Atlanta Meeting hosted at the ATS campus.

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The beautiful Marietta Georgia home campus of Applied Technical Services, Inc. (ATS) was the venue for our September 12, 2019 Atlanta area fall section meeting.

Guests were warmly welcomed by Cole Miller of Applied Technical Services, Inc., and breakfast was sponsored by Joe Campione of Southern Marketing, Inc.

Following introductions, a full day of interesting, relevant presentations ensued.

First up was Jeff Cook, Applied Technical Services, Inc., Jeff discussed the difference between Test Accuracy Ratios and Test Uncertainty Ratios. He presented on how to address this with customers and purchase orders. This presentation was more of an open discussion than a lecture with input from everyone on how this affects the calibration World.

Brian Miles, Applied Technical Services, Inc., also presented “Influences of Environmental Conditions and their Impact on Measurement Values.” Brian discussed the influences that environmental conditions have on
measurement values. He also discussed the importance of accounting for temperature, humidity, and pressure when making wind flow measurements, and the importance of accounting for temperature overall when making various measurements in chemistry, conductivity, and velocity.

Chris Christofferson, Additel Corporation, then presented the “Common Errors and Innovations with Drywell Calibrators.” Chris discussed the common errors that users may not be aware of when using Drywell Calibrators. He reviewed when you need to use an external reference thermometer and when you might not need to. Chris showed new innovations in Drywell manufacturing to improve productivity and throughput.

Last presentation of the morning was Patrick Timmons, The Modal Shop. Pat presented “Vibration Calibration: Methods of Accelerometers and Considerations for Uncertainty.” His presentation gave an overview of the calibration methods used for accelerometers and the associated standards. Typical failure modes of sensors and the efficacy of the methods in observing these failures were presented. In calibration, one of the primary contributors to uncertainty is the directionality of the motion of the sensor stack during sinewave excitation. The relationship between the sensor characteristic of transverse sensitivity and the calibration exciter characteristic of transverse motion was discussed in detail.

After lunch, Rich Wismer, Ametek Sales Manager (North America), discussed the hardness measurement of ferrous and non-ferrous metallic materials. Rich covered the three most common types of indentation hardness testing; Rockwell, Brinell, and Vickers/Knoop Microhardness testing. We reviewed the general mechanics of these tests, types of testers, applications, and possible issues. Rich also reviewed direct and Indirect calibration of hardness testers and current calibration issues in the field today.

We were happy to have Tony Almeda, Mitutoyo, present “Coordinate Measurement Machines Calibration Practices.” Tony examined the difference of CMM linear accuracy and Volumetric accuracy. Why squareness is very important for the CMM calibration. Which artifacts Mitutoyo used to calibrate CMM’s and other important checks and adjustments for a CMM.

We ended our amazing day of presentations with Mike Linn, Indysoft, “Maintaining Compliance with Your Computerized LIM.S” He explained how Laboratory generated data and the control of information is critical to laboratory operations. From the collection of measurement data to the reporting of operational key performance indicators. Laboratory managers are challenged to implement systems to manage their information. Mike discussed options for lab managers to comply with the various regulatory and accreditation requirements for laboratory information management systems with a focus on ISO/IEC 17025:2017 Section 7.11.

The day’s highlight included a tour of the Applied Technical Services facility. This world-class testing facility was founded in 1967 and is one of America’s leading consulting engineering firms, providing a variety of testing services. Our tour brought us through many of their individual laboratories including; nondestructive testing, calibration, chemical analysis, polymer testing, forensic engineering and metallurgy.

Special thanks to our host, Cole Miller and the Applied Technical Services management and team for not only opening their laboratory to the calibration community for such a valuable, interesting and top-notch experience, but also providing our attendees a phenomenal southern barbeque lunch!

Future meetings are in the planning stages for the Atlanta region and will be announced as soon as dates are set. Stay tuned, exciting things are in store!