HANNOVER MESSE

USA

CONFERENCE GUIDE

The 2022 HANNOVER MESSE USA Conferences
September 12 – 14, 2022 | West Bldg.
McCormick Place, Chicago
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The HANNOVER MESSE USA **Conference**

September 12 – September 14, 2022

REGISTRATION INCLUDES:

- Access to HANNOVER MESSE USA Conference, 1-day or 3-day passes
- Full access to the IMTS Exhibit Hall September 12-17
- Lunch ticket for day(s) of registered conference

FEATURED SPEAKER SESSIONS INCLUDE:

- **Power of 5G**, edge computing & the role of intelligent software in Industry 4.0
- The impacts of **labor shortage** and how to combat one with automation
- Are you **AI-Ready**? Bridging the gap from factory to cloud

COST:

1-day: $295 / 3-day: $495 / IMTS + Hannover Messe: $695

HANNOVER MESSE USA

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The 2022 HANNOVER MESSE USA Conference will offer 5 topic tracks including **Motion & Drives**, **Cybersecurity**, **Industry 4.0**, **Automation**, and **Supply Chain**; a comprehensive conference that will provide solutions to current manufacturing concerns.

HANNOVER MESSE USA Conference is the hub for industrial technology business and where world-leading suppliers and forward-thinking manufacturers can network and unlock new efficiencies.

Learn more and register today
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HANNOVER MESSE USA

Dear HANNOVER MESSE USA Supporter,

Welcome back! On behalf of Hannover Fairs USA, and the thousands of employees of Deutsche Messe AG around the world, welcome to HANNOVER MESSE USA co-located with IMTS, September 12-17, 2022, at Chicago's McCormick Place. HANNOVER MESSE, the global flagship of our manufacturing brand, returned to great success in-person in June in Hannover, Germany, and the enthusiasm for the return of HANNOVER MESSE USA and IMTS continues to grow.

After a forced four-year hiatus, we find ourselves in the midst of the fourth Industrial Revolution, and the branding of the new ***HANNOVER MESSE USA Conference***. Expanded to 3-days, September 12-14, the ***HANNOVER MESSE USA Conference*** makes up for lost time, offering (37) sessions across standards such as Motions & Drives and Automation, but also taking a newer look at Smart Factories and the impact of Industry 4.0, the growing concerns around Cybersecurity, and the challenges – and opportunities – present in our existing Supply Chain.

Providing necessary content like this can't be done without the tireless work of partners and supporters. We can't thank the staff at GIE Media's Manufacturing Group enough, Mike DiFranco, Elizabeth Modic, and Amanda Cafardi, for all of their effort in helping us triple the size of our educational offerings this year. This also isn't done without partners from Siemens, Boeing, NASA, MxD, Tulip Interfaces, Ericsson, 5G Alliance for Connected Industries and Automation (ACIA,) Amazon Web Services, Festo, Rittal, Nokia, VDMA, and so many more. Thank you to all our partners.

A new partner this year to HANNOVER MESSE USA is the Smart Factory Institute. A sister organization to HANNOVER MESSE USA, and the U.S. edition of Deutsche Messe's Technology Academy on the Hannover Fair Grounds (Germany) the Smart Factory Institute, located in Tennessee, enjoys the support of the Tennessee Manufacturers Association and Peak Performance Inc. Principals Denise Rice and Mary Beth Hudson, in cooperation with HANNOVER MESSE USA's Meike Sauer, have developed a program offering (40) complimentary educational sessions in our Solutions Theater, September 12-17.

There's one partner we are celebrating this year, without which HANNOVER MESSE USA can't enjoy this success, and that's our partner AMT – The Association of Manufacturing Technology. It all began with Deutsche Messe's Dr. Jochen Kockler and AMT's Doug Woods 10 years ago but has grown stronger due to the efforts of Peter Eelman, Michelle Edmondson, Bonnie Gurney, Arno Reich, Larry Turner, Bill Fox, Meike Sauer, and more than I can name, but which we are grateful and appreciative to all for their partnership and friendship.

So, this year is a celebration. A celebration of coming back together. A celebration of our 10-year partnership with AMT. A celebration of HANNOVER MESSE USA and IMTS.

The entire team welcomes you and looks forward to seeing you in September!

Sincerely,

Ed Nichols
CEO, Hannover Fairs USA

HANNOVER MESSE USA

Education for today, the future

A warm welcome back to The HANNOVER MESSE USA 2022 Conference after a 4-year hiatus. Brought to you by Hannover Messe USA and GIE Media's Manufacturing Group, this event has been carefully curated to help attendees embed continuous improvement processes within their manufacturing operations.

Taking place in the West Building of McCormick Place, Chicago, IL, The HANNOVER MESSE USA 2022 Conference sessions will be held Mon-Wed, Sept. 12-14, 2022. These sessions cover the latest technologies and services to keep you up to date so you can stay one-step ahead of your competition. When you register to attend these sessions, you'll be able to engage in presentations with experts, discuss challenges with other attendees, and discover practical solutions to implement in your plant immediately.

The HANNOVER MESSE USA 2022 Conference program at IMTS 2022 focuses on 5 topic tracks for continuous improvement and deliver solutions to current manufacturing concerns. Thirty-seven carefully selected presentations will take place throughout three days within the following topics.

