



WHAT'S THE BIG ATTRACTION? IMTS 2010!

The great thing about a trade show the size of IMTS is the amount of options available to attendees. If you're into cars, fighter jets, machine tools, fighting robots, manufacturing relics or simply the latest technology advancements in a particular industry, you'll find it at IMTS 2010. From discussions on the state of manufacturing in the United States to former Michigan governor and current National Association of Manufacturing president John Engler speaking on how to create a manufacturing climate that encourages innovation, the six-day event has the entire scope of manufacturing and industry covered. Along with the 1,100+ exhibiting companies on hand, attendees can check out a variety of special programs and demonstrations throughout the week.

Emerging Technology Center (Booth N-650)

Everyone comes to IMTS to see "the next big thing." You can see four of these at the Emerging Technology Center (ETC) at IMTS 2010 in Chicago. The four featured technologies this year are cloud computing, MTConnect, nanotechnology/micro manufacturing, and additive manufacturing. Get a brief overview by checking out a cool 3-D video that discusses these leading-edge technologies and take a tour of the ETC for some in-depth demonstrations. MTConnect, the open, royalty-free standard developed to foster communication between machine tools, made its debut in the ETC at IMTS 2008. More companies have begun pilot programs with MTConnect, and the standard is beginning to garner international attention. Cloud computing is a technology that has gained popularity by leaps

and bounds over recent years using remote, large Internet farms to collect data. Nanotechnology is the development of materials and devices sized 100 nanometers or smaller, important especially in the fields of electronics and medicine. Additive manufacturing, the process of building objects from 3-D model data, allows design flexibility previously unknown and impossible in traditional subtractive processes. It allows for a much more rapid production process, as well as materials flexibility. The ETC is located at Booth N-650 in the North Building.

Advanced Manufacturing Center (Booth W-160)

The center will feature a 3-D, virtual reality presentation that allows visitors to operate and interact with the Rolls Royce Trent 1000 engine used to power the Boeing 787 Dreamliner. Additionally, Rolls Royce will present a fan blade set from the Trent 900 engine and several machined components from the Trent engine series. Multimedia displays, giveaways and interactive presentations will also be on hand. The Advanced Manufacturing Center debuted at IMTS in 2008 and is located in Booth W-160 in the West Building.

Robot Combat Arenas (Booth E-5066, Booth B-6875)

Back by popular demand are the Robot Combat Arenas, sponsored by ThomasNet. Attendees can go head-to-head in some serious robotic warfare against co-workers at Booth E-5066 in the East Building. If destroying inanimate objects is more your cup of tea,

Booth B-6875 in the North Building allows guests to use their robotic machines to destroy microwaves, dishwashers and other household appliances.

The Tesla Roadster (Booth W-100)

The facts are simple; this automobile stands alone as the most efficient, high-production sports car on the planet, according to Tesla representatives. The statistics help the argument as the Roadster features a 248 hp (185 kW) 3-phase electric motor; can go 0-60 mph in 3.9 seconds with a top speed of 125 mph; carbon fiber body; single-speed transmission; 200+ miles per charge; zero emissions. Full recharging of the automobile can be completed in as little as 3.5 hours. In an effort to show off the vehicle's practicality, Tesla sent one of its Roadsters around the world. Starting at the Geneva Auto Show in March, the automobile is scheduled to end its journey at the Paris Auto Show on September 28, 2010. The Tesla Roadster will be on display in Booth W-100 in the West Building.

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The Tesla Roadster will be on display at IMTS 2010 (courtesy of Tesla Motors).

Manufacturing Museum (Booth E-4771)

Artifacts on loan from the American Precision Museum, located in Windsor, Vermont, will entertain and engage visitors on the history of manufacturing. Attendees will see how far industry has advanced through the years. Exhibits appearing at IMTS from the American Precision Museum include historic lathes, sewing machines, typewriters, milling machines, hand-powered planers and a tiny model steam engine.



This metal working lathe with two foot pedals was donated by the Carroll-Jamieson Machine Tool Company in Batavia, OH.



This hand-powered model of a non-circular lathe, built by Peter Fernleigh Jones in England, was donated to the museum by his son, Mike Jones.

Ann Lawless, executive director at the American Precision Museum, is excited about the opportunity to

share some history with IMTS. “The machine tool industry developed from the interchangeable parts used in gun making initially. It’s the same process that was used for sewing machines, bicycles, even automobiles. Everyone knows the work that Henry Ford did to create the assembly line, but he couldn’t have done it without interchangeable parts.”



