

# 2023 Fall Conference on "Improving Measurement Confidence and Reducing Risk"



**Sheraton Suites - Cuyahoga Falls, Ohio**

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2023 Joint ASQ Measurement Quality Division and Akron/Canton Section Conference Registration Fees												
	Early Bird Pricing (Through August 31, 2023)				Regular Pricing (September 1 - October 6, 2023)				After Oct 7 and On-Site Pricing (October 11-13, 2023)			
	Tutorial Only (1 day) *limited capacity  2 x 4 hour or 1 x 8 hour  Wednesday 10/11	Conference Only (includes Thurs dinner)		BUNDLE: Tutorial plus Full 2-day Conference Registration (tutorial capacity limited)	Tutorial Only (1 day) *limited capacity  2 x 4 hour or 1 x 8 hour  Wednesday 10/11	Conference Only (includes Thurs dinner)		BUNDLE: Tutorial plus Full 2-day Conference Registration (tutorial capacity limited)	Tutorial Only (1 day) *limited capacity  2 x 4 hour or 1 x 8 hour  Wednesday 10/11	Conference Only (includes Thurs dinner)		BUNDLE: Tutorial plus Full 2-day Conference Registration (tutorial capacity limited)
		2 days  Thurs 10/12 and Fri 10/13	1 day Only  Thurs 10/12 OR Fri 10/13			2 days  Thurs 10/12 and Fri 10/13	1 day Only  Thurs 10/12 OR Fri 10/13			2 days  Thurs 10/12 and Fri 10/13	1 day Only  Thurs 10/12 OR Fri 10/13	
ASQ Member	\$500	\$600	\$400	\$1,000	\$600	\$700	\$500	\$1,100	\$700	\$800	\$600	\$1,200
Nonmember	\$600	\$700	\$500	\$1,200	\$700	\$800	\$600	\$1,300	\$800	\$900	\$700	\$1,400
Student Rate <i>(with valid Student ID)</i>	\$150	\$200	\$100	\$300	\$250	\$300	\$200	\$400	\$350	\$400	\$300	\$500
Thursday Night Dinner & Keynote (only)	\$30				\$30				\$30			
Exhibitors (6 to 8 foot tables, includes 1 registration/table) - exhibitors allowed to attend sessions. * Does NOT include Sponsorship			\$900				\$1,200		not available			
Exhibitor - each addtl person from same company			\$300				\$400		not available			

## 2023 Joint ASQ Measurement Quality Division and Akron/Canton Section Conference Sponsorship

*SPONSORSHIP: Separate from Conference Registrations & Exhibitors*

### Flat Rate Sponsorship (Thru Sept 30)

Sponsorship Levels	Webpage: Company/ Organization logo & weblink on webpage	Company Included in Email Marketing Before Conference	Ad in conference program	One (1) Full 2-Day Conference Registration	Company Mentioned Prior To Presentation Sessions
<i>Platinum</i> <b>\$1000</b>	Yes	Yes	Full-page	Yes	Yes
<i>Gold</i> <b>\$500</b>	Yes	No	Half-page	No	Yes
<i>Silver</i> <b>\$250</b>	Yes	No	none	No	No

Select option below, then click on [Buy Ticket](#)

Choices are provided based on the Early Bird, Regular, and Later/On-Site pricing

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Thursday Night Dinner Only  
(Dinner included with any conference registration)

