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NEWS & ANALYSIS

FABTECH & AWS spectacular will be a real laser show

If you're in the market for a laser show, try Chicago.

Many new laser application-related activities are slated for the first combined FABTECH International & AWS Welding Show, North America's largest metal forming, fabricating, and welding event. Scheduled for November 13-16 at McCormick Place, the show will feature nearly 800 exhibits and two technical conferences.

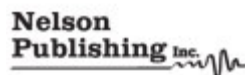
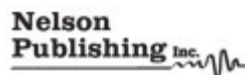
"In the next five years, the use of lasers in the manufacturing environment, as a cost-efficient, high-productivity alternative to existing methods, is poised for substantial growth," reports the Society of Manufacturing Engineers (SME), a co-sponsor of the show. "Costs of laser applications are decreasing, while the number of applications themselves is increasing. Currently, lasers are being used in a number of applications including marking, laser welding, drilling, heat treating, cladding, and brazing."

New show features and activities will be available to help attendees learn more about lasers and their practical applications:

- **Laser Education Track:** The FABTECH Conference has added a special laser educational track to its line-up of offerings. This track includes sessions on laser-cutting technology and laser processing.

- **Laser and Laser-Related Exhibitors:** More than 90 exhibiting companies will feature equipment and technology for lasers and laser-related applications.

- **Laser Day in the Innovation Theater:** A full day of laser technology discussions and free education will be presented November 14 in the Innovation Theater, conveniently located on the show floor. Laser Day will kick off with the Laser 101 Session, a white paper presentation by the Industrial Laser Group on the history, current, and future aspects of



the laser and where it fits into the manufacturing environment.

SME is co-sponsoring the show with the American Welding Society and the Fabricators and Manufacturers Association. For more information about the FABTECH International & AWS Welding Show, call the SME Resource Center at 800.733.4763 or go to

Society of Manufacturing Engineers,

www.rsleads.com/511tp-191

Agile learning plan determined to reinvent modern workforce

Educational researchers and an automotive industry veteran have presented a solution for attracting and training manufacturing workers for the 21st century—a solution that combines the time-honored tradition of apprenticeships with distance learning and data-mining technologies, along with interactive collaboration tools to provide a platform for rapid and agile learning.

The strategy, titled “Agile Learning for Agile Manufacturing: An e-Learning Model,” was delivered at the Society for Advanced Learning Technology (SALT) conference in Washington by Dr. Miriam Masullo of InViVoVision and Dan Criscenti of Campbell & Co.

“Our agile learning solution focuses on the need to establish a new online training methodology to help the American manufacturing industry to recruit, train, and build the manufacturing workforce of the future,” says Masullo, the CEO of InViVoVision. “Modern manufacturing has created great demand for highly skilled employees, yet 80 percent of manufacturers feel that they face a moderate to serious shortage of advanced manufacturing worker applicants.”

InViVoVision and Campbell & Co. are working jointly to research and address the training needs of America’s largest manufacturing sector, the automotive industry.

“U.S. automotive manufacturers and suppliers face a number of personnel challenges, including a rapidly aging workforce, low interest among young people to work in manufacturing,” says Criscenti.

Criscenti is vice president of interactive media at Campbell & Co. in Dearborn, MI. Previously, he was an executive with Ford Motor Company, where he developed an information and edu

The presentation, “Agile Learning for Agile Manufacturing: An e-Learning Model,” can be found at

InViVoVision,
www.rsleads.com/511tp-192
and
Campbell & Co.,
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Robot begets robot at automation show

I, robot. You, robot.

FANUC Robotics America Inc. demonstrated intelligent shaft insertion and gear assembly/disassembly of robot components during the 2005 International Robots and Vision Show this fall.

At the show, the M-16iB robot, equipped with FANUC's V-500iA/3DL laser vision sensor and FS-30 Force Sensor, performed three assembly processes. First, the 3-D laser vision sensor identified and located a cluster gear assembly from a tray. The robot picked up the assembly and used force control to mount it to a fixtured gear housing (shaft insertion). Next, the robot used vision to locate and pick up an idler gear and assemble it to a pinion and the cluster gear (spline matching). Finally, the robot removed the idler and cluster gears from the assembly, and returned the parts to their respective trays (disassembly).

“This actually demonstrates robots building robots,” says Ranganath Misra, FANUC Robotics’ staff engineer for material handling products and applications. “Traditional robots are not able to do these types of operations. However, our Intelligent Robots can cost-effectively handle a wide range of precision assembly applications.”



“Conventional robotic 2-D assembly processes are performed by SCARA robots,” says Misra. “Our articulated Intelligent Robots with integrated vision and force sensors provide maximum flexibility for a variety of assembly operations, including the ability to pick a component and assemble it to a sub-assembly in 3-D orientation. Since our sensors can be used with a variety of FANUC Robotics’ articulated robots, we can also handle the assembly of large parts. Compared to other robot suppliers that use third-party sensors, we offer our customers unique integrated process solutions that simplify sensor

setup, calibration, and application programming.”

The six-axis M-16iB series is the latest generation robotic solution for a variety of medium-payload manufacturing and system processes such as material removal, part transfer, machine tending, part and case packing, dispensing, and assembly. The robot’s compact, cost-effective, and flexible design simplifies installation and maximizes reach, even in compact workspace environments.

FANUC Robotics,

www.rsleads.com/511tp-194

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