



NCSLI Canada Division Meeting 2018



Welcome to the Greater Toronto Area.

Date 6^h to 8th November 2018

Venue/Lieu:

DoubleTree by Hilton Toronto Airport West

5444 Dixie Road, Mississauga,

Ontario. L4W 2L2





A professional, member based organization, aimed at enhancing the understanding, application, and advancement of measurement science across a broad range of disciplines

Members include individual professionals, business groups, national and international measurement bodies, educators, and students... serving the world of measurement

NCSLI VISION

Be the world's recognized source for measurement science expertise and information.

NCSLI MISSION

To provide the best opportunities for the world's measurement science experts and practitioners to network and exchange information; to promote measurement education and skill development; and to develop means for organizations to resolve measurement challenges.



OVERVIEW OF THE PROGRAM

Tutorial Program

Tuesday, November 7th.
9:30 a.m. to 3 p.m.

- Measurement Uncertainty Made Easy
- Risk Based Thinking in Measurement and Testing (French)
- ISO/IEC 17025:2017 What's new, what's not

Technical Sessions

A full technical session starting with a covering topics from calibration; Instrumentation; national and international metrology and laboratory practice.

For details refer to the session itinerary.

Exhibition

Wednesday, November 7th, 8 a.m. to Thursday, November 8th, 2 p.m.

Exhibition and trade show.

Networking Events

Tuesday, November 6th,
8:00 p.m.

Metrology Mixer – *Metrology quiz*

Just for fun, join us in the hotel bar, where you can take a quiz sheet to test your knowledge of metrology related trivia.

Wednesday, November 7th, 5:30 p.m.

Hosted Banquet – Join us for a cocktail reception and banquet at the Double Tree Hotel.

Facility Tour

Location	Description
MDA, Brampton	Details and sign-up sheet will be available at reception.



TECHNICAL SESSION ITINERARY

Day 1 - Wednesday, November 7, 2018

Time	Topic/Title	Name/Org
08:00	Registration/Exhibits/coffee	
08:45	Welcome and Opening Remarks	Ingrid Ulrich, VP NCSLI Canada Division
09:30	Healthy Minds ~ Healthy Workplace	Sonia McDonald, Edify
10:30	Break/coffee/exhibits	
11:00	The Revised SI – A Change That’s Worth the Weight	Georgette Macdonald, National Research Council
11:30	Preventing Contamination in Pressure Calibrations	Wally Miller, Fluke Calibration
12:00	Lunch/Exhibits	
13:00	Significant Improvements in Pressure Transducer Performance	Robert Clayton, Mensor
13:30	Redefinition of the Kelvin	Andrew Todd, National Research Council
14:00	NRC Remote Clock: Precise and Traceable Time Dissemination	John Bernard, National Research Council
14:30	Break/coffee/exhibits	
15:00	NCSLI committees panel discussion	Hosted by Dana Leaman, NIST NVLAP with panelists from selected committees.



Day 2 - Thursday, November 8, 2018

Time	Topic/Title	Name/Org
08:00	Exhibits/coffee	
09:00	Solid-State Lighting Measurement Activities at National Research Council	Amin Rasoulof, National Research Council
09:30	High Pressure Calibration Techniques	Wally Miller, Fluke Calibration
10:00	Technology for Generating AC Currents up to 100 kHz and 100 A, Specifically for a Transconductance Amplifier.	Mark Evan, Guildline Instruments
10:30	Break/coffee/exhibits	
11:00	Risk Based Thinking – A Paradigm Shift In Laboratory Management or Business as Usual.	Isabelle Amen, National Research Council
11:30	NCSLI Canada Review	Ingrid Ulrich and the NCSLI Canada Volunteers
12:00	Lunch/Exhibits	
13:00	Closing Address	Ingrid Ulrich
13:30	Travel to Tour	
14:00-16:00	Facility Tour MDA – details at the registration desk.	



TUTORIAL PROGRAM

The National Research Council of Canada is pleased to be able to offer a choice of workshops. Numbers are limited; please look for the tutorial of your choice when booking your conference ticket. Places will be given on a first come first served basis.