**2023 Fall Conference on  
"Improving Measurement Confidence and Reducing Risk"**



**Sheraton Suites - Cuyahoga Falls, Ohio**

**Wednesday, October 11      Pre-Conference Tutorials**

7:15 am - 8:00 am	Registration		
	Room A	Room B	Room C
8:00 am - 12:00 pm	<b>Measurement Uncertainty Fundamental Applications</b>  Dilip Shah <i>E = mc<sup>3</sup> Solutions</i>	<b>Risk-Based Thinking</b>  Henry Zumbrun and Greg Cenker  <i>Morehouse Instruments &amp; IndySoft</i>	<b>Using Dimensional Inspection Tools</b>  Joshua Worthy  <i>Mitutoyo</i>
12:00 pm - 1:00 pm	<b>Lunch Break (on your own)</b>		
1:00 pm - 5:00 pm	<b>Measurement Uncertainty Fundamental Applications (continued)</b>  Dilip Shah <i>E = mc<sup>3</sup> Solutions</i>	<b>3 Rs of Calibration: Researching, Requesting, Reviewing</b>  Heather Wade <i>Heather Wade Group</i>	<b>Force Fundamentals</b>  Henry Zumbrun  <i>Morehouse Instruments</i>

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## 2023 Fall Conference on "Improving Measurement Confidence and Reducing Risk"



**Thursday, October 12**

### Room A

### Room B

8:00 am - 8:30 am	<b>Welcome</b> (Gary Hinshaw, MQD Chair)	
8:30 am - 10:00 am	<b>Joint Session - Risks and Opportunities in Measurement Quality</b> (speaker TBA)	
10:00 am - 10:30 am	<b>Break in Exhibit Area</b>	
10:30 am - 11:15 am	<b>Let's Talk About Bias</b> (Henry Zumbrun, Morehouse Instruments)	
11:15 am - 12:00 pm	<b>Utilizing QC Data for Estimation of Total Measurement Uncertainty</b> (Polona Carson, Neptune & Company)	
10:30 am - 11:15 am		<b>Medical Devices Metrology Under ISO 13485 and ISO 14971</b> (Ed Panek, Blue Spark Technologies)
11:15 am - 12:00 pm		<b>Fundamentals of Metrology Development in New Product Development</b> (Edward Jaeck, SINE18, LLC)
12:00 pm - 1:30 pm	<i>Luncheon Talk: Giving Engaging Presentations and Avoiding Death-By-PowerPoint</i> (Heather Wade, Heather Wade Group)	
1:30 pm - 2:15 pm	<b>Requirements for an Audit Trail according to ISO/IEC 17025 and ALACC</b> (Heather McLemore, A2LA)	
2:15 pm - 3:00 pm	<b>Proficiency Testing</b> (Rob Knake, NVLAP)	
1:30 pm - 2:15 pm		<b>Best Practices for Managing a Captive Laboratory Using ISO/IEC 17025</b> (Tim Osborne, A2LA WPT)
2:15 pm - 3:00 pm		<b>Applying IoT Technologies in a Calibration Laboratory Setting to Improve Efficiency and Reduce Costs</b> (Mitchell Jones, IndySoft)
3:00 pm - 3:30 pm	<b>Break in Exhibit Area</b>	
3:30 pm - 4:15 pm	<b>Accreditation Overview</b> (Rob Knake, NVLAP)	
3:30 pm - 4:15 pm		
		<b>The Future of Work: A Deep Dive into Artificial Intelligence and ChatGPT</b> (Zac Jarrard, Jarrard Consulting)

4:15 pm - 5:00 pm	<b>Proper Adapters to Reduce Force Measurement Error</b> (Henry Zumbrun, Morehouse Instruments)	<b>Leveraging R Programming and AI for Interactive Charting in Metrology</b> (Dan Lay, Fuyao Glass America)
5:00 pm - 6:30 pm	<b>Networking in Exhibit Area</b>	
6:30 pm - 7:30 pm	<b>Dinner Served</b>	
7:30 pm - 9:00 pm	<i>Dinner Keynote: Core Values of Leadership</i> (Patrick Jester, G.T. Michelli Co., Inc.)	