This micrometer was made by Brown & Sharpe Mfg Co., Providence, RI, and was a gift from Charles W. Dodge (courtesy of the American Precision Museum).

In addition to the artifacts, the museum will have information regarding its education programs and some history of the museum itself. “We’re going to have a beautiful exhibition set up for IMTS that really illustrates the work we do at the museum. It’s a wonderful opportunity for us and we’re grateful for the help the Association for Manufacturing Technology (AMT) has done during this process.”

The Manufacturing Museum at IMTS will be located at Booth E-4771 in the East Building.

F-35 Lightning II Joint Strike Fighter (Booth W-100)

Lockheed Martin has agreed to exhibit a full-scale model of its F-35 Lightning II Joint Strike Fighter during the show. The F-35 Lightning II is a 5th generation fighter, combining advanced stealth with fighter speed and agility, fully fused sensor information, network-enabled operations, advanced sustainment, and lower operational and support costs. Lockheed Martin is developing the F-35 with its principal industrial partners, Northrop Grumman and BAE Systems. Two separate, interchangeable F-35 engines are under development: the Pratt & Whitney F135 and the GE Rolls-Royce

Fighter Engine Team F136. “While the manufacturing technology featured at IMTS stands alone as a must-see, what’s really exciting is seeing the end result from some of those machines,” says John Krisko, IMTS Director - Exhibitions. “Everyone at the show will have the opportunity to learn about the plane’s construction and the manufacturing technology behind it. We are thrilled to have this amazing example of an end product featured at IMTS.” GIE Media was instrumental in working with IMTS to secure the fighter for exhibit. The F-35 is intended to be the world’s premiere strike aircraft through 2040. The United States intends to buy a total of 2,443 aircraft with a total of more than 4,000 F-35s forecast to be built for U.S. and foreign customers combined. The F-35 program’s overall value is estimated \$323 billion, making it the largest defense program ever. The F-35 will be on display in the front of McCormick Place’s West Building in Booth W-100. Plans are also in the works to have photo opportunities with the plane available to attendees.

For more information on these or other IMTS 2010 exhibits and attractions, visit www.imts.com.

IMTS 2010 Industry & Technology Conference

Five topic tracks will be the focus of a wide range of industry sessions at IMTS 2010 including materials engineering, machining technology and trends, alternative manufacturing processes, metrology and plant operations. The industry and technology conference begins Monday, September 13, with Industry Inspiration Day and ends Friday, September 17, by noon. Here’s a brief rundown of the conference schedule:

Industry Inspiration Day– September 13 (Room S100)

Keynote speakers from four different industries will be presenting programs at the first ever Industry Inspiration Day at IMTS. Allan McArtor, chairman and CEO of Airbus Americas, will

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lead the aerospace segment; automotive will be presented by Jim Tetreault, vice president of North American Manufacturing, Ford Motor Company; Denise Bode, president/CEO of the American Wind Energy Association, will present an energy program; Rene van de Zanda, president/CEO of Emergo Group will examine the medical industry. A roundtable panel discussion will close the special program, and registrants of the IMTS Industry & Technology Conference will be admitted. Industry Inspiration Day programs will take place in the South Grand Ballroom, S100.