Motion & Drives
- Sensor Technology
- Drive Technology
- Fluid Power
- Linear Technology

Cybersecurity
- Cloud
- Infrastructure
- Digital Platforms
- Security

Industry 4.0
- Industrial Internet of Things (IIoT)
- Preventative/Predictive Maintenance
- Machine Learning
- Artificial Intelligence

Automation
- Handling
- Assembly
- Robotics
- Cobots
- Sensors

Supply Chain
- Logistics
- Infrastructure
- Cloud
- Sustainability
- Digital Technologies

Turn to page 5-7 for the current schedule, pricing, and registration information, then make sure to review the following pages which highlight scheduled conference sessions. As you make your plans to attend HANNOVER MESSE USA 2022, co-located with IMTS 2022 don't forget to register for The HANNOVER MESSE USA 2022 Conference to learn the latest solutions to current manufacturing concerns.

I look forward to seeing you in Chicago this September.

Sincerely,

Elizabeth

Elizabeth Engler Modic
Editor
emodic@gie.net

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HANNOVER MESSE USA

Conference Schedule*

MONDAY 9/12

	TRACK A	TRACK B
8:30 - 9:55	**REGISTRATION**	
10:00 - 10:55	Room W196-A **Apana** Don Lanham, Vice President of Sales *Use Actionable Insight to Reduce Operational Water Use* **Industry 4.0**	Room W196-B **Balluff GmbH** Tom Knauer, Global Industry Manager- Factory Automation *Implementing IIoT Solutions for Robots Using Sensor- Level Protocols* **Automation**
11:00 - 11:55	Room W196-A **Hiwin** Art Holzknecht, Engineering Manager *Optimizing Motion Control System Design Through Component Technology Analysis* **Motion & Drives**	Room W196-B **igus** Michael Patterson, Energy Chain National Sales Manager *Avoid Unplanned Downtime with Intelligent Monitoring* **Industry 4.0**
12:00 - 1:10	**LUNCH**	
1:15 - 2:10	Room W196-A **5G Alliance for Connected Industries and Automation, Bosch Corporate Research, & Ericsson** Dr. Afif Osserian, Director of Industry Engagements and Research; Dr. Andreas Mueller, Head of Communication & Network Technology *Industrial 5G – Where Are We Now and What Still Needs to Be Done?* **Industry 4.0**	Room W196-B **Pro-Micron GmbH** Lennart Riehle, Head of Sales and Marketing *Get Ready for Autonomous Machining - Data Tracking, Monitoring, in-Process Quality Control with Spike®* **Supply Chain**
2:15 - 3:10	Room W196-A – Page 8 **Weidmuller** Simon Seerenier, Head of Product Management IE & SAI *Single-Pair Ethernet – The Standard for the Industrial Internet of Things* **Industry 4.0**	Room W196-B **Vention** Etienne Lacroix, Founder & CEO *The Start of a New Era: The Democratization of Industrial Automation* **Automation**
3:15 - 4:10	Room W196-A **MxD** Laura Elan, Senior Director of Cybersecurity *MxD Cybersecurity Roadshow: Securing the Manufacturing Supply Chain* **Cybersecurity**	Room W196-B **Litmus** Vastal Shah, Co-Founder & Chief Executive Officer *Are You AI-Ready? Bridging the Gap from Factory to Cloud* **Industry 4.0**

***Speakers, topics, times, and rooms are all subject to change.**

The IMTS Conference Pricing

https://www.IMTS.com/show/education/IMTS2022.cfm

DATES & TIME: Monday, Sept. 12 - Thursday, Sept. 15, 2022; 8:00 a.m. - 4:00 p.m.

LOCATION: West Building, Room W192-A, W192-B, W192-C, W193-A, W193-B, W194-A

COST: 1-day: $295 | 4-day: $495 | IMTS + Hannover Messe: $695

REGISTRATION INCLUDES:
- Access to IMTS Conference, 1-day or 4-day passes
- Full access to the IMTS Exhibit Hall September 12-17
- Lunch ticket for day(s) of registered conference

The HANNOVER MESSE USA 2022 Conference

https://www.imts.com/show/education/HMUSAConference.cfm

DATE & TIME: Monday, Sept. 12 – Wednesday, Sept. 14, 2022; 8:00 a.m. - 4:00 p.m.

LOCATION: All sessions will be held in the West Building – Level 1 of McCormick Place

COST: 1-day: $295 | 4-day: $495 | IMTS + Hannover Messe: $695

REGISTRATION INCLUDES:
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Conference Schedule*

HANNOVER MESSE USA

TUESDAY 9/13

	TRACK A	TRACK B
8:00 - 9:55	**REGISTRATION**	
10:00 - 10:55	Room W196-A **Canon USA** Grant Zahorsky, Sales Engineer, Machine Vision Products, Industrial Products Division ***The Impacts of a Labor Shortage and How to Combat One with Automation*** **Automation**	Room W196-B **Amazon Web Services** Kimberley Hagerty, Head of the Americas SC&L Professional Services Practice ***Supply Chain and Logistics*** **Supply Chain**
11:00 - 11:55	Room W196-A **Röhm** David Jackson, Chief Executive Officer ***Getting a Grip with Smarter Clamping*** **Industry 4.0**	Room W196-B **Southwire Co.** Steve Wetzel, Principal Applications Engineer ***VFD Cables: Essential or Overkill*** **Motion & Drives**
12:00 - 1:10	**LUNCH**	
1:15 - 2:10	Room W196-A **Cy.Pag. S.p.A** Luca Pagni, CEO & Owner ***What Happens When You Try to Apply (Artificial) Intelligence to Basic Mechanical Components?*** **Industry 4.0**	Room W196-B **Festo** Ted Rozier, Director of Engineering ***How to Unleash the Power of Smart Manufacturing While Upholding the Integrity of Automation & Robotic Safety*** **Automation**
2:15 - 3:10	Room W196-A – Page 10 **Rittal** Michael Milam, General Manager - South Region Dr. Dirk Pieler, Executive Vice President Business Unit Industry ***Increasing Productivity Through Successful Digital Transformation*** **Industry 4.0**	Room W196-B **Nokia** Todd Nate, North American Manufacturing Lead ***Always Up and Running – Predictable Manufacturing*** **Automation**
3:15 - 4:10	Room W196-A **VDMA** Johannes Olbort, Project Manager ***The Global Production Language – OPC UA Companion Specifications as the Basis of Networked Production*** **Automation**	Room W196-B **Velo3D** Matt Karesh, Technical Sales Engineer ***Functional Benefits of Additively Manufactured Heat Exchangers*** **Industry 4.0**

