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2009 Annual Conference Session Reports

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2009 Annual Conference Session Reports

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Standards Update

Monday, June 15, 2009
Presented by: Engineering Division
Sponsored by: ThomsonReuters Healthcare and Science; IEEE
Moderator: Helen Josephine, Head of the Engineering Library, Stanford University, Stanford, CA (helenj@stanford.edu)
Organizer: Lee Pharis, Manager Information Resources, Exponent, Menlo Park, CA (lpharis@exponent.com)
Reported by: Helen Josephine, Head Librarian, Engineering Library, Stanford University

Standards Update 2009 drew 70 attendees. Eleven organizations representing both standard developing organizations (SDOs) and distributors presented concise updates from their organizations. Thanks to Lee Pharis and her enthusiastic organization of the event, two additional standards developing organizations participated this year, SAE International and API (American Petroleum Institute).

ANSI—Leanne Lowry [llowry@ansi.org]
http://www.ansi.org
Leanne highlighted the search and update functions available in NNSN (National Search Engine for Standards) www.nnsn.org hosted and developed by ANSI. RSS feeds and news updates are now available as well as the option to e-mail links. ANSI also has an active university outreach program. Details on the ANSI website at: http://www.ansi.org/education_trainings/university_outreach.aspx?menuid=9

ASCE—Will Farnam [wfarnam@asce.org]
http://www.asce.org
ASCE 7 "Minimum Design Loads for Buildings and other Structures" continues to be the "best seller". The Codes and Standards Program of ASCE, which is accredited by the American National Standards Institute (ANSI), develops consensus standards on a variety of topics for the civil engineering profession including structural, architectural, environmental and transportation.

ASME—Michael Rovins [rovinsm@asme.org]
http://www.asme.org
The ASME Boiler and Pressure Vessel Code (BPVC) will be released in 2010. This year ASME is recognizing the 125th anniversary of its renowned codes and standards activity. Michael also mentioned an ASME publication that he found useful, "The Why and How of Codes and Standards from the American Society of Mechanical Engineers" authored by Hal Arden and Sandy Blough (1984).

ASTM—John Pace [jpace@astm.org]
http://www.astm.org
John announced that the ASTM digital library is evolving to a combined platform for both the 12,000 standards and test methods and the digital library of Special Technical Publications, monographs, manuals and, journal articles. MARC records will also be available. ASTM has also launched a new educations program to target teaching faculty and encourage the integration of standards into the college curriculum.

IEEE—Michael Spada [m.spada@ieee.org]
http://www.ieee.org
IEEE is also celebrating its 125th anniversary this year. Michael commented that the 802 series of standards continues to evolve as more networking applications are required. IEEE also has standards for healthcare devices and power generation. The IEEE Standards Organization (http://standards.ieee.org/) has an online newsletter and updating service—Standards Wire—for the latest on IEEE standards and related products.

API (American Petroleum Institute)—Teresa Ambrosius [ambrosiust@api.org]
http://www.api.org

Teresa and API are new to the Standards Update. API maintains 550 standards covering all segments of the oil and gas industry. The API standards program has gone global, through active involvement with the International Organization for Standardization (ISO) and other international bodies. API is an American National Standards Institute (ANSI) accredited standards developing organization, operating with approved standards development procedures and undergoing regular audits of its

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processes. API also has an active educational component.

SAE International—Bruce Mahone [bmahone@sae.org]
http://www.sae.org

Bruce and SAE International were also new to the Standards Update this year. Bruce represented the Aerospace Division of SAE and he discussed the civilian and military use of aerospace standards. SAE currently maintains 8,400 standards and of those over 6,000 are aerospace standards. SAE International is the largest producer of non-governmental aerospace standards in the world. The FAA and SAE International are currently in discussions on new standards projects for runway deicing, aircraft emissions, synthetic aviation fuel, and LED lighting for EFVS sensors.

East View Information Services—Rodney Burhsmith [Rodney.burhsmith@eastview.com]
http://www.eastview.com

East View specializes in Russian, Chinese and Arabic publications. East View also specializes in industrial standards from the Russian Federation. Businesses operating in Russia need access to official industry standards, also known as "GOST." East View offers an English-language, searchable database of Russian standards by industry. Translation services are also available.