<i>Places are limited, so book early!</i>		
Time	Topic/Title	Name/Org
Tuesday, November 6th, 9:30 a.m. to 3 p.m.	Measurement Uncertainty Made Easy	Jeff Russell, NRC Calibration Laboratory Assessment Service (CLAS)
	Risk Based Thinking in Measurement and Testing (French)	Isabelle Amen, National Research Council
	ISO/IEC 17025:2017 What's new, what's not	Georgette Macdonald, National Research Council



TECHNICAL SESSION & TUTORIAL PROGRAM

Thanks to our speakers





Sonia McDonald CYW, CYC cert.

905-866-2172 soniamc@edifycentre.ca www.edifycentre.ca

HEALTHY MINDS ~ HEALTHY WORKPLACE

This workshop provides an overview of the most essential ideas and skills in supporting our Mental Health in the Workplace. During this 1 hour presentation, the focus is on the warning signs of Mental Health problems, and how they can affect employee performance, dispelling myths and strategies to help yourself or co-workers. It also examines why an employee might not disclose their Mental Health problem as well as why it is important to act if there is an issue present. We all have Mental Health. Some days it is better than others, and some days, it is just plain difficult to deal with. If the average employee in Canada will spend 63% of their time in the workplace, we know that their day to day struggles will impact their work performance, their mood and the overall climate in their work environment. Becoming aware of Mental Health concerns can drastically reduce the rate of absenteeism and increase performance.

We will provide an overview of common mental health concerns to allow attendees to recognize when a co-worker is struggling and provide concrete strategies to help.



In a fast paced, high stress environment it is sometimes difficult to determine what is job stress and what could be mental illness. Everyone has a clear role to play in their workplace with deadlines and responsibilities that so often keep us focused on ourselves. Our goal in this session will be to help people identify concerns rather than feel the need to take on a new responsibility of helping a fellow employee. Our hope is to reduce stigma and focus on a healthy workplace.

Biographical Note

Sonia McDonald is a qualified Child & Youth Worker; she is a Cambrian College graduate with experience working with youth of all ages and is a professional, certified member of the Ontario Association of Child & Youth Counsellors. With over twenty years' experience in the Mental Health field, Sonia contributes a wide range of skills and experiences to her facilitation. She has an exceptional ability to engage children, youth and community members in a positive way to offer them a different perspective during presentations. Sonia's passion and commitment is to reach & train students, professionals and community members how to end the stigma of talking about Mental Health and Suicide to create safer communities where help can be found for those who are struggling during the most difficult times.



Georgette Macdonald - National Research Council

THE REVISED SI – A CHANGE THAT’S WORTH THE WEIGHT



Later this fall we will all embark on the most fundamental change to our SI measurement system in living memory. This international initiative is the result of decades of negotiations and associated metrological advancements and it finally implements the century old advice of such scientific giants as Gauss, Maxwell and Planck. I will briefly outline the origins and evolution of our measurement system, the SI. I will then describe the revised SI, its ties to fundamental constants and the impact of these changes. Finally, I will mention the remaining administrative timeline and offer some guidance about the implementation of these changes.

Biographical Note:

As Director, Research and Development, Metrology for Quality Infrastructure, Georgette provides leadership in delivering coherent metrological advice, improving and informing national decision making for commerce, standards development, and regulation and trade agreements. Her program activities ensure the Canadian market has access to and confidence in competent measurement solutions and while supporting the international recognition of both the Canadian National Accreditation Body and Canadian National Metrology Institute (NMI).

As the Chair of the SIM Quality System Task Force (QSTF), Georgette enables NMIs in the Americas to demonstrate competence and to gain confidence between National Measurement Systems around the globe.

Georgette’s technical background is in mass and related quantities. She started her career in metrology with GJS Mass Measurement and Fisher Scientific Canada; as a Laboratory Technologist, and then as the Laboratory Supervisor and Quality Manager. As the Lab Supervisor, she managed the successful participation in an international inter-laboratory comparison for mass standards. As the Quality Manager, she led the transition of the quality system from ISO Guide 25 compliance to ISO/IEC 17025 accreditation.

Georgette holds a BSc in Civil Engineering from the University of Ottawa and a MBA from Queen’s University. Her association with the NCSLI workshops began in 2000 when she attended her first conference in Toronto; she presented her first paper in San Diego in 2002 and led her first tutorial in Tampa in 2003.