Tuesday, September 14

Alternative Manufacturing Processes

Non-Traditional Look at Wire EDM in Modern Manufacturing

(11:00 a.m. – 11:55 a.m.) Ann Mazakas, DP Technology, Room W192B

Machining Technology & Trends

Innovative Multitasking Concepts for Turbine Blade Manufacturing

(9:00 a.m. – 9:55 a.m.) Mike Finn, Mazak, Room W192B

Cycle-Controlled Lathes

(9:00 a.m. – 9:55 a.m.) Andreas Schulz, Weiler NA Inc., Room W192A

Advanced Grinding Technology Leads to Measurable Gains

(9:00 a.m. – 9:55 a.m.) C. Stine, United Grinding Technology, Room W192C

Cutting Tools Engineered for Power Generation

(9:00 a.m. – 9:55 a.m.) Thomas Raun, Iscar Metals Inc., Room W194B

Metalworking Fluid Performance in Aluminum High-Speed Machining

(11:00 a.m. – 11:55 a.m.) Dr. Robert Evans, Quaker Chemical Corp., Room W192C

Cutting Tools Engineered for Medical

(1:00 p.m. – 1:55 p.m.) Thomas Raun, Iscar Metals Inc., Room W194B

Materials Engineering

Machine Tool Design Elements for Machining Triple-Nickel Titanium

(1:00 p.m. – 1:55 p.m.) Scott Walker, Mitsui Seiki USA, Room W193B

Metrology

Multi-Sensor Metrology

(11:00 a.m. – 11:55 a.m.) Tom Groff, Optical Gaging Products, Room W192A

Plant Operations

The Machine Part Cost and Process-Management Dilemma

(10:00 a.m. – 10:55 a.m.) Jerry LaChapelle, MES, Room W193B

Lean Safety-Transforming Your Safety Culture with Lean Management

(10:00 a.m. – 10:55 a.m.) Robert Hafey, RBH Consulting LLC, Room W195

Increased Capabilities and Flexibility Equals Higher Productivity

(1:00 p.m. – 1:55 p.m.) T. Economan and J. Reinert, Index Corp., Room W195

MTConnect

(2:00 p.m. – 2:55 p.m.) William Sobel, System Insights, Inc., Room W192B

Greening Up the Industrial Parts Cleaning Process

(2:00 p.m. – 2:55 p.m.) Chuck Sexton, Kyzen Corp., Room W192A

Capital Equipment Justification-The Truth about ROI

(2:00 p.m. – 2:55 p.m.) J. Reinert and Klaus Voos, Index Corp., Room W192C

Utilizing New Software Algorithms to Improve CAM Programming, Shorten Mill Times and Increase Security

(3:00 p.m. – 3:55 p.m.) Jeff Jaje, SESCOI USA, Inc., Room W194B

The Information Age of Manufacturing

(3:00 p.m. – 3:55 p.m.) Kevin Bevan, GBI, Room W193B

Discussions on Manufacturing Issues Today

(3:00 p.m. – 3:55 p.m.) Steven Stokey, Allied Machine & Engineering Corp., Room W195

Wednesday, September 15

Alternative Manufacturing Processes

Laser Ablation Extends Machining Options for Complex Free-Form Surfaces

(9:00 a.m. – 9:55 a.m.) G. Ledvon, AgieCharmilles, Room W192B

Expand Your Capabilities with the Versatility of Waterjet

(10:00 a.m. – 10:55 a.m.) S. Szczesniak, Mitsubishi Waterjet, Room W195

Use of Abrasive Waterjet Cutting for Improving Manufacturing Flexibility and Efficiency

(2:00 p.m. – 2:55 p.m.) Laird Perry, OMAX Corp., Room W192A

Machining Technology & Trends

The True Cost of Setup on a CNC Machine

(9:00 a.m. – 9:55 a.m.) G. Vacio, BIG Kaiser Precision Tooling Inc., Room W192A

Productivity Efficiencies in Difficult Materials Require Consideration of the Machine Tool, the Spindle and the Cutting Tool

(9:00 a.m. – 9:55 a.m.) Sean Holt, Sandvik Coromant, Room W192C

Gaining 50% Productivity with Workholding

(11:00 a.m. – 11:55 a.m.) Tim Winard, Kitagawa-Northtech Inc., Room W192B

Green Manufacturing Techniques and Machine Designs-Practical Technology Available and in Use Today

(11:00 a.m. – 11:55 a.m.) Richard A. Curless, MAG Americas, Room W192A

Manufacturing Economics

(1:00 p.m. – 1:55 p.m.) Brian Norris, Sandvik Coromant, Room W193B

Metrology

3-D Volumetric Calibration of Multi-Axis Stage Motion for Machine Tools

(10:00 a.m. – 10:55 a.m.) Dr. H. Schwenke, Etalon, Room W193B

Plant Operations

LMPC—Lean and Machining Practices: Make the Connection

(10:00 a.m. – 10:55 a.m.) Larry Schwartz, Okuma, Room W194B

Smart Operation Starts with Automation

(11:00 a.m. – 11:55 a.m.) Bill Vejnovic, Toyoda Machinery, Room W192C

TTCT—Takt Time Versus Cycle Time: What's More Important?