Techstreet—Thomson-Reuters Health & Science—Todd Fegan [todd.d.fegan@thomsonreuters.com]
http://www.techstreet.com
Todd discussed both the transaction side of Techstreet and the subscription side. Subscription services allow for reference linking of standards for course reserves, work group sharing via e-mail and other forms of communication. The transaction service has a new "preview" option to see the context of the standard, the related standards and keywords.

SAI Global—Paul Crosta [paul.crosta@saiglobal.com]
http://www.saiglobal.com
SAI Global recently acquired Syrus Global, an employee hotline and ethics reporting company. SAI Global provides a full complement of standards distribution, legal and regulatory compliance services. Paul is also the current president of the Standards Engineering Society (SES) (http://www.ses-standards.org). SES was founded in 1947 as a non-profit, technical association dedicated to furthering the knowledge and use of standards and standardization. SES is the only organization in North America committed exclusively to furthering public awareness and knowledge of standards and standardization.

IHS—Steve Noth [steven.noth@ihs.com]
http://www.ihs.com
IHS is also celebrating an anniversary in 2009—their 50th anniversary. IHS is also providing reference linking of standards to course reserves as part of its custom collection services. IHS now includes the following groups: IHS Cera, IHS Global Insight, IHS Janes and IHS Herold.

After the presentations we had about 20 minutes for comments and discussion from the audience. Topics included:

- more information needed on international standards particularly Eurocodes, and standards for countries in Asia and the Middle East
- more help needed with including knowledge and value of standards as part of the academic curriculum

Please mark your calendars now for the 2010 Conference, June 12-17 in New Orleans. Details on the day and time of the 2010 Standards Update, will be available soon. If you have topics to discuss or would like to suggest additional vendors or standards organizations, please contact Helen Josephine (helenj@stanford.edu).

Science of Imagination

Tuesday, June 16, 2009
Presented by: Science-Technology Division, Biomedical & Life Science Division, and Engineering Division
Sponsored by: Nature Publishing Group and Springer
Reported by: Hilary Davis, Chair-Elect, Science-Technology Division

This year's "Science of…" session focused on the "Science of Imagination and the Neurobiology of Constructivist Learning" – the neurological and biochemical basis for how we learn as well as what makes us creative and imaginative. Dr. M. Layne Kalbfleisch was our featured speaker for this thought-provoking session. Dr. Kalbfleisch is the Pomata Term Professor of

Cognitive Neuroscience at the Krasnow Institute for Advanced Study and College of Education and Human Development at George Mason University. Dr. Kalbfleisch holds additional affiliations in the Department of Pediatrics at The George Washington School of Medicine and Health Sciences, Washington, D.C., and the Gifted Education Research Institute at Purdue University, West Lafayette, IN. Her laboratory, KIDLAB, combines methods from educational psychology and cognitive neuroscience to study how the brain develops, learns, creates, and solves problems throughout the lifespan to enable more strategic development of therapies, technology, environments, and medicine.

In this session, Dr. Kalbfleisch introduced us to the "avenues of potential crossing" between the practical application of education in schools and the theoretical approaches of cognitive neuroscience. Some of the long-standing issues at these crossroads are what Dr. Kalbfleisch refers to as "neuromyth" – a series of common misconceptions about brain development. Some examples: "Everything important in the brain develops between the ages of 0 and 3;" "You only use 10% of your brain;" the suggestion that there is a left-brain and a right-brain, etc. Dr. Kalbfleisch carefully unpacked each of these misconceptions and explained how new advances in neuroscience can help overcome barriers to learning and creativity.

At KIDLAB, Dr. Kalbfleisch and her team use functional MRI (fMRI) neuroimaging technology to study brain health and brain activity related to learning and creativity. One of her primary missions is to help educators and the general public better understand the connection between learning and behavior. The basis for her approach to unraveling the connection between learning, behavior and brain function borrows from an educational theory called "constructivist learning" – the ability to learn and make sense of things through your own experiences.