Wally Miller – Fluke Calibration

PREVENTING CONTAMINATION IN PRESSURE CALIBRATIONS

When performing pressure calibrations, contamination can be transferred through the calibration media. This can cause problems such as damaged devices, bad calibrations, and contaminated processes. The good news is, there are solutions. This presentations discusses and describes several of the issues and solutions to prevent contamination.



HIGH PRESSURE CALIBRATION TECHNIQUES

High Pressure presents a unique set of challenges. This presentation discusses physical principles of pressure with a focus on high pressure. We cover special fluid properties and describe techniques and considerations to achieve good results with high pressure calibrations.

Wally has been with the Fluke Corporation June 1982 to present. Currently Business Development Manager for Temperature & Pressure Products.

Biographical Note

Previous positions at Fluke

- Senior Sales Manager – Americas
- Senior Sales Program Manager – Asia
- Business Development Manager – Fluke Precision Measurement
- Marketing Product Specialist – Manufacturing/R&D Group
- Sales Support Engineer – Industrial Measurement and Control Group
- Applications Engineer – Industrial Measurement and Control Group
- Marketing Product Engineer – Control Products Business Unit
- Software Engineer – Precision Measurements Business Unit

Education:

- Bachelor's Degree with Honors in Electrical Engineering – University of Washington
- Executive Masters of Business Administration – University of Washington
- Personal:
- Born in Michigan, moved to Washington in 1969
- Father of two girls
- Interests include Photography, Wine and Science

Wally was born in Michigan and moved to Washington in 1969. He is father of two girls and his interests include Photography, Wine and Science.



Robert Clayton – Mensor LLP

SIGNIFICANT IMPROVEMENTS IN PRESSURE TRANSDUCER PERFORMANCE

Mensor has always strived for continual improvement of our pressure transducers and in the last two years we have made significant strides. We have developed new processes in the qualification of the sensors used, new higher quality electronics and revolutionary processes for our production of pressure transducers. The purpose of this paper is to explain some of the changes with our new transducers, and the results of our improvements.



Biographical Note:

Robert Clayton is the Director of Research at Mensor and has a BSME from the University of Texas. He was instrumental in the transition from fused quartz to silicon sensor technology at Mensor over 20 years ago. He also serves as the corporate metrologist and liaison to NCSLI.

Andrew Todd – National Research Council Canada

REDEFINITION OF THE KELVIN

It is expected that the International System of Units, the SI will be revised, taking effect on World Metrology Day 2019 (20-May-2019). This redefinition will include redefining the unit of temperature, the kelvin, in terms of a fixed value of the Boltzmann constant, k . This talk will provide an overview of the redefinition, provide brief descriptions of the primary thermometric methods that can be used to realize thermodynamic temperature, and discuss the impact of the new definition (spoiler: NMIs will ensure that there is no impact to general users!)



Biographical Note:

Andrew Todd obtained his PhD in physics from Dalhousie University in Halifax, Nova Scotia in 2009 after which he began working as a Research Associate at the National Research Council. He is currently the Team Leader of the Thermometry and Radiometry group in the Metrology Research Centre at NRC.



John Bernard – National Research Council

NRC TimeLink™ – MONITORED NTP AND THE NRC REMOTE CLOCK: PRECISE AND TRACEABLE TIME DISSEMINATION

John Bernard, André Charbonneau, Rob Douglas, Bill Hoger, Deval Patel, Hai Pham, and Marina Gertsvolf



There is a growing demand from sectors such as telecom, utilities, finance, and the military for accurate and precise time synchronization. This is particularly important in the area of finance where the auditing of high-speed stock trades and other financial transactions has led to new regulations and requirements for high-accuracy time-stamping of trades with traceability to Coordinated Universal Time (UTC). For example, in Canada and the United States, the current regulation guidelines specify 50 ms time stamp accuracy with explicit requirement for traceability to UTC. For the past three decades, the Network Time Protocol, NTP, has provided time synchronization throughout the digital world and is used in most networked equipment today. NTP can achieve time synchronization over the public internet, often with millisecond precision. In many applications, this accuracy is sufficient provided traceability and service quality control are established. However, to the best of our knowledge, NTP has not yet been used to achieve traceable measurements.

