The Third Seminar on Surface Metrology for the Americas (SSMA) took place in Albuquerque, New Mexico, May 12-13, 2014. The conference was at the Marriott Hotel, in the heart of Albuquerque Uptown, within walking distance of many fantastic restaurants. Why surface metrology? Ask Professor Chris Brown of Worcester Polytechnic Institute (WPI), the chair of the first two SSMAs in 2011 and 2012 and the chair of the ASME B46 committee on classification and designation of surface qualities, and Professor Brown responds: “Because surfaces cover everything.”

The geometry of the surface influences the properties of the material and its interactions. Surface topography correlates with fatigue, with tribology, with friction, and many other properties. The purpose of the Seminar on Surface Metrology for the Americas is to improve the practice of surface metrology through education. Therefore, NCSL International chose to host the third SSMA as a regional training event. Although held as an Albuquerque regional training event, the participants were international: The longest distance traveled (by map) was a student registrant from Australia. Other international participants came from Spain, France, and Japan. In total, 43 participants were registered, including student attendees, regular attendees, exhibitors and speakers. Albuquerque certainly surprised its visitors—expecting the desert southwest, Albuquerque promptly gave us snow flurries on Tuesday, May 13, and a snow storm in Colorado for the air travelers on Sunday May 11.

Learning is both formal, through tutorial seminars prepared by subject matter experts, and informal—networking with colleagues and interacting with exhibitors. The SSMA had exhibitors and a sponsor. The sponsor was Digital Surf, developers of MountainsMap software. The other exhibitors were Alicona Corporation, Bruker Nano, FRT of America, Keyence Corporation and KLA-Tencor.

The seminars were prepared and presented by a subject matter expert in the field. The learning outcomes for each seminar were well defined and presented to the attendee in advance of the seminar, and certificates of participation, along with a proceedings CD, were mailed to the attendees after the event. The certificates can be used by the attendee to document professional development hours for continuing education.

The event started on Monday, May 12, with coffee and refreshments at the exhibit area. A total of 15 tutorials were presented over two days—a dedicated attendee could have attended eight total tutorials. Dr. Ted Vorburger, a guest researcher at NIST, formerly group leader in the NIST Surface and Microform metrology group, and a former chair of the ASME B46 committee, led off the formal tutorials with a presentation on the fundamentals of surface metrology and texture.

After the kickoff seminar, the tutorial sessions were divided into two parallel sessions. The parallel sessions were roughly divided into a session focused more on measurement techniques, and a session focused more on properties and applications. Learning outcomes and speaker biographies were available on the printed program, so the attendee could choose the tutorials that were most relevant to their needs. The seminar duration was two days, with a dedicated attendee being able to attend four seminars per day.

1 Student, Florida State University. Sophie Tran is majoring in Clarinet Performance at Florida State University and anticipates earning a Bachelor’s in Music in May 2016. She was the assistant event coordinator for the SSMA starting May 5, 2014. She coordinated hotel space layout and food orders. She also prepared the registration packets, printed program, the certificates of participation; she assembled and burned the proceedings CD and she handled sign-in and on-site registration.

2 Sandia National Laboratories. Hy Tran has Bachelors’ degrees in life sciences and mechanical engineering from MIT. His MS and PhD at Stanford University were in mechanical engineering, with a minor in electrical engineering. Hy is a registered professional engineer. Hy has worked in manufacturing and product development, and has been principal investigator on many engineering research projects. He became involved with NCSLI in 2004, organizing paper sessions in dimensional metrology. He is co-chair of the NCSLI Dimensional Metrology Committee and is VP of the NCSLI Central US division. He volunteers in STEM education outreach, including metrology ambassador activities and outreach volunteer activities in higher education with ASME. He is currently project lead for length, mass, and force metrology in the Primary Physical Standards department at Sandia National Laboratories.
Dr. Hy Tran was the chair of the meeting, and Professor Torbjorn Bergstrom of WPI was the meeting co-chair. Together with Professor Christopher Brown and Dr. Suresh Ramasamy, the organizing team planned the desired outcomes, with initial planning for SSMA occurring in May 2013. After NCSLI approved the regional event in August 2013, the organizing group finalized the meeting dates and selected the hotel.

The organizers solicited experts in surface metrology to present the tutorials, and kept in mind the recommendations from the NCSLI Learning and Development committees. Based on previous experience, the organizers knew that a lot of learning comes from informal experiences—meeting with colleagues during breaks; hands-on interacting with exhibitors; perhaps discussing a poster presentation of recent research results. Therefore, the organizers worked at soliciting commercial exhibitors in surface metrology, in scheduling long breaks between the tutorials for additional social interactions, and soliciting research posters.

As the deadline for the hotel food orders approached, Sophie Tran helped with the final organizational details. She visited the hotel to walk the space and lay out roughly where the speakers, screens, and attendee tables were going to be. She also selected the menu for the breaks, lunches, and evening reception. The meals and snacks were delicious! The photographs show some of the attendees and exhibitors at the hotel.

After all the tutorials were presented at the SSMA, the American Society of Mechanical Engineers (ASME) arrived. The ASME B46 committee on classification and designation of surface qualities held both project and committee meetings at the SSMA venue on May 13 and May 14. NCSLI International staff, the SSMA organizers, and the ASME codes and standards staff collaborated on colocating the SSMA with the first 2014 B46 meeting. On May 14, François Blateyron and Anne Berger of Digital Surf provided an additional workshop on applications of MountainsMap software during the ASME B46 meeting, and after the B46 meeting, the Albuquerque section of NCSLI International held a section meeting in the same hotel space.

The two-day conference was a success for learning. One attendee commented...
that as far as learning goes, this is the best conference she has attended. This Albuquerque Regional Training event succeeded in meeting NCSL International’s mission to promote education and skill development in measurement science. The positive feedback from the attendees and the exhibitors will encourage the organizers to schedule a 4th SSMA sometime in 2016.

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**Albuquerque Section**

**Donovan Gerty, PhD**

The NCSLI Albuquerque Section Meeting was held on May 14, 2014 at the Albuquerque Marriott Hotel, following The Third Seminar on Surface Metrology for the Americas.

The meeting was held from 12:30 p.m. to 3:15 p.m. and every minute was utilized! Dr. Jim Salsbury, with Mitutoyo Corporation, facilitated the meeting on my behalf and gave two interesting presentations. The first was “Common Mistakes and Concerns in Dimensional Calibrations.” The second was “Calibration vs. Verification vs. Test: How Careful Consideration of the Measurand Results in Radical Changes to Uncertainty and the Entire Concept of Calibration.”

After the presentations, Roger Burton presented an update from the Board of Directors and also advertised the 2014 NCSL International Workshop & Symposium, which will be held at the Walt Disney World Dolphin Hotel in Orlando, Florida, from July 28-31.

Twenty participants were in attendance, with a mix of management, measurement technologists, engineers, and others, thus making for engaging conversation.

We would like to thank Dr. Salsbury for his participation and for conducting the meeting.

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