(1:00 p.m. – 1:55 p.m.) Jeff Estes, Okuma, Room W194B

Lean Manufacturing and the Production-On-Demand Model

(1:00 p.m. – 1:55 p.m.) Bernard Schawe, Mazak, Room W195

Preventative Maintenance: What You Don't Know Can Hurt You

(2:00 p.m. – 2:55 p.m.) Steve Reed, KSolutions, Room W192C

U.S. Government Actions and Policies on Top Manufacturing Issues

(2:00 p.m. – 2:55 p.m.) Harry Moser, ISTMA Americas Region, Room W192B

Developments in CAD/CAM for Composites

(3:00 p.m. – 3:55 p.m.) Peter Dickin, Delcam, Room W193B

Automatic Tool ID Saves Big Bucks

(3:00 p.m. – 3:55 p.m.) Mark Sippel, Balluff Inc., Room W194B

Thursday, September 16

Machining Technology & Trends

New Metal Cutting Techniques Applied to Current Market Trends

(10:00 a.m. – 10:55 a.m.) Don Graham, Seco Tools, Inc., Room W194B

How Do Small Shops Break Into the World of Automation?

(10:00 a.m. – 10:55 a.m.) John Lucier, Methods Machine Tools Inc., Room W195

Increased Productivity by Effective Thermal Management in Metal Cutting of Titanium

(2:00 p.m. – 2:55 p.m.) Dr. Paul Prichard, Kennametal, Inc., Room W192B

Materials Engineering

Machine Tool Design Elements for Machining Triple-Nickel Titanium

(9:00 a.m. – 9:55 a.m.) Scott Walker, Mitsui Seiki USA, Room W192B

Metrology

CAD/CMM: A New Category in the CMM Industry

(11:00 a.m. – 11:55 a.m.) Sam Golan, PAS Technology, Room W192C

Top Reasons Visions Fail

(1:00 p.m. – 1:55 p.m.) Joe Freud, KSolutions, Room W193B

Catch Part Defects Before They Happen

(1:00 p.m. – 1:55 p.m.) Paul Hogendoorn, OES, Inc., Room W194B

Plant Operations

Advantages of an Integrated NC Programming and Simulation Strategy

(9:00 a.m. – 9:55 a.m.) NC Kishore, Dassault Systèmes DELMIA, Room W192A

Cost-Cutting Scrap Handling Solutions: Innovative ways to Improve Processes, Cut Costs

(9:00 a.m. – 9:55 a.m.) Del Butler, Magnetic Products, Inc., Room W192C

MTConnect

(10:00 a.m. – 10:55 a.m.) William Sobel, System Insights, Inc., Room W193B

CAM Software and Your Profitability

(11:00 a.m. – 11:55 a.m.) Bill Gibbs, Gibbs and Associates, Room W192A

The Information Age of Manufacturing

(11:00 a.m. – 11:55 a.m.) Kevin Bevan, GBI, Room W192B

Get All the Facts Before You Select Your Next CNC Control

(1:00 p.m. – 1:55 p.m.) Karl Kleppek, FANUC CNC America, Room W195

Motors, Drives and Motion Control—Global Market Update

(2:00 p.m. – 2:55 p.m.) Alex Chausovsky, IMS Research, Room W192A

Using PLM to Enhance Value Stream Management for Competitive Advantage

(3:00 p.m. – 3:55 p.m.) David Segal, Dassault Systèmes, Room W193B

Leveraging CAD/CAM Automation

(3:00 p.m. – 3:55 p.m.) Steve Sivitter, Planit Software, Room W194B

Friday, September 17

Materials Engineering

Composite Material and Production Technology Developments Enabling Game Changing Designs for Aircraft, Automotive and Wind Energy to be Practical Today

(9:00 a.m. – 9:55 a.m.) Randy Kappesser, MAG Cincinnati, Room W192A

Plant Operations

Case Study Evidence that Sustainable Design Practices Help Manufacturing Increase Profits and Growth

(9:00 a.m. – 9:55 a.m.) Robert Kross, Autodesk Manufacturing Industry Group, Room W192B

Getting it Right on the Money: Best Practices in Job Costing

(10:00 a.m. – 10:55 a.m.) R. Winger, Epicor Software, Room W193B

Ultra-High Performance Toolpath Technology Can Transform U.S. Manufacturing

(10:00 a.m. – 10:55 a.m.) Glen Coleman, Celeritive Technologies, Room W193B

New Technologies for Machine Tool Automation

(11:00 a.m. – 11:55 a.m.) Andreas Schuhbauer, Kuka Robotics, Room W192A