***Speakers, topics, times, and rooms are all subject to change.**

HANNOVER MESSE USA

Conference Schedule*

WEDNESDAY 9/14

	TRACK A	TRACK B	TRACK C
8:00 - 8:55	**REGISTRATION**		
9:00 - 9:55	Room W196-A **Reshoring Initiative** Harry C. Moser, President ***Reshoring is Surging in the U.S. and Worldwide. How Your Company Can Benefit*** **Supply Chain**	Room W196-B **ARM Institute** Michael Skocik, Program Manager ***Critical Initiatives in Artificial Intelligence and Machine Learning for Manufacturing*** **Industry 4.0**	Room W196-C **Boeing** Wen Jiang, Senior Control Engineer ***Robot for 787 Center Bushing Installation for IMTS 2022*** **Automation**
10:00 - 10:55	Room W196-A – Page 12 **AT&T** Scott Comroe, Senior Principal Architect ***Industry 4.0: A Behind the Scenes Look at What is Really Happening*** **Supply Chain**	Room W196-B – Page 14 **Siemens Industry Software** Gus Gremillion, Solutions Consultant ***Edge Computing for Machine Tools*** **Industry 4.0**	Room W196-C **Norton | Saint Gobain** Mike Shappell, Senior Application Engineer, Automation Specialist; Nathan Jackson, Application Engineer, APS Programmer; Tony Landes, Application Engineer Manager, Abrasive Process Solutions Lab ***How Can I Be Certain that My Automation System Process Will Work...Before I Buy it?*** **Automation**
11:00 - 11:55	Room W196-A **SCHUNK** Tom Reek, Vice President of Sales- Automation ***Robotic Machine Loading- Considerations for Adding Automation to Existing Machines and Processes*** **Automation**	Room W196-B **MxD** Federico Sciammarella,President & CTO ***Digital Twins, Cybersecurity and an Empowered Workforce for Manufacturing*** **Cybersecurity**	Room W196-C – Page 16 **NASA Goddard Space Flight Center** Joshua Berrier, Optical Engineer ***Surface Damage Catalog for Contact-Measuring Space Flight Optics Using a Coordinate Measuring Machine*** **Industry 4.0**
12:00 - 1:10	**LUNCH**		
1:15 - 2:10	Room W196-A **Datanomix & Caron Engineering** Greg McHale, Co-Founder & CTO; Rob Caron, President & CEO ***Using Machine Learning to Understand Production- From Tools to Finished Parts*** **Industry 4.0**	Room W196-B **Dassault Systemes** Adrian Wood, Strategic Business Development & Marketing Director ***Closing the Gap for Supply Chain Resiliency*** **Supply Chain**	Room W196-C **Hexagon Manufacturing Intelligence** Giles Gaskell, Commercial Business Manager – Photogrammetry & Structured Light Systems ***The Rules Still Apply to Additive Manufacturing*** **Industry 4.0**
2:15 - 3:10	Room W196-A **Ericsson** Sebastian Elmgren, Head of Business Development & Product Marketing, Dedicated Networks | Erin Liao, VP, Head of E2D 5G Systems ***How the 5G Innovation Platform is Enabling the Next Generation of Lean Production*** **Industry 4.0**	Room W196-B – Page 18 **MISUMI** Brice Hiner, Head of Industrial Digital Sales and Marketing; Jeff Trzaskus, Associate Director – Industrial Digital Manufacturing Business Unit ***Meviy, Digital Revolution 4.0 for the Manufacturing Industry*** **Industry 4.0**	Room W196-C **Tulip Interfaces** Madilynn Angel, Head of Marketing ***Why Upskilling and Digital Augmentation Are Key to Winning the War for Talent*** **Industry 4.0**
3:15 - 4:10	Room W196-A – Page 20 **Markt Pilot** Alex Morbe, Chief Revenue Officer ***Digital Intelligence for Parts Business Will Generate High Growth and Strategic Advantage*** **Industry 4.0**	Room W196-B **Verizon** Babatunde Akindele – Directorof Technology Strategy, Verizon Communications ***5G Edge and the Role of Intelligent Software in Industry 4.0*** **Industry 4.0**	

***Speakers, topics, times, and rooms are all subject to change.**

Monday, 9/12

2:15 to 3:10 p.m. / Room W196-A

Topic Track: Industry 4.0

Session Topic: Single-Pair Ethernet – The Standard for the Industrial Internet of Things

In the factory of the future, machines and systems are networked with each other through a digital infrastructure. So-called cyber-physical systems are emerging, which communicate in real time as independent actors in the Industrial Internet of Things (IIoT) and control production processes. The basic prerequisite is the forward-looking combination of two disciplines: automation and digitization. Single pair ethernet can be the backbone infrastructure of both disciplines.