The need for traceable time synchronization makes the uncritical use of standard NTP methods insufficient. To meet the demand for precise and traceable time, we have developed two new time dissemination services, *NRC TimeLink™ - Monitored NTP* and *-Remote Clock*, which provide metrological traceability with respect to UTC of the timescale at the customer's site. The Monitored NTP service utilizes standard NTP methods, but adds the use of a stratum server traceable to UTC(NRC), automated monitoring and alert systems, and performance report generation, all required for achieving traceable time dissemination. For applications that require traceable synchronization to UTC at the microsecond level, the customer can choose the *Remote Clock* service. The Remote Clock is installed at the client's site and provides standard frequency (5 or 10 MHz), 1PPS, and timecode outputs that are suitable for feeding time and frequency servers and are traceable to UTC with uncertainties below 1 microsecond. The rubidium standard in the Remote Clock is synchronized to UTC(NRC) through GPS-common view observations. Common view data from our laboratory at NRC are uploaded to the Remote Clock every few minutes and combined with similar data acquired by the Remote Clock to ensure synchronization of the two timescales. Both the Monitored NTP and Remote Clock services are continuously monitored in our laboratory to watch for problems and monthly calibration reports are provided.

Biographical Note:

John Bernard joined the Frequency and Time Group at the National Research Council in 1994. His responsibilities have included the development of techniques and devices to measure optical frequencies to provide traceability to the SI second and metre. This work includes the calibration of optical frequency for lasers used by the NRC Dimensional Metrology group and the development of an optical frequency standard, based on a single trapped and laser-cooled ion, that will serve as a next generation standard of the SI second for Canada. From 2002 until 2015 he served as project leader for Optical Frequency Standards and later as Group Leader for Frequency and Time. As such, he developed expertise in time-keeping and contributed to the early stages of the Remote Clock project.



NCSLI COMMITTEES PANEL DISCUSSION

This session will provide an overview of NCSLI committees and focus on selected committees. The aim of this session is to raise awareness of the NCSLI committees and to encourage Canadian participation.

Amin Rasoulof – National Research Council Canada

SOLID-STATE LIGHTING MEASUREMENT ACTIVITIES AT NATIONAL RESEARCH COUNCIL

The incandescent light bulb has existed for over 130 years; however, it suffers inefficient energy conversion, large form-factor and vulnerability to environmental shock. In the last decade solid-state lighting (SSL) technology matured enough to produce efficient, small white light emitting diode (LED) sources that work in a large variety of environments and conditions.

Contrary to compact fluorescence lamps (CFL) lamps that contain mercury, LEDs are more eco-friendly and easy to dispose which makes them even more interesting. These properties have made LEDs the most popular light source for household and commercial applications.-

This rise of LED technology brings a significant demand for measurement and calibration of these light sources. LEDs and traditional light bulbs have fundamentally different techniques of light generation. Hence, specific studies are required for photometry and spectral radiometry of LED sources. At the Photometry group in National Research Council we have been working on establishment of facilities for photometry of LED light sources. In my talk, after a brief introduction to LED sources, I will discuss our activities so far and the promises on measurement and characterization of this emerging type of light source.



Biographical Note:

Amin Rasoulof received a Ph.D. in Optical Engineering in 2017 from the University of New Mexico, USA. During his studies he worked on developing laser sources and spectroscopy of nitrogen molecules. In 2017 he joined National Research Council of Canada (NRC) in Ottawa to establish laser source for time and frequency measurement. Since 2018 he has been working in Photometry and Spectrophotometry group at NRC. In addition to photometry with incandescent light sources he is studying solid-state lighting measurement and characterization methods.



Mark Evans – *Guildline Instruments* *Technology for generating AC currents up to 100 kHz and 100 A, specifically for a transconductance amplifier.*



Transconductance Amplifiers use an input voltage signal to drive an output current signal typically at the same frequency. This stable voltage controlled current source is commonly used at higher current levels. The design of a wide-band transconductance amplifier (i.e. DC to 100 kHz) is especially challenging. To extend wide-band operation to accommodate higher output currents and higher output power levels (e.g. 100 A with compliance voltages of 8 V_{rms} or higher) requires a unique architecture.