**Friday, October 13**

**Room A**

**Room B**

8:30 am - 10:00 am	<b>Joint Session - Measurement Uncertainty: What's it All About?</b> (Speaker TBA)	
10:00 am - 10:30 am	<b>Break in Exhibit Area</b>	
10:30 am - 11:15 am	<b>Specifying Customer Calibration Requirements</b> (Heather Wade, Heather Wade Group)	<b>Career Paths in Quality</b> (Joleen Watson, University of Central Missouri)
11:15 am - 12:00 pm	<b>Evaluating Your Calibration Provider</b> (Dilip Shah, E=mc <sup>3</sup> Solutions)	<b>Building Trust, Communication, and Respect at Work - Enhance Your Multi-Generational Culture</b> (Zac Jarrard, Jarrard Consulting)
12:00 pm - 1:30 pm	<i>Luncheon Talk: Measurements Gone F*!@ing Wrong</i> (Henry Zumbrun, Morehouse Instruments)	
1:30 pm - 2:15 pm	<b>Decision Rules and Statements of Conformity</b> (Heather Wade, Heather Wade Group)	<b>Using Scorecards &amp; Root Cause Analysis to Drive Process Excellence in an Operational Environment</b> (Deanna Boyd, PNC Bank)
2:15 pm - 3:30 pm	<b>Panel Discussion</b> (all speakers)	
3:30 pm - 3:45 pm	<b>Closing Remarks</b> (Gary Hinshaw, MQD Chair)	

## Who Needs Another Session on Measurement Risk or Decision Rules?

**Tutorial Length: 4 hours AM**

**Instructor:** Henry Zumbrun, Morehouse Instruments, [hzumbrun@mhforce.com](mailto:hzumbrun@mhforce.com) and Greg Cenker, IndySoft, [greg.cenker@indysoft.com](mailto:greg.cenker@indysoft.com)

**Abstract:**

This 4-hour session will help the participant eliminate much of the noise on decision rules. It will provide guidance anyone can take away and implement in their laboratory. This session aims to give guidance beyond simply requesting a 4:1 TUR or accepting a shared-risk scenario as with simple acceptance.

**Topic Covered Include:**

1. Are my measurements traceable? Understanding metrological traceability.
2. The importance of measurement uncertainty.
3. What am I measuring - Sampling Requirements.
4. Understanding the decision rules for conformance.
5. Specific Risk Models
6. Global Risk Models
7. Costing Models for Determination of Return on Investment
8. Understanding the conformance decision and minimizing the risk for a safer, confident use of the calibrated item.

**Instructor Bio:**

Henry has taught various classes and sessions at NCSLI, MSC, A2LA, etc., authored several published papers, written a book titled "Force Calibration for Technicians and Quality Managers: Top Conditions, Methods, and Systems that Impact Force Calibration Results," and was the primary Author on the "G126 - Guidance on Uncertainty Budgets for Force Measuring Devices" for A2LA. He has authored several chapters in the ASQ Metrology Handbook 3rd Edition. He has been part of the ASTM E28 committee for well over a decade and has made several contributions to the ASTM E74 and E2428 standards through the committee.

Greg is a senior metrologist and Product Manager for IndySoft. Greg has taught various classes and workshops at IndySoft, NCSLI, MSC, and as an independent consultant, providing measurement uncertainty training and process improvements to a growing clientele. He received "Best Paper" at the 2021 NCSLI titled "All Roads Lead to Uc95" and was graciously presented the Woodington Award at the 2022 Measurement Science Conference. Greg possesses over 39 years of metrology experience at various companies including SpaceX, Southern California Edison, and Fluke.

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## Using Dimensional Inspection Tools

**Tutorial Length: 4 hours AM**

**Instructor:** Josh Worthley, Mitutoyo, [Josh.worthley@mitutoyo.com](mailto:Josh.worthley@mitutoyo.com)

**Abstract:**

The Introduction to Dimensional Metrology Hand Tools – Fundamental Tools session is for entry-level team members who need to learn the fundamentals of the steel rule, caliper, micrometer, gage pin, and gage block for part inspection. Supervisors and trainers may also find this course helpful to bolster their own on-the-job training program. Through hands-on instruction, this class focuses on the tool fundamentals and only briefly introduces part-to-print inspection. A significant amount of time will be dedicated to measuring known standards and practice parts to facilitate proper technique and feel. Attendees can expect to build confidence in their approach and use of all the devices, including mechanical and digital versions of the caliper and micrometer.

