As IMTS approaches, prepare to be wowed by the manufacture of a 3D-printed electric car and other advanced manufacturing attractions.

Patrick Waurzyniak
Senior Editor

IMTS Facts

Show Dates
September 8–13

Show Hours by Hall
East Building: 9 am–5 pm
West Building: 9 am–5 pm
North Building: 10 am–6 pm
South Building: 10 am–6 pm

It’s just about time for IMTS, the Big Show that rolls into the city of Chicago September 8–13 at McCormick Place for the biennial extravaganza celebrating advanced manufacturing technology and state-of-the-art machine tool equipment. This year’s show stands to be different, with an electric car being completely built with additive manufacturing techniques at the Emerging Technology Center (ETC). Sponsored by Local Motors Inc. (Phoenix, AZ), the six-week 3D Printed Car Challenge aimed to influence the methodology used with additive and subtractive manufacturing for electric vehicle design and development. The Challenge, which ended May 13, drew more than 200 entries. The winning concept, Strati, was created by Michele Anoé of Italy.

Lights, Camera … Print!
The No. 1 wow-factor at the show is sure to be the complete construction of the electric car in the McCormick Place North Building’s AMT Emerging Technology Center by our partners from Local Motors,” said Peter Eelman, vice president, Exhibitions and Conferences, AMT-The Association for Manufacturing Technology (McLean, VA).

“This will not be an assembly project as it was at IMTS 2012. We will be starting from scratch to manufacture parts and assemble the vehicle during the six days of IMTS,” Eelman said. “For example, additive manufacturing processes will be employed to produce major parts on-site in the ETC.”

First-time visitors to IMTS should be sure to bring their best walking shoes to the show, which boasts some 13 miles of aisles in four large buildings. Some 100,200 visitors attended the six-day IMTS 2012. For the IMTS 2014, the 30th edition of the premier manufacturing technology show in North America, some 1900 exhibiting companies will occupy 1,240,863 ft$^2$ (115,276 m$^2$) of exhibit space at McCormick Place. Held every even-numbered year in Chicago, IMTS attracts more than 100,000 buyers and sellers from over 112 countries.

The 3D Printed Car Challenge winning concept, Strati, was created by Michele Anoé of Italy. Anoé will receive a $5000 award for his submission and will be invited to see his concept manufactured live at the Emerging Technology Center.

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Attendees can register at www.IMTS.com. A Conference Day Pass is priced at $250 and a Full Conference pass is $450. A full access IMTS/GAMS/MDA Combo Conference Pass, which includes entrance to IMTS plus admission to the Sept. 9 Motion, Drive and Automation Conference, and the Global Automation and Manufacturing Summit on Sept. 10, is priced at $650.

Key Attractions
At the Emerging Technology Center, visitors also can see some of the developments of the National Network for Manufacturing Innovation (NNMI) that is part of President Obama’s commission supporting US manufacturing. Each of the chartered NNMI facilities plans to share insights on their contributions. Eelman said attendees can expect to see examples of innovations from America Makes, which is developing high-performance materials and digital manufacturing; Next-Gen Power Electronics, showcasing improvements in everything electronic; and the innovations of the Digital Manufacturing and Design (DMDI), displaying recent breakthroughs and also Lightweight & Modern Metals Manufacturing (LM3I) examples.

Another key attraction will be a scale replica of a Mars rover automated motor vehicle at the Today’s Technology Center in McCormick Center’s West Building, Eelman added. “In addition to the rover itself, visitors can enjoy a display devoted to the development and manufacturing technology that support the vehicle,” he said.

Besides these exhibits, the IMTS 2014 show will see a major brand extension, Eelman said, with Industrial Automation North America once again showcasing process, factory, and building automation. “To further expand the range of technologies and solutions presented, IMTS 2014 introduces Motion, Drives & Automation North America (MDA NA) bringing together the power transmission, motion control and fluid...
technology sectors,” Eelman said. Both of these events are being developed by IMTS partner, Hannover Fairs USA, and will be located in the East Building.

Nine Pavilions Get Down to Business
IMTS 2014 will showcase manufacturing technology at nine pavilions, down from the 11 pavilions at IMTS 2012. Here’s a guide to what you’ll see at each pavilion:

- **Abrasive Machining/Sawing/Finishing** features technology for applications that require high tolerance and precision surface finish, including grinding technology, sawing and cutoff machines, and finishing technologies such as lapping, balancing, honing and polishing machines.
- **Controls & CAD-CAM** offers the world of custom automation and the latest software needed to extract the maximum efficiency from machine tools to optimize plant operations and cost efficiency.

