NCSL INTERNATIONAL
"Serving the World of Measurement"

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Jay L. Bucher, Madison Wisconsin Section Coordinator
Phone: 608-846-6968 / yokota-69@charter.net

Madison Wisconsin Section Meeting
Friday, December 4th, 2009

This section meeting will hosted by **Promega's Metrology Department** and will be held at Promega Corporation in Madison, WI. Our section meetings are open to NCSLI members and non-members alike, at no cost. Please register by calling or emailing our contact person so we can have an accurate head count for information packets/handouts, name tags, etc., (see page 2). Please arrive on time so we can start and end on time. Thank you.

The deadline for registration is 12 (noon) November 25th, 2009

8:00 am ~ 8:30 am	Registration and get acquainted
8:30 am ~ 8:45 am	Introductions and logistics
8:45 am ~ 9:30 am	***Laboratory Planning and Design*** – Tim VonderHaar (Western Environmental Corp.)
9:30 am ~ 9:45 am	Break time
9:45 am ~ 10:45 am	***Interpreting Instrument and Equipment specifications*** - Dilip Shah (E = mc^3 Solutions)
10:45 am ~ 11:00 am	Group picture and door prizes
11:00 am ~ 12:15 pm	Lunch
12:15 pm ~ 1:00 pm	***TECH, TWIST and WIZARDS-Educational Outreach Programs for Students and Teachers*** - Terrence M. Conder (3M)
1:00 pm ~ 1:45 pm	***NCSLI updates - BoD meeting; 151 Healthcare sub-committee on FDA/Metrology Guidance Document*** - Jay L. Bucher (NCSLI North Central Region Coordinator; Chair - 151 Healthcare sub-committee)
1:45 pm ~ 2:15 pm	***Tour of the Promega Metrology Department*** - Karl Wigdal (Promega Corp.)

Lunch will be pay-as-you-go using Promega's on-site cafeteria (very reasonable prices with a good selection); or any of the many local establishments.

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Attendee Contact: Keela Sniadach
608-298-4681
1-800-356-9526 x4681
Keela.Sniadach@promega.com

Meeting Location: Promega Corp.
5445 East Cheryl Parkway
Madison, WI 53711

Hotels:
Quality Inn & Suites
2969 Cahill Main
Madison, WI 53711
608-274-7200 (*Promega visitors receive a discount*)

Directions using the internet: http://www.promega.com/about/direction/Default.htm

Off street parking is limited. You may park on either side of East Cheryl Parkway.

Traveling to Promega

From Chicago
1. Take I-90 Northwest toward Madison.
2. Exit 142 A West (Highway 12/18 "Beltline Highway").
3. Follow Instructions below from # ❼

From Milwaukee
1. Take I-94 West toward Madison.
2. Exit I-90 South toward Janesville/Chicago for approximately 2 miles.
3. Exit 142 A West (Highway 12/18 "Beltline Highway").
4. Follow Instructions below from # ❼

❼ Exit at Fish Hatchery Road, Exit 260 A-B, (County Highway D).
Turn Left (South) across the overpass on Fish Hatchery Road.
Travel South on Fish Hatchery Road about 2 miles.

❽ Look for the Fitchburg Center (FC) sign on the left.
Turn Left at the sign onto East Cheryl Parkway.

❾ The BioPharmaceutical Technology Center (BTC) is on the right about 3 blocks from FC.

Presentation abstracts and speaker bios

Title: Laboratory Planning and Design

Abstract: At some point in the future, when the economy has settled and the dust has cleared, companies may once again begin to spend money on capital projects. Whether you are building a new laboratory or updating your current laboratory, there are many things to take into consideration to ensure a successful project. This presentation will cover some of the basic aspects of laboratory design and highlight the areas of importance when it comes to planning for a new lab.

Presenter: Western Environmental Corporation has been in business for 16 years, providing design/build services of metrology labs, CMM enclosures, and cleanrooms – rooms with precise requirements for temperature, humidity, and particulate control. **Tim VonderHaar** has been with Western Environmental Corporation for a little over two years, working in business development and sales. He has worked on the front end of numerous metrology lab projects, assisting customers in identifying their needs and tailoring a solution that meets those needs from a performance and budgetary standpoint. Projects he has been involved with span all areas of metrology, including small mass, dimensional, electric, and pressure labs, as well as CMM enclosures and cleanrooms. Installations have ranged in size from 100 square feet to 10,000 square feet; from new lab construction in brand new facilities to retrofits in existing, outdated facilities; and everything in between. He has picked up a few bits of information along the way and would like to share them with you today in his presentation on laboratory planning and design.