Weidmüller

Together with our customers, we shape the digital transformation - with products, solutions, and services for Smart Industrial Connectivity and Digitalization. Experience how Weidmüller solutions increase the efficiency, reliability and quality in various industries and applications.

https://www.weidmuller.com/spe
IMTS 2022 Booth #134138

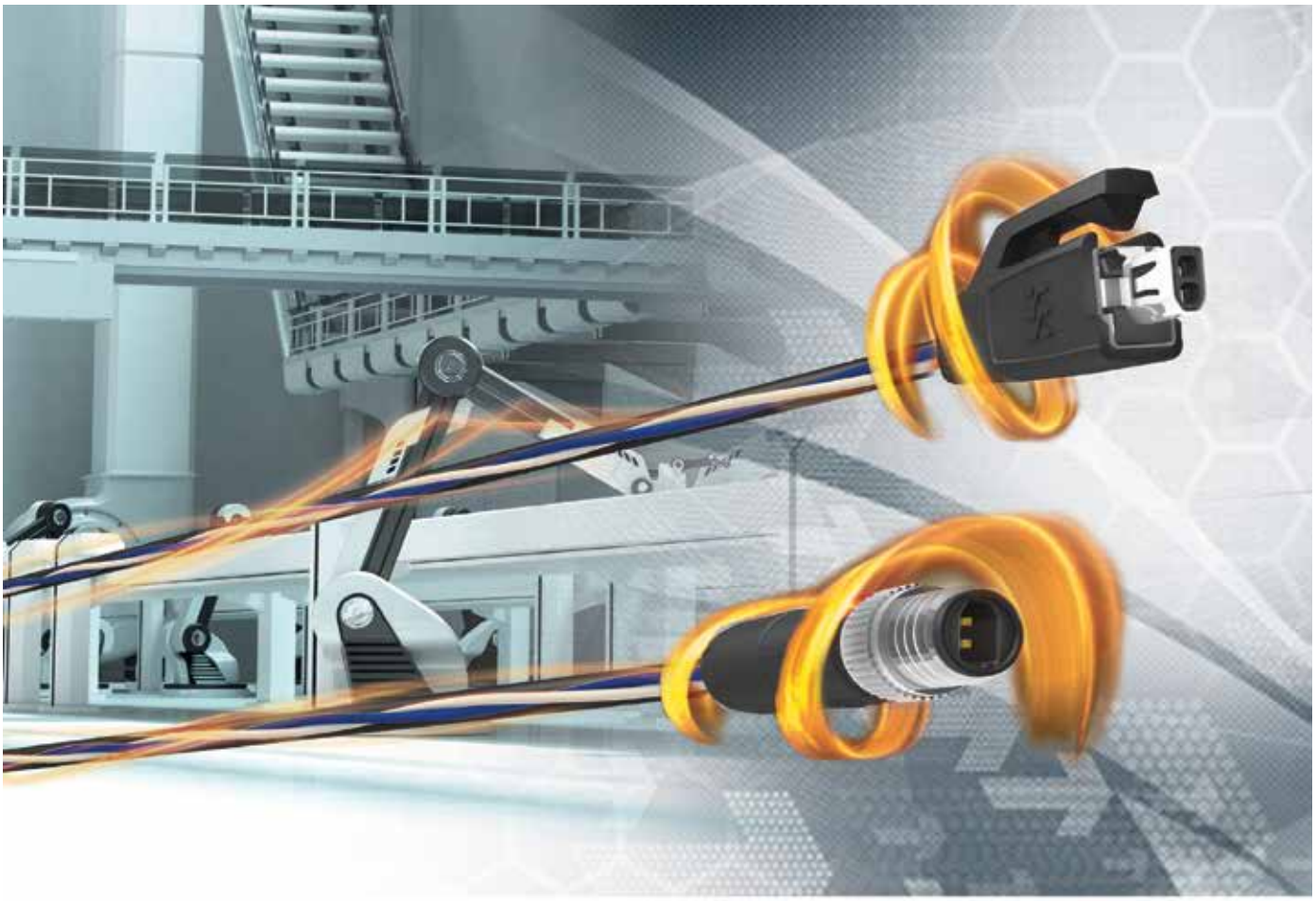
Simon Seereiner
Portfolio Manager
Weidmueller Interface

Simon Seereiner has been managing the portfolio for passive industrial networking at Weidmueller Interface since 2005 as Portfolio Manager. He's responsible for the global expansion of the industrial infrastructure portfolio and is actively involved in various national and international committees for connector standardization.

After studying at the University of Applied Sciences in Bielefeld (Dipl.-Ing.) and the Université de Metz in France with a focus on mechanics and structural analysis, Seereiner began his career in 1998 at Harting in the field of PCB connector development. Within the Harting Technology Group, Seereiner was responsible for various specialist areas.

Since 2005, he's been in charge of product management for the area of passive ethernet and sensor and actuator interfaces as well as customized cabling at Weidmueller Interface GmbH & Co. KG. The focus of his activities is the worldwide development and expansion of the portfolio for passive industrial networking. Seereiner is actively involved in various national and international committees and user organizations for industrial networking.

In addition to his work at Weidmüller, he was the first chairman of the registered association Single Pair Ethernet System Alliance since 2019. This global association of leading technology companies set themselves the goal of jointly and holistically implementing and further developing single pair ethernet technology.



