

Scott McCook is a SCADA programmer for the SCADA group at the Region of Halton. He has been with the Region of Halton since 2000 and moved to the SCADA group in 2005. In his 22 years, he has played a significant role in many projects and in the development of the Region's SCADA standards as well as having been on the Automation Committee since its inception.



utility staff on how all the various pieces of equipment in the plant are to be used, and maintained during the life of the facility, and how troubleshooting should be performed.

### Performance Test

After all the commissioning tests are completed, the facility will enter a performance test period during which it is expected to run with few, if any, adjustments. It is not unusual to see 7, 14, or even 21-day performance test runs specified in the construction contract for a municipal water/wastewater facility. Also, depending on how a project is structured, the results of the performance test may be tied to certain project payment milestones, so it is important that performance testing be carried out properly.

### Project Close-Out

The successful completion of the performance test does not signal the end of the project! The design and construction teams must now both document what has been built in a series of submittals called operations and maintenance manuals (O&M manuals) and as-built documentation.

A typical contractor-provided O&M manual will include the specifications and manuals for every component installed in the plant, along with copies of the associated approved shop drawings, and copies of the various associated configuration settings and commissioning reports. Depending on the project, it may also include warranty information for specific parts of the system over and above any general warranty requirements specified in the overall construction contract.

The system integrator will then provide an O&M and as-built package that consists of back-ups of any automation code and documentation on how the various SCADA systems work.

Finally, as part of the terms of reference, the design team will provide an O&M submission to document how the plant is intended to operate from an operations point of view, plus a full set of as-built drawings to reflect how the plant was actually built.

### Summary

Building critical infrastructure is a complex process with many moving parts. It is a team effort that requires personnel who have a wide variety of skillsets working together during all the various

project phases for the result to be a successfully operating facility. Because of the prevalence of automation, SCADA professionals are an essential part of this team effort. By being involved at every step of the process, SCADA professionals continue to make the world a better place with automation when it comes to critical infrastructure.

### Additional Resources

- ISA112 SCADA Systems Management Standards Committee: SCADA systems management lifecycle, standards and technical reports for SCADA systems – [www.isa.org/isa112/](http://www.isa.org/isa112/)
- ANSI/ISA-62381-2011 (IEC 62381 Modified), *Automation Systems in the Process Industry – Factory Acceptance Test (FAT), Site Acceptance Test (SAT), and Site Integration Test (SIT)*
- ISA101 HMI Design Standard and technical reports – [www.isa.org/isa101/](http://www.isa.org/isa101/)
- ISA18.2 Alarm Management standard and technical reports – [www.isa.org/isa18/](http://www.isa.org/isa18/)
- American Water Works Association – [www.awwa.org](http://www.awwa.org)
- ISA Water/Wastewater Industry Division – [www.isawaterwastewater.com](http://www.isawaterwastewater.com)

Graham Nasby, P.Eng., FS Eng, PMP, CAP, CISSP, CISM, is a professional engineer with more than 15 years of experience working the municipal water/water sector, and is based out of Guelph, Ontario, Canada. Graham is the co-chair of the ISA112 SCADA Systems standards committee and a member of the OWWA Automation Committee. As of 2022, he is now the Senior Manager of OT Security Architecture for CN Rail. Contact: [graham.nasby@grahamnasy.com](mailto:graham.nasby@grahamnasy.com)



### Correction Notice

The Fall 2022 issue of Ontario Pipeline included a profile of the OWWA's Automation Committee, which unfortunately omitted Graham Nasby's photo and bio. Ontario Pipeline regrets this oversight and extends our apologies to Graham, who has been a valued member of the Automation Committee from 2015 to 2022.



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