To help introduce us to the concept of constructivist learning, Dr. Kalbfleisch led us through a group exercise. For the next five minutes, she read a page from a book (*Einstein's Dreams* by Alan Lightman) that invoked strong and diverse imagery. While we all experienced the group activity at the same time during those five minutes, each of us had our own unique mental construct for making sense of the reading using our own individual experiences to yield a diverse set of interpretations.

For Dr. Kalbfleisch's research, the "central nervous system is an endogenous heuristic for understanding meaning making" – the brain functions by building meaning around personal experiences and through telling itself stories in the absence of personal experiences (Kalbflesich 2008). Dr. Kalbfleisch's work suggests that there is scientific evidence that neuroscience supports the theory of constructivist learning. She demonstrated this through a series of slides showing images of the brain during various states of neural activity – thinking on the spot, thinking though uncertainties, and under different environmental conditions. In her lab, Dr. Kalbfleisch and her team leverage the over-expression of specific cognitive processes in "twice-exceptional" children (those with very high-ability in some areas, but who are diagnosed with learning disabilities, e.g., Asperger's syndrome) to help further the translation of cognitive neuroscience into practical application in educational practices.

The presentation for this session is archived at: http://units.sla.org/division/dst/Annual%20Conference/2009_Washington/SLA2009_Kalbfleisch_handout.pdf
To learn more, see: Kalbfleisch, M. Layne. 2008. "Getting to the Heart of the Brain: Using Cognitive Neuroscience to Explore the Nature of Human Ability and Performance." *Roeper Review*, vol. 30, no. 3: 162-170.

Institutional Repositories Roundtable

Wednesday, June 17, 2009
Presented by: Social Science Division and Science-Technology Division
Reported by: Pam Enrici, Chair, Science-Technology Division

Seventeen early risers attended the Institutional Repository Roundtable on the last day of the conference at 7:00 A.M.

This was a true roundtable where a variety of topics were discussed. Some of them were how to get faculty, staff, or students to deposit their papers in the library's repository - the general answer was persistence and education. One of the questions that arose was what happens if the depositor changes his or her mind about the material being open to all comers. No consensus came out of this question.

Some of the other questions were what companies

are good for getting the material up on the web (or should the library do it themselves) and what programs (such as OAI-ster) can harvest them. How does UMI Dissertations (from Proquest) figure into putting up dissertations? That's a legal question for each library. For each question there were a number of opinions and lively debate ensued on many of these topics.

Tour: National Institute of Standards and Technology, Its Research Library and More

Thursday, June 18, 2009
Presented by: Chemistry Division, Science-Technology Division
Reported by: Pam Enrici, Chair, Science-Technology Division

The Engineering Division and Sci-Tech Division had, as their after-conference event, a tour of NIST, in Gaithersburg, MD. Thanks to Susan Makar for making all the arrangements for this fascinating tour.

We left the Convention Center early and made the hour plus bus ride to Gaithersburg, MD. The Information Services Division made us feel welcome with a morning snack. While we ate, they talked about their function within and without NIST. Then we had tours of the NIST Research Library and the NIST Museum. Just some of the exhibits included their Hall of Standards, some early surveying instruments from the Ferdinand Rudolf Hassler Exhibit (Hassler was the first Superintendent of the U.S. Coast Survey and the Office of Weights and Measures), Laser Cooling and Trapping of Atoms Exhibit, the Short Clock (the most accurate of mechanical clocks), and so many more that I don't have space to write about. After this we went on a tour of the grounds including looking at some of the research labs.

After a tour of the campus, we had a presentation by Dr. Tim Foecke on the Titanic. He is coauthor of the book What Really Sank the Titanic: New Forensic Discoveries. This was a fascinating talk about the metallurgy involved. We also had a group photo taken under the Newton Apple Tree. Finally, lunch and then an extremely rainy ride back to the convention center. The librarians at NIST did us proud. I hope that if you are in the D.C. area, that you can arrange (you just can't drop in) to tour NIST – it's well worth the time. ❖