This presentation will show key design components of a transconductance amplifier, and will describe manufacturing issues and operational challenges. The presentation will also describe patented technologies that overcome many of the issues that have prevented the development of high output power wide-band transconductance amplifiers.

Biographical Note:

Mark Evans, Senior Engineer, Guildline

With 20 years of experience, Mark Evans is a senior designer and leads the development of many of Guildline's new and flagship products. He is highly recognized world-wide within the electrical metrology community for his knowledge and skills. His responsibilities cover both software development as well as electrical design. Having authored and presented many papers pertaining to optimization and best practices in the field of metrology, he is well established as a solution provider in automating metrology practices and software system integration solutions for metrology. He is often called upon to give training in primary and national labs around the world as well as presentations and training workshops on many different aspects of metrology at international conferences and seminars.



Isabelle Amen – National Research Council Canada

RISK BASED THINKING – A PARADIGM SHIFT IN LABORATORY MANAGEMENT OR BUSINESS AS USUAL.



ISO/IEC 17025:2017 is a new standard, but how new? The fundamental principles remain the same. The structure of the document has certainly changed, but many of the requirements have simply been ported over. There are some clarifications and amplifications, a few new requirements, and a few old requirements have disappeared; so is it an evolution or a revolution?

One word stands out: risk. The new standard uses the word risk 29 times. The 2005 version of the standard uses the word risk 4 times. Is this indicative of a paradigm shift for laboratories, or is it business as usual? Arguably taking risk into account gives increased latitude to laboratories in the development of their approach to conformity to the standard. So it follows that, for laboratories conforming to the 2005 version of ISO/IEC 17025, this latitude also includes the option of changing almost nothing. This paper will explore that argument and provide interpretations of the effect considering risk can have on how we look at the general requirement for the competence of calibration and testing laboratories.

Biographical Note:

Isabelle Amen is the Leader, Quality System at the National Research Council Canada, Metrology Research Centre, where she manages the quality management system for Measurement Services and Reference Materials Production based on the International Committee for Weights and Measures (CIPM) Mutual Recognition Arrangement (MRA) requirements, ISO/IEC 17025 and ISO Guide 34/17034. Isabelle is also the NRC delegate at the Sistema Interamericano de Metrologia (SIM) Quality System Task Force. In her additional role as Technical Advisor for the Calibration Laboratory Assessment Service (CLAS), Isabelle also leads third-party assessments of calibration laboratories seeking accreditation to ISO/IEC 17025 and manages the CLAS quality management system to ISO/IEC 17011. Prior to joining the NRC, Isabelle was employed with the Standards Council of Canada for 9 years as Program Manager, Laboratory Accreditation, leading and overseeing assessment activities of about 100 laboratories. Isabelle was also the lead trainer for SCC technical and lead assessors. Isabelle's technical background is in radio communications and telecommunications. Prior to joining the SCC, as a R&D engineer at France Telecom, Isabelle was responsible for electromagnetic compatibility and spectrum engineering studies. She contributed to and attended twice the World Radio Conference of the International Telecommunications Union. She was also the technical secretary of the Radio Spectrum Matters working group at the European Telecommunications Standards Institute for five years. Isabelle holds a Bachelor degree and a Master degree in Electrical Engineering from National Institute of Applied Sciences, Rennes, France and University of Science, Rennes, France. She is a certified quality auditor and she is listed a peer evaluator for the Inter American Accreditation Cooperation (IAAC) and Asia Pacific Laboratory Accreditation Cooperation (APLAC) for testing and calibration. Isabelle enjoys training others and presenting on topics such as metrological traceability and assessing quality systems. She has been working with NRC since 2013.



Ingrid Ulrich AND THE NCSLI CANADA VOLUNTEERS

NCSLI CANADA REVIEW & CLOSING ADDRESS

This session is intended to give you the opportunity to contribute to the direction of NCSLI Canada. Our focus is always the annual event, but we are more than this event, we are a community. Your NCSLI volunteers would like to hear from you about what you would like this community to be and what you would like it to do. As volunteers we give our time because we care about the measurement community in Canada and its place in the global measurement community; but as volunteers, it is important that our contributions are useful and need by the community.

Ingrid will introduce and moderate an open discussion on where we are and where we might go. Please bring your thoughts and opinions to help us plan for next year and beyond.