Weidmüller

Industrial Ethernet

Single Pair Ethernet

The Standard Interface for the Industrial Internet of Things

- Compact Design: Smallest compact design for implementing IIoT devices
- Industrial Suitability: Tough enough for use in industrial environments
- Simple: Easy to connect for safe, fast installation
- Future-proof: Designed for the challenges of tomorrow through international standards

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Tuesday, 9/13

2:15 to 3:10 p.m. / Room W196-A

Topic Track: Industry 4.0

Session Topic: Increasing Productivity Through Successful Digital Transformation

Today, manufacturers need to defy unstable supply chains, labor shortages, and customer demand. The associated trickle down effect of those challenges also applies to OEMs, system integrators, machine builders, and panel builders. They are tasked with discovering new methods of maintaining timelines and cycles for design, assembly, installation, or manufacturing with an eye toward unlocking increased efficiency and reducing operational costs.

Modern manufacturing is driven by data and digitalization. Digital transformation is accelerating due to innovations such as edge and cloud computing, 5G, analytics, AI (artificial intelligence), and data standardization. Industry 4.0 relies on technology to power and streamline essential processes. Manufacturers see the digital transformation journey as essential to their company's success. This means investing in digitalization, leveraging automation, and realigning business models.

Whether you're a latecomer, first-timer, or leader in digital transformation, all industrial companies have an opportunity to reposition or establish themselves with innovative technologies and solutions. Join us to learn how three companies have done so and secured a crucial competitive advantage to not just survive – but thrive.

Michael Milam

South Region General Manager

Rittal

Michael Milam is the general manager of the south region for Rittal. With more than 20 years of experience in management and sales roles, Milam helps to guide the vision and strategy needed to reach key operations goals while managing P&L to achieve financial targets. His strategic business plans have proven results in significant transformation by driving market expansion, rapid revenue generation, and exceptional customer satisfaction. Milam has a Bachelor of Science degree in business and management marketing from Sam Houston State University.

Dr. Dirk Pieler

Executive Vice President Business Unit Industry

Rittal

Rittal manufactures industrial and IT enclosures, racks, and accessories, including high efficiency, high density climate control, and power management systems for industrial, data center, outdoor, and hybrid applications. Rittal's off-the-shelf standard, modified standard, and custom-engineered products are known throughout as high quality, affordable solutions for practically any industrial or IT infrastructure application from single enclosures to comprehensive systems.

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https://www.rittal.com

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Control manufacturing cycles are incredibly tight, and time and cost pressures today are the norm. So, having the most efficient process is now just as important as a high-quality product in gaining an edge over your competition.

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- Boost efficiency
- Achieve crucial competitive advantages

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Wednesday, 9/14

10:00 to 10:55 a.m. / Room W196-A

Topic Track: Supply Chain

Session Topic: Industry 4.0: A Behind the Scenes Look at What is Really Happening

Most of the focus in the Industry 4.0 journey has been on visible sensors and new software to analyze data, but underneath those outward technologies, a labyrinth of network options, synchronization tools, and data storage options exists. In this session, we'll review deployments and use cases to analyze the pros and cons of the decision-making process that generate intended outcomes. Topics include global industry IoT, manufacturing execution systems (MES), supply chain planning, network edge, mesh networking, SD-WAN, security, data synchronization, and data storage.

Scott Comroe

Senior Principal Architect

AT&T

Scott Comroe is part of the technical sales and engineering team with a specific focus in data center/cloud and network connectivity solutions for the AT&T manufacturing vertical in the U.S. and Asia. Comroe is based in Dallas, Texas. He's been with AT&T since 1987 and has been recognized by the company numerous times throughout his career, winning multiple Leaders/Diamond Council awards, 11 Circle of Excellence awards, and several other awards. Comroe holds a bachelor's degree in marketing management from San Diego State University, is a GSEC Global Security Certified Associate, and is Akamai CDN and Security certified among other internal AT&T technology and business certifications.

AT&T

AT&T Inc. (AT&T) is a provider of telecommunications, media, and technology services. The company offers wireless communications, data/broadband and internet services, local and long-distance telephone services, telecommunications equipment, managed networking, and wholesale services. AT&T also develops, produces, and distributes feature films, television, gaming, and content in physical and digital formats. It provides advertisement and entertainment services to household customers. The company serves individual customers and business enterprises, and markets services under various brands, including AT&T, Cricket, SKY, AT&T TV, AT&T PREPAID, AT&T Fiber, and Unefon.

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Wednesday, 9/14

10:00 to 10:55 a.m. / Room W196-B

Topic Track: Industry 4.0

Session Topic: Edge Computing for Machine Tools

As manufacturers continue their Industry 4.0 journey, they are looking to expand their Industrial Internet of Things (IIoT) capabilities. Manufacturing engineers want actionable insights to increase machine productivity, and data scientists are searching for higher quality statistics for digital twin modeling, while needing to do so in an existing CNC installed base.

Edge computing allows manufacturers to flexibly extend the capabilities of their shop floor without making major investments to upgrade machine tools or network infrastructure. Because data collection and processing are handled on an edge device, CNC performance and network traffic are minimally affected.

New use cases, including in-cycle process monitoring and anomaly detection, machine health monitoring, and big data analytics, can be addressed. The separation of computing from the CNC permits new data models, monitoring thresholds, or entire applications to be deployed to a fleet of machine tools without taking them out of production. Edge computing fosters collaboration between OT and IT.

Gus Gremillion

Solutions Consultant

Siemens Digital Industries Software

Gus Gremillion is a solutions consultant in machine tool digitalization at Siemens. In his four years with the company, Gremillion worked in CNC and VFD applications engineering before moving into digitalization. He has a BS in mechanical engineering from Texas A&M University.

