

TWIN CITIES SECTION 1311

By Harry C Spinks



The NCSLI Twin Cities section met at the 3M Innovation Center in Maplewood, Minnesota. The full day event had four presentations from three speakers. We had 104 attendees at the meeting! Not a record, but it was over our goal of 100 attendees per meeting and we have three meetings each year.

The 3M campus is home to the 3M corporate metrology lab managed by Terry Conder. Terry has been involved with NCSLI for many years as a section and region coordinator and as the NCSLI Conference VP. 3M also has a large calibration lab which is managed by Tom Crotty. We are very grateful to Terry and Tom for hosting and sponsoring the event!

The meeting began with the introduction of the section steering committee members. This is the team that makes our meetings so successful! Currently, we have 13 members from multiple industries and businesses.

The NCSLI Board of Directors meeting was held in the Twin Cities during this week and we had several members at our meeting including Georgia Harris, Robert Sawyer, Bill Hinton, and Dana Leaman. We really appreciate them taking the time to attend the meeting.

Next, Terry Conder provided the host presentation and featured lab presentation. Terry then presented the NCSLI board of directors update. Terry is retiring and "goin' fish'n" so we surprised him with a plaque in recognition of all that he has done for the section, NCSLI, and the metrology profession.

Several attendees took the opportunity to address the group and let us know just how much they appreciate what Terry has accomplished and how he has affected their lives.

The first presentation of the day was from Dilip Shah of E=mc3 Solutions on "Measurement Uncertainty Budget Development Process." Dilip has presented at many of the Twin Cities meetings and we really enjoy his ability to present the material in an easy to understand format. While developing a measurement uncertainty budget might be very basic for some folks, most of us are still learning and his style really helps. His presentation provided an understanding of the measurement uncertainty process along with Type A and Type B measurement uncertainty contributors which were discussed in detail. Frequency distributions were explained. Dilip continued to develop the uncertainty budget and utilized a custom spreadsheet to show the calculations.

Dilip also presented "Excel Template Validation and Verification." This presentation focused on spreadsheets for developing a measurement uncertainty budget. He demonstrated how to validate and verify spreadsheets and how the process relates to *ISO 17025* and other regulatory requirements. Dilip pointed out that there are some limitations in the use of spreadsheets, particularly for 32-bit operating systems. If you develop a spreadsheet template in one version of a spreadsheet (Excel 2003) and want to use it with another version, such as Excel 2007 or 2010, you'll need to revalidate your spreadsheet. They don't always convert properly.



Twin Cities section meeting.



Harry Spinks gives Terry Conder plaque of recognition.

After lunch we had our door prize drawing and a trivia contest. 3M provided a lot of door prizes including the 3M gift packs, rain suits, and 3M filtration units. Kevin Rust continued the tradition of movie trivia, this time with a western movie theme. It's amazing how there are usually a few people in the audience who get the answers right, even for black and white movies and TV shows!

In the afternoon we had two tracks – the presentations and a 3M product tour at the Innovation Center.

The next presentation was by Steve Stahley, Director of Measurement Excellence at Cummins Inc. Steve presented “Connecting Measurement Systems Analysis (MSA) to Measurement Uncertainty Analysis.” Cummins is bringing MSA and measurement uncertainty to the production floor and demonstrating how useful it can be to improve quality and drive down cost. Cummins MSA procedure provides a common approach to measurements to control manufacturing processes, confirm non-technical business related metrics, evaluate design criteria, calibrate measurement processes and standards, etc.

The final presentation of the day was by Georgia Harris, NCSLI President and NIST Group Leader, Laboratory Metrology. Georgia presented “Volumetric Standards used for checking Gas Pumps.” We learned how gas pumps are calibrated and traceable to NIST. This was part of our “How do you calibrate that” series which demonstrates practical application of metrology in real world applications. Not all states have a gas pump calibration program. Georgia demonstrated how to trace the five gallon field standard to a gravimetric “slicker” to mass standards. There is more to calibrating a gas pump than just filling up a five gallon container!

Next we had the door prize finale which included a Fluke non-contact thermometer donated by Tom Crotty. The day ended with a tour of the 3M Corporate Metrology Lab which was in another building.

Our next meeting is February 2, 2012 at Boston Scientific in Maple Grove. We look forward to seeing you there!

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