

Gearing Up!

NCME Busy Disseminating Products and Services

This 2004-05 academic year, the National Center for Manufacturing Education (NCME) has been actively disseminating our products and services aimed at enhancing and encouraging manufacturing technology education. In addition to the print-based *Gearing Up!*, we have added a monthly online newsletter, *Onsite Insight*, focused on MERC (the Manufacturing Education Resource Center electronic clearinghouse) and distributed both on the www.ncmeresource.org site and directly to registered MERC users. Other highlights of our activities include:

- In August, NCME leadership team member Robert Mott presented an overview of MERC to approximately 110 members of the steering committees for the seven technical communities of the Society of Manufacturing Engineers at the 2004 SME Manufacturing Technology Summit in Dearborn, Michigan. Robert Mott chairs and NCME Principal Investigator Shep Anderson serves on the SME Education & Research Community steering committee.
- Shep Anderson met in November with faculty, staff, and administrators of an Illinois community college to assist them in reshaping their manufacturing engineering technology program.
- In Washington DC, at the National Science Foundation’s annual meeting for projects and centers with Advanced Technological Education grants, NCME director Monica Pfarr and leadership team member Jim Houdeshell hosted an exhibit and gave a presentation on MERC.
- In December, Monica Pfarr presented at the national Project Lead The Way annual meeting in Las Vegas. Sinclair Community College, through the NCME, serves as the Ohio affiliate for PLTW.
- Jim Houdeshell presented “Integrating Learning Objects into Instructional Materials” at the League for Innovation conference in New York in March 2005.
- Anita Gilkey and Sean Falkowski, both members of the NCME leadership team, are pilot testers for the *Getting Results* project, a collaborative effort between the NCME and the League for Innovation. Anita Gilkey presented the materials to six Sinclair Community College and University of Dayton faculty participants in early April 2005, and later that month met with project evaluator Dr. Kay McClenney (Director of the Community College Survey of Student Engagement) and SCC president, Dr. Steven Johnson.
- Gilah Pomeranz, NCME project manager, attended the Florida Technology Leadership Council meeting in April at Daytona Beach Community College. She spoke about the NCME’s collaboration with Florida Community College at Jacksonville.
- Also in April, Steve Quinlan and Harry Greenleaf from the SME Education Foundation visited the NCME to discuss opportunities for collaboration.

These highlights are representative of the diversity of exciting dissemination opportunities that the NCME staff is involved in year round. Much more continues to be on the calendar for the remainder of the academic year, and on into 2005-06 and beyond.

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Meet the Staff

Donna Hoying, Project Manager for Lean Manufacturing

Donna Hoying joined the Advanced Integrated Manufacturing (AIM) Center and the NCME in the spring of 1999, serving as a Project Manager for Lean Manufacturing.

Donna received a BS in Industrial Engineering from Purdue University in 1985 and attended a Kaizen/JIT training with Yoshiki Iwata and Chihiro Nakao in 1988. Before joining the AIM Center, Donna worked at Delphi as a Lean Manufacturing Engineer, implementing Lean in the plant and office areas as well as with suppliers. Donna led a Delphi team to reduce the lead-time for their budget process by 43%. William Sherkenbach published this example in his book, *Deming's Road to Continual Improvement*.

As a Project Manager for Lean Manufacturing, Donna develops and delivers hands-on implementation workshops for many Lean topics, including Value Stream Mapping, 5S, and Setup Reduction. Donna also provides executive coaching for companies, such as Smiths Aerospace. "The AIM Center and Project Manager Donna Hoying have played a critical role in improving productivity at our plant. As a result, our



Donna Hoying

inventory turns have increased from 3 to 7 and we received the Silver Award from Boeing, our top commercial customer," stated Nigel Cranwell, Vice President of Operations, Smiths Aerospace. In addition, Donna was one of the featured Lean Presenters at Precision Machined Products Associations National Technical Conference in St. Louis in 2002.

In 2004, Donna also became the Quality Management Representative responsible for designing and implementing a Quality Management System to achieve ISO certification. After an external audit by SGS, the NCME and the AIM Center became ISO certified and the registration took effect August 31, 2004.

"It was my goal to improve quality without adding any unnecessary waste," says Donna. "We have achieved that goal, and we continue to strive for improvement every day."

Currently, Donna is also responsible for populating the "Related Links" section of the NCME website.