MEASUREMENT UNCERTAINTY WORKSHOP

Jeff Russell NRC CLAS

Scope

This workshop is intended to help attendees understand what the big deal is about measurement uncertainty and how to apply it; to the extent it is needed. It is a step by step walk through the evaluation and expression of measurement uncertainty with a worked example.

It will provide the basics of evaluating and expressing uncertainty with minimal stats jargon, algebraic notations, system modeling and calculus. The emphasis is to evaluate and express uncertainty only to the extent you need, to accept that you'll never be certain about the uncertainty and to focus mostly on the "biggies"; don't sweat the small stuff (much).

Intended audience

This is an introductory workshop, intended for measurement practitioner and managers. Practitioners who would like a basic understanding of how to evaluate and express measurement uncertainty.

Learning objectives

After this workshop participants will be able to:

- Identify the contributors to measurement uncertainty.
- Select consistent units for the uncertainty evaluation.
- Evaluate the magnitude of each uncertainty contributor.
- Express each uncertainty contributor as a standard uncertainty.
- Document the basis for your evaluations.
- Combine the standard uncertainties.
- Expand combined standard uncertainty to represent desired confidence level.
- Report the result in a manner consistent with industry practices such as the GUM and ISO/IEC 17025.

Workshop Facilitator:

Jeff Russell is the Leader, Assessment Services for NRC. In this role he has been assessing calibration labs since 2009 and has experience with almost every area of calibration. He is also the technical authority for the NRC gauge block calibration lab providing calibrations with measurement uncertainties of <100 nm. Before joining NRC Jeff worked in both the medical devices and telecommunications industries as a manufacturing engineer. He has been doing uncertainty analysis for calibration and testing since 1996.





RISK BASED THINKING IN METROLOGY, ISABELLE AMEN NRC

CLAS

Portée

Les normes conçues pour les systèmes de gestion ont une vocation universelle, puisqu'elles sont adaptables à chaque situation grâce à l'insertion d'expressions telles que « dans la mesure nécessaire », « le cas échéant », « suffisamment pour », etc.

L'évaluation des risques s'imisce de plus en plus dans tous les aspects de l'économie et de la société depuis de nombreuses années. Elle va devenir plus importante pour les laboratoires avec l'adoption de la norme ISO/CEI 17025:2017.

Cet atelier aidera les personnes qui participent à la planification, à la gestion, à la mise en œuvre et à l'examen de n'importe quel aspect des systèmes de gestion des laboratoires à évaluer les risques et à comprendre ce que les énoncés signifient dans leur cas particulier.

Les outils et les techniques permettant d'identifier, d'analyser, de contrôler et de surveiller les risques seront présentés. Les participants pourront les mettre en pratique durant les exercices effectués en salle de classe.

Public visé

Toute personne ayant des responsabilités liées aux prises de décisions, à la qualité, à l'assurance de mesurage, aux vérifications ou s'intéressant à la gestion des risques au sein d'un laboratoire.

Objectifs d'apprentissage

Après cet atelier, les participants :

- pourront citer plusieurs sources communes de risques associées au mesurage et aux essais;
- pourront appliquer des techniques d'analyse quantitative et qualitative des risques liés aux mesures;
- pourront appliquer les principes de la prise de décision basée sur les risques dans un contexte de mesurage;
- pourront évaluer les actions et maintenir une connaissance à jour des risques dans un système de mesure;
- seront mieux préparés à la transition vers la norme ISO/CEI 17025:2017.

Animatrice de l'atelier:

Isabelle Amen est responsable, système qualité du Centre de recherche en métrologie CNRC. Dans ce rôle, elle gère le système de gestion de la qualité de l'Institut national de métrologie du Canada conformément à l'ISO/CEI 17025 et au Guide ISO 34/17034 depuis 2013. Elle est également conseillère technique et responsable qualité pour le Service d'évaluation des laboratoires d'étalonnage (CLAS). Avant de se joindre au CNRC, Isabelle a travaillé comme gestionnaire de programme, accréditation de laboratoires au Conseil canadien des normes et comme ingénieur R&D en communications radio et télécommunications au centre de France Telecom R&D. Isabelle est titulaire d'un baccalauréat et d'une maîtrise en génie électrique. Elle est une auditrice qualité certifiée. Elle est évaluatrice en chef selon la norme ISO/CEI 17025 depuis 14 ans et elle est inscrite à titre d'évaluateur par les pairs pour la coopération interaméricaine d'accréditation (IAAC) et la coopération d'accréditation des laboratoires de l'Asie-Pacifique (APLAC) pour les essais et l'étalonnage.