- **EDM** will include everything in EDM equipment from CNC wire systems to die-sinking machines.
- **Fabricating/Laser/Additive** will show the latest technology in fabricating, metal forming, laser and waterjet-based machining and additive manufacturing, along with displays of welding, metal treating and marking equipment.
- **Gear Generation** is devoted to gear cutting, forming and finishing, as well as broaching, shaping and slotting machines and will spotlight traditional applications such as auto, construction, mining and shipbuilding, plus the emerging alternative energy and wind power sectors.
- **Machine Components/Cleaning/Environmental** offers everything from the parts to service and monitor machines to the components necessary for safe and environmentally responsible operations.
- **Metal Cutting** is the foundation of the machine tool industry, and visitors will find the latest innovations

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**HX504**

- **Pallet:** 19.6” x 19.6” x 8 / 0.001” Index
- **Travel:** 30.0” 25.1”, 31.5” XYZ
- **Tools:** CAT40, up to 240T ATC

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**IMTS 2014 Preview**
in metalcutting equipment including machining centers, turning centers and the entire range of metalcutting technology.

- Quality Assurance features metrology equipment and systems that keep processes on track, as well as the equipment that will check the accuracy of machines.
- Tooling & Workholding Systems offers all the necessities and innovative solutions to tooling challenges. Visitors can see innovations that maximize investments in machinery and equipment by reducing machine tool setup times.

Show Conferences

The individual conferences at IMTS encompass a wide variety of topics. The full conference schedule is available at http://www.imts.com/education/conference_search.cfm.

Among the many educational opportunities at the show, the TRAM-Trends in Advanced Machining, Manufacturing and Materials conference will be held Wednesday-Thursday, Sept. 10-11, in the West Hall. The Additive Manufacturing Workshop will be held Tuesday, Sept. 9, from noon-5 pm, in the West Hall.

Also on Tuesday, Sept. 9, the second Motion, Drive and Automation (MDA) Conference will bring industry experts in to discuss best practices in motion control, power transmission and fluid power. Helping manufacturing professionals to increase efficiency and productivity, this year’s program will cover industrial communications, robotic control, guidance and inspection, linear actuators, 3D printing and 3D machining.

The Global Automation & Manufacturing Summit 2014 (GAMS) at Industrial Automation North America (IANA) and IMTS will be held Wednesday, Sept. 10. GAMS focuses on industrial automation, mobility and modern maintenance practices. Speakers from Alcoa, Chrysler and McGladrey will share their expertise to help end-users increase their productivity and to meet their current and future manufac-
turing challenges. For more information please visit www.ia-na.com.

For the first time ever, the EOS North America User Day Conference (EOS NAUD 2014) will be held on Wednesday, Sept. 10. Open to both EOS customers and all attendees of IMTS, visitors will learn about the latest developments in direct metal laser sintering (DMLS) and plastics laser-sintering directly from EOS, its customers and partners.

The ISA Inside course on Sept. 10-11 provides a detailed look at how the ANSI/ISA99 standards can be used to protect critical control systems. It also explores the procedural and technical differences between the security for traditional IT environments and those solutions appropriate for SCADA or plant floor environments.

Finally, IMTS also will hold its Smartforce Student Summit on Sept. 8–13 from 9 am to 5 pm. During IMTS 2012, more than 9300 students and educators from 17 states attended the student summit before touring IMTS. For 2014, IMTS will welcome even more of the student community. The program is free for students, educators, administrators and parent chaperones.

“IMTS has always been an industry-driven event,” Eelman said. “We’ve already spoken about the hunger for innovation. Our area of concern is making certain we are successful at bringing the next generation of manufacturing technology professionals into the industry.

“To do this, we are investing heavily and growing the area for the AMT Smartforce Student Summit at IMTS by more than 50%. We are welcoming students with the thrilling Google Glass technology. Along with a tour, the student area will display a variety of interactive exhibits highlighting technology. MTAmbassadors—young manufacturing professionals in their 20s—can speak about the wealth of career opportunities in manufacturing and the enormous earning potential. And of course, students gain access to the show floor for quality interaction with exhibitors.”

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