**Instructor Bio:**

Josh Worthley is the Education and Training Specialist at Mitutoyo America Corporation where he develops and facilitates dimensional metrology related classes and certifications for colleges and industry partners. Previous experience includes several years teaching credit and non-credit quality and metrology related classes, contract metrology support, and several years progressing through various quality roles in the aerospace and defense industry. Worthley holds 5 ASQ certifications and has supported numerous students and industry members on their certification journey through his classes and prep-courses.

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### **The 3 Rs of Calibration; *Reading, Writing, and Reviewing* *Accreditation Scopes, Service Requests, & Cal Certs***

**Tutorial Length: 4 hours PM**

**Instructor:** Heather A Wade, Heather Wade Group, [h.wade@heatherwadegroup.com](mailto:h.wade@heatherwadegroup.com)

**Abstract:**

Some frequent challenges and ISO/IEC 17025 assessment deficiencies have to do with finding and requesting external services and ensuring the equipment being returned to service is fit for purpose and meets requirements.

These challenges and deficiencies can be addressed and prevented by having the knowledge and understanding of:

1. How to search for appropriate calibration vendors and understanding scopes of accreditation,
2. What to communicate to calibration vendors so you get what you need the first time,
3. How to read and interpret calibration certificates and use the data to reduce your risks and ensure better measurements.

This session is appropriate for consumers and suppliers of calibration services. This tutorial will include hands-on exercises for attendees to practice searching for and interpreting calibration scopes of

accreditation, comparing and interpreting scopes of accreditation, and reviewing and interpreting calibration certificates to meet ISO/IEC 17025 requirements.

**Learning Objectives-** at the end of this half-day tutorial, participants will know how:

1. To search and interpret calibration scopes of accreditation,
2. To consistently communicate service requests between calibration vendors & customers,
3. To read and interpret calibration certificates.

**Instructor Bio:**

Heather is an internationally recognized metrology subject matter expert & a popular presenter. She is ASQ-MQD's Immediate Past Chair and an A2LA ISO/IEC 17025 Assessor. She is an active member of several international metrology organizations and is editor and co-author of ASQ's Metrology Handbook, 3<sup>rd</sup> Edition.

A University of Michigan graduate with a B.S. in Biology, Heather has worked as a microbiologist, physical test engineer, and chemist before moving full-time into metrology. With her nearly 30 years professional experience, she provides "Pain Relief for Measurement Headaches" for her consulting clients.

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## May The Force Be With You

**Tutorial Length: 4 hours PM**

**Instructor:** Henry Zumbrun, Morehouse Instruments, [hzumbrun@mhforce.com](mailto:hzumbrun@mhforce.com)

**Abstract:**

This course will cover the importance of calibrating force measurement devices on how they are being used to reduce measurement errors and lower uncertainty. Each participant will leave with a better understanding of best practice techniques for making better force measurements. This matters because better measurements improve safety, increase profitability in that measurements performed correctly result in fewer recalls, improve efficiencies, and build trust.

**Learning Objectives:** By the end of this course, the student should be able to:

1. Identify various force calibration equipment types and perform basic load cell trouble-shooting techniques.
2. Identify potential force measurement errors.
3. Implement proper force calibration techniques as discussed and demonstrated in class.
4. Know the risk level associated with conformity assessment when measurement errors are not accounted for properly in the Measurement Uncertainty

**Instructor Bio:**

Henry has taught various classes and sessions at NCSLI, MSC, A2LA, etc., authored several published papers, written a book titled "Force Calibration for Technicians and Quality Managers: Top Conditions, Methods, and Systems that Impact Force Calibration Results," and was the primary Author on the "G126 - Guidance on Uncertainty Budgets for Force Measuring Devices" for A2LA. He has authored several chapters in the ASQ Metrology Handbook 3rd Edition. He has been part of the ASTM E28 committee for well over a decade and has made several contributions to the ASTM E74 and E2428 standards through the committee.