ISO 17025:2017 WHAT'S NEW, WHAT'S NOT,

Georgette Macdonald – National Research Council Canada

Scope

ISO/IEC 17025 *General requirements for the competence of testing and calibration laboratories* enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work locally, nationally, regionally and around the world.

Implementing 17025 also helps facilitate cooperation between laboratories and other bodies by generating wider acceptance of calibration and test results between countries. Test and calibration reports and certificates can be more readily accepted from one country to another without the need for further test or measurement, which, in turn, facilitates international trade.

Management system standards are a one size fits all solution, tailorable through statements such as “to the extent necessary”, “as appropriate”, “sufficient to”...

Risk-based thinking also has been a growing trend spreading to all aspects of the economy and society for many years. It became more prominent for laboratories with the revision of 17025 published in November 2017 (ISO/IEC 17025:2017).

This workshop will help those involved planning, managing, implementing and reviewing any aspect of laboratory management systems to review and discuss the requirements and determine what these statements mean to their particular situation.

Participants will have the opportunity to put them into practice during class room exercises.

Intended audience

This is an introductory workshop, intended for measurement practitioner and managers.

Learning objectives

After this workshop, participants will be able to:

- List the principal requirements of the ISO/IEC 17025:2017;
- Explain the requirements;
- Understand and apply risk-based thinking in a laboratory; and
- Discuss implementation within their own laboratory.

Workshop Facilitator:

Georgette Macdonald





NCSLI CANADA WHO'S WHO 2018

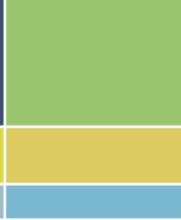
Ingrid Ulrich, NCSLI Vice-President Canadian Division Transcat Canada Inc.

Ingrid Ulrich is currently the Vice-President, Operations & Administration of Transcat Canada Inc., which operates commercial calibration laboratories across the country providing accredited calibration and repair services, as well as the distribution and rental of test and measurement instruments. She began her career with Ulrich Metrology in 1996 as Controller, and subsequently Chief Financial Officer, before becoming the President in 2004. Ulrich Metrology was purchased by Transcat, Inc. in 2014, at which time Ingrid assumed her current role for the Canadian operations. Prior to joining the company, Ingrid had a nine-year career as a Chartered Professional Accountant with the firm Richter where she worked as an audit manager and advisor to owner-manager companies.



Ingrid first joined NCSLI in 2004 as a member and participant in the Canadian Region activities. She was named Secretary in 2009 and then Canadian Region Coordinator from 2010 to 2012. Ingrid then assumed the role of NCSLI Canadian Division VP in 2013, in addition to her participation in the Learning and Development Committee as Chairperson of the Anthony Ulrich Metrology Scholarship committee.

Ingrid graduated from McGill University with a Bachelor of Commerce in 1987 as well as a Graduate Diploma in Public Accountancy in 1988. She was admitted to the Canadian Institute of Chartered Accountants in 1988, and later received her Masters of Business Administration from Concordia University. Ingrid resides in Montreal, Quebec, Canada with her husband, three teenage children and Wheaten Terrier named Riley. She enjoys travelling, alpine skiing and eating chocolate, and is an avid soccer mom.



Canadian Division Volunteers

Canadian Division Deputy	Andy Oldershaw	National Research Council Canada
Eastern Canada	Jarett Grant	Pylon Atlantic Division of Pylon Electronics, Inc.
Eastern Ontario	Jim S. Mullins	Pylon Electronics, Inc.
Western Ontario	Patrick A. Stuart	Fluke Calibration
Québec	Sylvain Bérubé	Hydro-Québec
Western Canada	Malcolm C. Smith, PhD	Wescan Calibration Services Inc.

Thanks go to all of our volunteers, speakers, sponsors, partners and exhibitors for their time and consideration and making this event such a worthwhile endeavour.