NCME Part of Development Grant

The NCME and AIM Center, in partnership with Edison Materials Technology Center (EMTEC), received a \$1.2 million grant to establish a new product development center to be utilized by regional manufacturers. The funding comes from the Ohio Third Frontier Project, a 10-year, \$1.1 billion initiative representing Ohio's largest-ever commitment to expand the state's high-tech research capabilities and promote start-up companies to create high-paying jobs for the future. Companies using the new development center will be able to utilize FlexiTrac™, a tool that provides innovative product development services to small- and medium-sized Ohio-based manufacturers dealing with advanced materials. The economic impact of this project is expected to be \$25 million annually, with 142 jobs being created or retained over five years.

Recent Visitors to the NCME:

- Ohio Department of Education
- Community College of Southern Nevada
- Ohio Career-Technical Planning District Superintendents
- University of Dayton Engineering Technology Department
- High school juniors and seniors from southwestern Ohio
- St. Louis Community College
- SME Education Foundation
- Owensboro Community College

Project Lead the Way Growing in Ohio

Project Lead The Way, the nationwide program for high and middle schools dedicated to increasing the quality and quantity of engineers graduating from college, continues to grow in Ohio.

The NCME, in its role as the Ohio affiliate for Project Lead The Way (PLTW), will host four intensive two-week training sessions for high school teachers from all over Ohio this summer. The sessions, Introduction to Engineering Design (June 19-July 1), Principles of Engineering, Digital Electronics, and Computer Integrated Manufacturing (July 24-Aug. 5), will prepare teachers to teach those PLTW courses in their respective schools.

Sinclair is one of only three community colleges chosen as PLTW state affiliate institutions. Other PLTW affiliates include Purdue, Duke, and Penn State universities. Offered free to participating districts, Project Lead The Way's curriculum is now in place in high schools and middle schools in 44 states.



In Ohio, PLTW's reach and reputation continue to grow. Last summer, the NCME hosted 25 teachers in two workshops; this year, four are scheduled, with a potential of 50 participating teachers. A recent listserve, added to the PLTWOhio website at www.pltwohio.org, will help those Ohio teachers connect with one another. The listserve has only been in place for a few weeks and is already proving to be a valuable tool for teachers all over Ohio.

Another recent addition on the state front is the new data collection system, the first of its kind in the nation. The system, being developed by the Center on Education for Training and Employment (CETE) will keep track of demographic information, course grades, and college readiness exam scores for all the PLTW students in our state.

Also in process is the new "College Options" statewide articulation agreement, which eventually could include most of the two-year and four-year colleges and universities in the state. It will allow students to earn college credit for their high school PLTW courses as long as they meet the specific scoring criteria of the college or university chosen.

Monica Pfarr, the Ohio Affiliate Director for Project Lead the Way, is happy to see the growth continue. "Ohio stands to gain a great deal from Project Lead the Way," she said. "Our workforce needs engineers, and this program is the best way to get them started." For more information on Project Lead The Way, go to www.pltw.org or to www.pltwohio.org

NCME's Manufacturing Education Resource Center (MERC) Hosts Lean Manufacturing Web Seminar

On Friday, May 6, MERC hosted a free web seminar entitled "Teaching Lean Manufacturing." This web seminar featured Dr. J T. Black, Professor Emeritus, Industrial Systems Engineering, Auburn University. Dr. Black is also an Engineering Fellow with the Society of Manufacturing Engineers (SME) and is co-author of *Materials and Processes in Manufacturing* and *Lean Manufacturing and Cell Design*.

During this live broadcast, Dr. Black, a leading authority in lean manufacturing, shared his extensive expertise to provide participants with tools and techniques for student success in lean manufacturing concepts and applications.

Another "Teaching Lean Manufacturing" web seminar is in the works. Please check our website for updates.

www.ncmeresource.org



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Upcoming NCME Events & Conferences

June 1–5, 2005	2005 SME Annual Meeting	Baltimore, MD
June 12–15, 2005	ASEE 2005 Annual Conference and Exposition	Portland, OR
June 22–25, 2005	Innovations for Manufacturing Engineering Education Conference	San Luis Obispo, CA
July 12–15, 2005	3rd Nano Training Bootcamp	Washington, DC
July 25–28, 2005	SAME-TEC 2005	San Jose, CA

For a listing of additional professional development opportunities available this summer, please visit www.ncmeresource.org/events.cfm.

If you would like to receive an electronic version of this newsletter, please contact Faith Leeper, NCME Customer Engagement Manager, at faith.leeper@sinclair.edu or (937) 512-2008.