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# Measurement Uncertainty – Fundamental Applications

**Tutorial length:** 8 hours

**Instructor:** Dilip Shah, E = mc<sup>3</sup> Solutions

## **Abstract:**

Most ISO/IEC 17025 accredited laboratories have implemented the measurement uncertainty budgets in their laboratories for their scope of accreditation. Is this all there is to it?

What about the customers of these calibration suppliers?

This workshop takes the next step of using measurement uncertainty data by showing how it can be used:

- For process improvement.
- Reporting measurement uncertainty for the customer's Unit Under Test.
- Ensuring that metrological traceability is maintained.
- Meeting ILAC P14 requirements.
- Making statements of conformity per ILAC G8 guidelines.

## **Learning Objectives:**

1. Understanding the Measurement Uncertainty Process.
2. Developing and understanding statistical tools for analyzing and improving the measurement uncertainty process.
3. Developing tools and methods for reporting customer's measurement uncertainty per ILAC P14 requirements and ILAC G8 guidelines.

## **Additional Information:**

This workshop is intended for suppliers and consumers of calibration services who are involved in the day-to-day measurement issues (production, inspection, calibration etc.). It is intended for both beginner and intermediate level of comprehension.

NOTE: Attendees should bring a laptop computer with Microsoft Excel installed to conduct hands-on exercises, if possible, for an immersive experience.

## **Instructor Bio:**

Dilip A. Shah has over 45 years of industry experience in metrology, electronics, instrumentation, measurement and computer applications of statistics in the Quality Assurance areas. Dilip is an ASQ Fellow and certified by American Society for Quality (ASQ) as a Certified Quality Auditor, Certified Quality Engineer, and Certified Calibration Technician. He is currently a Principal of E = mc<sup>3</sup> Solutions, a consulting practice that provides training, consulting, and auditing solutions in ISO/IEC 17025, ISO 9001, measurement uncertainty, and computer applications. He is the co-author of The Metrology Handbook (1st and 2nd editions) and a reviewer (3rd edition) published by the ASQ Quality Press and contributed to the 2010 re-write of the CCT Primer by the Quality Council of Indiana. Dilip participated in the initial development of ASQ's Certified Calibration Technician (CCT) exam. He participates actively in NCSL International and Measurement Science Conference (MSC).

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# Conference Hotel Registration

## Sheraton Suites Akron Cuyahoga Falls

**Standard Suite is available for a group rate of only \$149.00 per night / room!**

**Group Block:** American Society for Quality Measurement

**Start Date:** Tuesday, October 10, 2023

**End Date:** Friday, October 13, 2023

**Last Day to Book:** Friday, September 15, 2023

Hotel offering your special group rate:

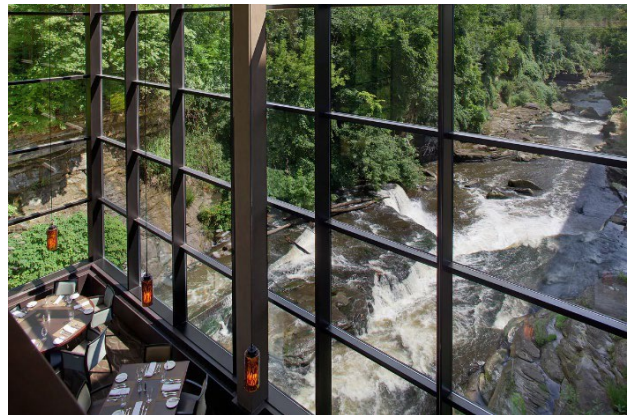
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[Book your group rate for American Society for Quality Measurement](#)

Click on link above or call and request group rate.

Main number: (330) 929-3000

If any problems call Group sales manager Stacey Sobel-Marder at: (330) 920-7510



More photos of venue: <https://www.marriott.com/en-us/hotels/caksi-sheraton-suites-akron-cuyahoga-falls/photos>