SIEMENS

Siemens Digital Industries Software is driving transformation to enable a digital enterprise where engineering, manufacturing and electronics design meet tomorrow. The Xcelerator portfolio helps companies of all sizes create and leverage digital twins that provide organizations with new insights, opportunities and levels of automation to drive innovation. For more information on Siemens Digital Industries Software products and services, visit siemens.com/software or follow us on LinkedIn, Twitter, Facebook and Instagram. Siemens Digital Industries Software – Where today meets tomorrow.

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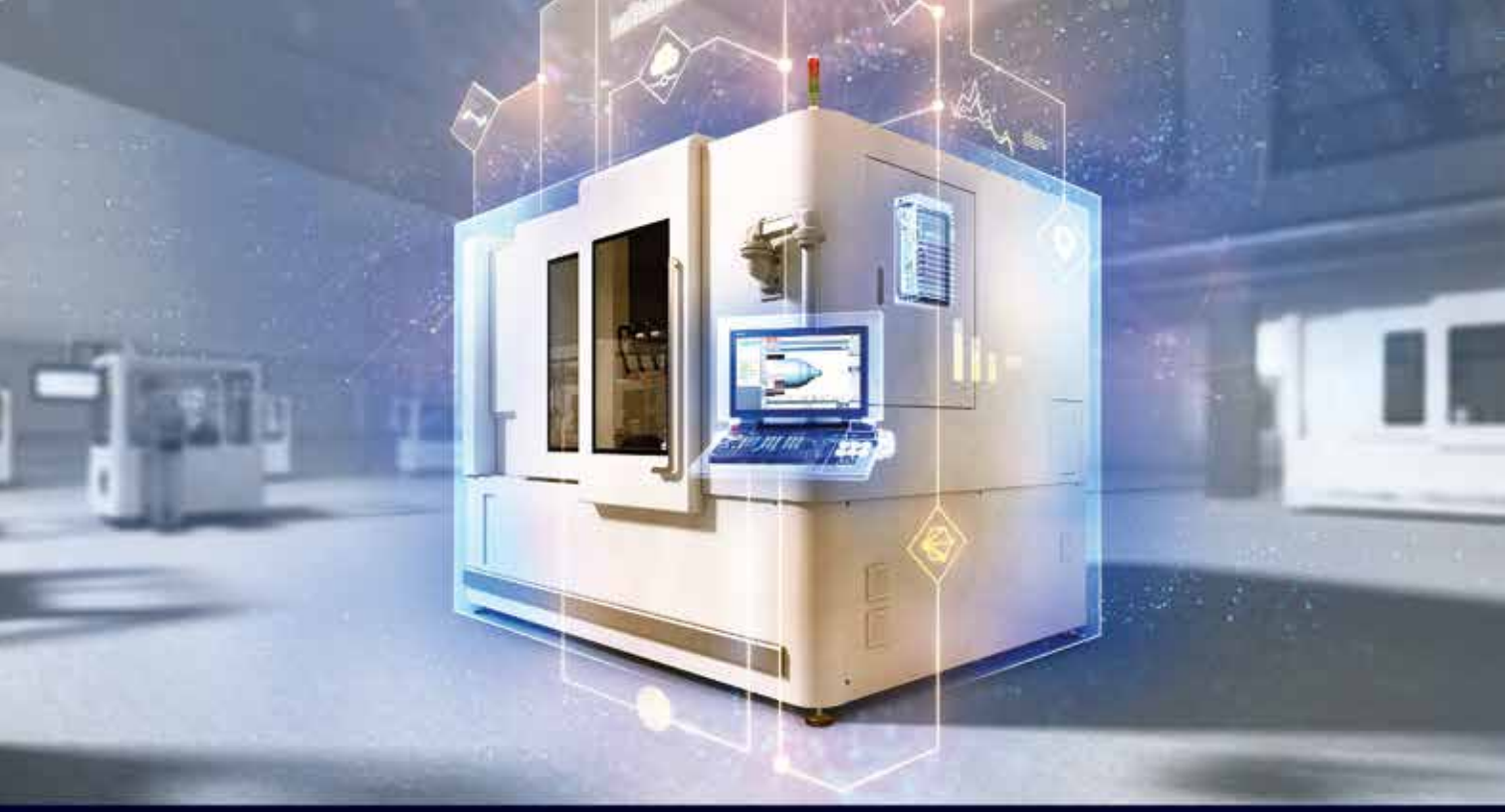

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IMTS booths:
133346
433028

SIEMENS

Wednesday, 9/14

11:00 to 11:55 a.m. / Room W196-C

Topic Track: Industry 4.0

Session Topic: Surface Damage Catalog for Contact-Measuring Space Flight Optics Using a Coordinate Measuring Machine

Touch-probing with a coordinate measuring machine (CMM) is not new, but contact-measuring a sensitive optic for use in space flight or other vacuum applications is usually considered high risk and avoided at all costs due to specialty substrate materials, optical thin film coatings, and tight surface error tolerances needed for high-performance systems operating at challenging wavelengths. In an environmentally controlled cleanroom with a CMM, we inspect the surface damage from touch-probing a variety of optics for use in space flight missions. Motivation comes from the requirement to characterize an optic and its coordinate system for use in complex, opto-mechanical alignments with single-digit micron accuracies. Currently, a multi-step/instrument process is performed to prevent surface damage, relate the optic's reference frame to metrology targets on a mount or other associated hardware, and then confidently track the optic's orientation throughout integration and test. Disadvantages of this measurement combination include error stack-ups, hardware-handling safety, increased exposure to contamination, multiple instrument availability, personnel logistics, and extended schedules. We report on experiments with techniques to mitigate these risks, to create a catalog capturing the measurement parameters used on each space-qualified substrate and coating, and to show surface damage results on the order of single-digit nanometers after touch-probing, which we translate to scratch/dig parameters. Until non-contact, continuous-measurement, multi-axis probes with high accuracy exist, this touch-probing technique shows promise for absolute metrology on sensitive, space flight optics by reducing the risks of conventional multi-step/instrument processes.

