



NCSLI Central Indiana Meeting Hosted by Purdue Polytechnic.

Central Indiana



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The Central Indiana Section 1133 spring meeting was held on April 27, 2017 at Purdue Polytechnic Columbus Indiana in the Advanced Manufacturing Center of Excellence (AMCE). A total of 37 participants attended.

The meeting started off with a welcome and introduction from our host Joseph Fuehne, PhD, PE, Director and Associate Professor at Purdue Polytechnic Columbus. Joe gave the history of the AMCE and the school's name. Founded in 1983, Purdue Polytechnic Columbus is part of a statewide network that offers the same technology bachelor programs available at the West Lafayette campus. Purdue Polytechnic Columbus is currently headquartered in the Advanced Manufacturing Center of Excellence (AMCE) in Columbus.

The AMCE is a state-of-the-art education and workforce training center serving students and the industry alike in Southeastern Indiana. The building is home to AMCE's certification and degree programs, as well as business development services for manufacturers. With integrated technology labs and classrooms designed for a science, technology, engineering, and math curriculum, the building enables distance learning.

The first presentation was an introduction to Zeiss' Calypso software for coordinate measuring machines by Joseph Fuehne, PhD. Joe explained that the software has a simulation mode that allows the operator the

opportunity to test measurement protocols in a virtual environment before running on a real CMM. This function prevents damage to expensive measurement tools that could occur if improperly programmed. By establishing a measurement plan and a point of origin, Joe demonstrated how the simulation program measured surfaces generated from a CAD model including flats and holes. Once the operator approves the plan, the software is downloaded into a jump drive and then loaded into the CMM for execution. This was demonstrated later in the measurement laboratory.

A discussion evolved about working with local manufacturers in developing training for employees to help them understand basic calibration requirements. Additional discussion included possible educational outreach to high school students in the AMCE /Purdue Polytechnic area of focus.

Purdue Polytechnic provided our morning break refreshments and Indianapolis Scale Company provided lunch. Participants greatly appreciated both, especially since the facility has limited nearby refreshment options.

Lloyd Baker, NCSLI Midwestern Region Coordinator, presented the recent updates from the Board. He then went on to explain the opportunities available at the upcoming NCSLI Workshop & Symposium scheduled for the National Harbor, Maryland in August. The NCSLI Conference will include committee meetings, tutorials, oral presentations, poster presentations NIST tours, exhibition hall, luncheons and receptions. In closing, Lloyd also spoke about the Technical Exchange scheduled for February 2018 in Orlando, Florida.



Joseph Fuehne, PhD, PE, of Purdue Polytechnic Columbus.



Ms. Bethany Hackett of NVLAP.

The third speaker was Ms. Bethany Hackett, Program Manager, ECT/Construction, from the National Voluntary Laboratory Accreditation Program (NVLAP). Her topic was “Updates to the International Standard ISO/IEC 17025 and ISO/IEC 17011.” Beth started with details of how the ISO CASCO Working Group 44 was composed and their progress/timelines for drafting, voting, revising and publishing updates to both standards. The feedback forms we received tell us that the audience greatly appreciated this update with all of the details. Thank you, Beth, for your insightful presentation.

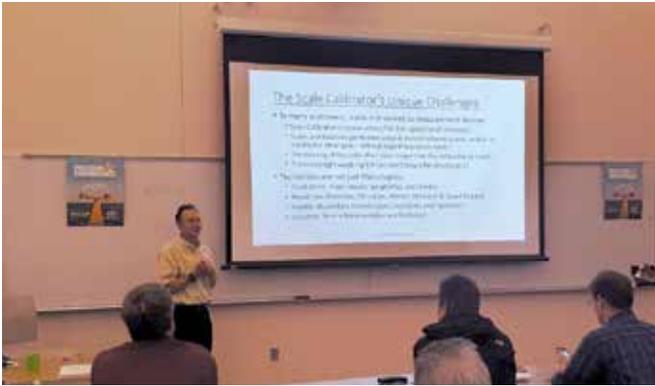
The fourth speaker was Kirk Eggebrecht, Kirk Eggebrecht Consulting, working with Indianapolis Scale Company. His topic was “Weigh Scale and Balance Use through the Experience of an Indiana-Based Scale Company.” Kirk stated that nearly every building in the USA has at least one scale or balance. They are used everywhere including asphalt plants, gravel quarries, livestock facilities, pharmaceuticals, railroads, trucking, steel mills, etc. There are dozens of manufacturers, and service technicians must understand all the different makes and models.

Kirk discussed “Legal Metrology” telling the audience about NIST Handbook 44 and the various details as they apply to retail trade. HB 44 prescribes the test method, minimum test loads and scale classes and tolerances. Frequently non-legal-for-trade users will default to the tolerances listed out of convenience.

Kirk explained that application drives capacity, resolution and accuracy. He discussed high precision lab balances, lab and precision scales, high-resolution counting scales, bench and floor scales, tank and hopper scales, pallet and forklift scales, portable wheel weighers, truck scales, hanging scale and dynamometers, and rail scales.

The scale Calibrator’s Unique Challenges:

1. Wide range of devices, applications and environments:
 - a. From Micro-Balances to Truck & Rail Scales of all brands!
 - b. From Legal for Trade to Unregulated
 - c. From Clean Rooms to Pig Farms & Scrap Yards
2. 95+% of the work is at the customer:
 - a. Better pack everything you might need
 - b. Different safety & security rules, check-in procedures and other protocols
 - c. “Where did the scale go?”
 - d. “You’re not shutting my line down!”
 - e. “What happened to the Fork Lift driver?”
 - f. “Who is in charge, we have a problem?” – Do scales fall under Quality, Metrology, Maintenance, Purchasing or Production?
 - g. To many customers, scales not viewed as measurement devices:
 - h. Scale Calibrations require a Pass/Fail, but against what tolerance?
 - i. Scales and Balances often thrown around, moved between plants, and/or re-applied for other uses – without regard to process needs!
 - j. The cleaning of the scale often takes longer than the calibration or repair!
 - k. The scale might weigh right if you do not blow a fan directly on it!
3. Technicians are not just Metrologists:
 - a. Truck Driver, Trailer Hauler, Weightlifter, and Climber
 - b. Repairmen (Detective, Electrician, Welder, Mechanic & Speed Reader)
 - c. Installer (Assembler, Cement Layer, Electrician, and Fabricator)
 - d. Customer Service Representative and Politician!



Kirk Eggebrecht of Kirk Eggebrecht Consulting.



Amanda Garrett and John Bush, Eli Lilly and Company, helping participants register.

The meeting concluded at 3:00 PM with an optional tour of the Metrology/Three D printer lab.

The Central Indiana Section steering committee members are Amanda Garrett, John Bush and Elizabeth Robinette of Eli Lilly and Company, Kathy Kerner of Indianapolis Scale Company, Inc. and Section Coordinator is Charles Andrew, Eli Lilly and Company.