Title: Interpreting Instrument and Equipment specifications

Abstract: How many times has one looked at equipment specifications and wondered they are really written in English or some other legible language? It is times like these that one wished there was a standard for documenting Instrument and Equipment specifications. Unfortunately, there are too many different variables associated with Instruments and Equipment to state specifications in one common format. All we can do is try to narrow interpretations, so we can use the information in metrology to determine Measurement Uncertainty, Test Uncertainty Ratios (TUR) or make a make a pass/fail /adjust decision. This presentation looks a sample of most commonly written specifications and provides a means for their interpretation. Some discussion of how manufacturers determine specifications is covered.

Presenter: Dilip A. Shah (ASQ Senior Member) has over 30 years of industry experience in metrology, electronics, instrumentation, measurement and computer applications of statistics in the Quality Assurance areas. He is well versed in all measurement parameters. He has been employed in various positions with Philips Electronics (UK), Kodak Ltd. (UK), Instruments Division of Monsanto Corporation, Flexsys America and Alpha Technologies. He is currently a Principal of $E = mc^3$ Solutions, a consulting practice that provides training and consulting solutions in ISO9000/TS 16949, ISO17025, measurement and computer applications.

Dilip is certified by American Society for Quality (ASQ) as a Certified Quality Auditor, Certified Quality Engineer and Certified Calibration Technician. Dilip volunteers his time with the local Akron-Canton (Ohio) ASQ section where he was the Chair (2001-2002 year). Dilip has been a member of the advisory board of the University of Akron Engineering and Science Technology Division since 1988. Dilip also belongs to the Statistics, Automotive, Inspection, Quality Audit and Measurement Quality Divisions (Chair 2007-2008, 2003-2005 years) of American Society for Quality. Dilip is the co-author of The Metrology Handbook published by the ASQ Quality Press. Dilip participated in the

development of ASQ's Certified Calibration Technician exam. Dilip participates actively in the measurement related issues through National Conference of Standards Laboratories International (NCSLI) and the west coast based Measurement Science Conference (MSC) where he presents sessions, papers and workshops. Dilip also is a member of Institute of Electrical and Electronic Engineers (IEEE). Dilip is the recipient of MQD's Highest Award, the 2005 Max J. Unis Award and co-recipient of MSC's 2003 Algie Lance Award for the Best Paper (Gage R. & R. versus ANOVA). Dilip is a Member of the A2LA Board of Directors (2006-2012). Dilip is a Chief Technical Officer for Workplace Training Inc. which provides many on-line, off-line and webinar topics related to metrology training for the industry. Dilip is also involved in Learning & Development Committee activities of NCSLI. Dilip is a frequent contributor to the ASQ Quality Progress magazine's Measure for Measure column.

Title: TECH, TWIST and WIZARDS-Educational Outreach Programs for Students and Teachers

Authors: Terrence M. Conder and James C. Ek

Abstract: Learning Objectives:
1. To convey some best practices of educational outreach activities for students and teachers.
2. To be motivated, and take a personal and active role in local metrology educational outreach programs.
3. To act upon suggestions, and to administer to your organization's metrology educational outreach programs.

As a technology company, 3M has supported many science outreach programs to engage students and teachers in science and math to make connections to everyday life and future careers in science.

3M Corporate Metrology Services has volunteered our time and talents in several 3M sponsored science outreach programs as a tool to enrich, excite and promote metrology as a career option. By promoting the principles of these programs, we can retain our global competiveness for future generations of scientists, engineers, and metrology practitioners.

- 3M TECH (Technical Teams Encouraging Career Horizons) matches pairs of 3M scientists and engineers for classroom visits to middle and high schools to share stories from their own career paths and encourage students to "keep the door open" for science careers.

- The 3M TWIST (Teachers Working In Science and Technology) program allows middle and high school math, science and technology teachers to spend several weeks during the summer working closely with a 3M host laboratory on an actual research project to provide active and challenging technical experiences for teachers.

- The 3M Visiting Wizards program encourages young grade school children to become more interested in science and technology by promoting interesting educational demonstrations and hands-on experiments in a variety of science topics.

Learn how 3M Corporate Metrology Services active involvement in these programs has promoted the science of measurement in our local communities.