Touch-probing optical surfaces with a coordinate measuring machine (CMM) has the potential to replace the complex opto-mechanical alignments of a space flight optical system throughout the integration and test process. Surface damage for these findings has been measured at the single-digit nanometer-levels. We report on the experiments performed and create a catalog capturing the measurement parameters used on each space-qualified substrate and coating.

Joshua Berrier

Optical Engineer

NASA Goddard Space Flight Center

Author(s) information
Joshua Berrier – NASA Goddard Space Flight Center; Timothy Hahn – Tech Innovations LLC; David Kubalak – NASA Goddard Space Flight Center; S. Bradley Cenko – NASA Goddard Space Flight Center; Javier Del Hoyo – NASA Goddard Space Flight Center; Severine Tournois – Tech Innovations LLC; Raymond Ohl – NASA Goddard Space Flight Center

Joshua Berrier is an optical engineer in the alignment, integration, and test (AI&T) group at the NASA Goddard Space Flight Center in Greenbelt, Maryland. He served on more than 20 space flight projects such as the James Webb Space Telescope, Roman Space Telescope, and Parker Solar Probe. Currently, he's the AI&T lead for a space qualified rover lidar which will be the first 3D imaging system of its kind designed to support wheeled vehicles on the lunar, Martian, and other extraterrestrial surfaces. In addition, he's the lead for the coordinate measuring machine working group at NASA Goddard where he and his team perform state-of-the-art opto-mechanical characterizations, alignments, and integrations for complex space flight hardware.

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Wednesday, 9/14

2:15 to 3:10 p.m. / Room W196-B

Topic Track: Industry 4.0

Session Topic: Meviy, Digital Revolution 4.0 for the Manufacturing Industry

meviy is an optimized on-demand manufacturing service from MISUMI for sheet metal and machine plate component design, pricing, and procurement. meviy uses industry leading designed-for-manufacturing (DFM) feedback and control of component feature tolerancing, detailed 2D part outputs for transfer to customers' legacy systems, stable pricing, and automatic creation of global part numbers. Uploading 3D CAD data allows meviy to use Artificial Intelligence (AI) that immediately determines prices and delivery time. Compared to conventional contract manufacturing, meviy is available 24/7 and promises fast delivery in addition to the usual very high MISUMI quality.

This presentation focuses on design freedom and overall flexibility gained by utilizing meviy for sheet metal and machine plate projects. Via meviy, customers can check production time in minutes and order sheet metal and machine plate components online. The selectable sheet metal materials and surface coatings increase design freedom. For machine plates, customers can determine parameters exactly as required. Customers can define hole shapes and tolerances according to specific requirements. Through the meviy CNC shop and by individual production, customers can have special components manufactured in the shortest possible lead time and order customized CNC parts online.

Our most recent data shows design and procurement time is reduced by 90%. Delivery without delay is 99%. End-users report the quality of components is excellent with an average of 93% of customers being highly satisfied with their products. This means increased productivity for engineers and designers using component products and infinite configurations via meviy.

Jeff Trzaskus

Associate Director – Industrial Digital Manufacturing Business Unit

MISUMI

Jeff Trzaskus has 25 years of engineering, manufacturing, and product development experience focused on optimized solutions for customers in the automotive, HD truck, recreational vehicle, electronics, and factory automation industries. He's responsible for the development, rollout, and expansion of MISUMI's digital manufacturing platform in the US.

Brice Hiner

Head of Industrial Digital Sales and Marketing

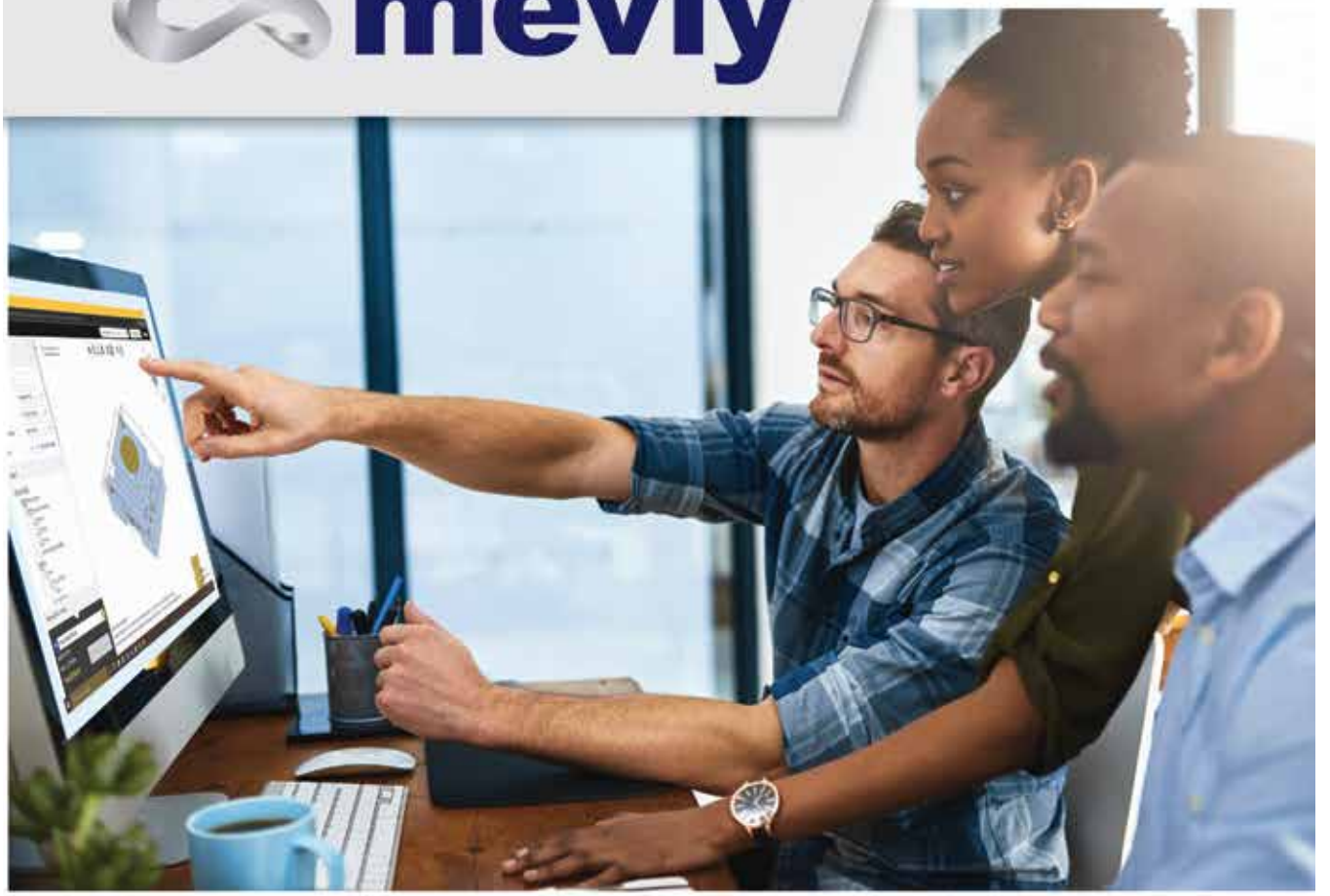
MISUMI

Brice Hiner has more than 20 years of sales and marketing experience in industrial and manufacturing verticals. He also has extensive knowledge of product utilization and optimization in manufacturing settings. Hiner is responsible for the USA launch of meviy into the rapidly growing ODM marketplace.

MISUMI is configured to save time throughout the product lifecycle from design to build and ongoing maintenance. With over 20 million products globally and 80 sextillion part configurations for automation, press die, and plastic mold applications, MISUMI is the most comprehensive, user-friendly engineering resource for a variety of industries including automotive, medical equipment, consumer packaging, semiconductor, and more. As both a manufacturer and distributor, MISUMI offers an unmatched, one-stop-shop to meet customer specifications, and is committed to empowering customers to do impactful design work incredibly fast..

IMTS 2022 Booth #134841
https://us.misumi-ec.com

meviy



Easily Accelerate Custom Component Procurement

With meviy you're given the design freedom and flexibility to speed up custom part procurement.
It's free, easy to use, and available 24/7.

3D Modeling

Instant Quotation

Faster Delivery

See a live demo of meviy at IMTS 2022
Wednesday, September 14th at 2:15pm | Room W196-B

Powered by: MiSUMi

Wednesday, 9/14

3:15 to 4:10 p.m. / Room W196-A

Topic Track: Industry 4.0

Session Topic: Digital Intelligence for Parts Business will Generate High Growth and Strategic Advantage

The parts business is the most critical profit driver for manufacturing companies but has been overlooked by OEMs for too long while new competitors entered the market. How can you realize the promise of the macro technology forces and those emerging now? Leaders are exploring how today's process and advanced technology intersect to create more value – and new ways to manage the infusion of technology to measure strategic advantage and growth. The manufacturing industry is experiencing an expansion of technology-driven innovation and an organization's ability to exploit technology to its advantage will determine its survival. Staying competitive requires new digital tools, new expertise, and deeper market intelligence. The shift from analog to digital methods accelerates the market for commercial parts and places pressure on revenue and margins.

In this session, you'll learn about the macro trends at play in digital market intelligence and how new and advanced digital technology can significantly boost your parts business revenue. We'll discuss how simple it is to move at today's digital pace with readily available web-based market intelligence tools and why these tools will become a necessary part of your daily operation. We'll also discuss the history of part pricing, current trends in making part pricing more dynamic, and what it means when digital becomes pervasive in the parts business. The capabilities that got us to today won't be the same that get us to tomorrow. The change is coming quickly and understanding what's driving it can help you make fast decisions to stay ahead. You'll gain actionable examples and proven strategies from industry leaders on how to integrate and leverage digital market intelligence.

Alex Morbe

Global Chief Revenue Officer

Markt-Pilot

Alex Morbe leads Markt Pilot as their Global Chief Revenue Officer. He is a proven leader and visionary with over 10 years of experience. Alex has been driving success in various revenue-producing roles such as Head of Technical Sales and Machine Upgrades and Retrofits Leader for over ten years. He is a strategic thinker with a vast array of experiences.

Having spent over a decade driving innovation in the manufacturing industry, he now is on a mission to disrupt the global parts pricing market. Prior to joining Markt Pilot, Alex led growth at the global corporations Illig and Gemu. Building revenue at the forefront of new technology, he currently leads the charge in opening the U.S. market. He brings to the US market best practices from 100+ European manufacturers to share with OEMs across the US and Canada. Alex earned his MBA from the German Graduate School of Management and Law (GGS) and an Engineering Degree from Cooperative State University (DHBW).

MARKT PILOT

MARKT-PILOT boosts equipment manufacturers' parts revenue and customer loyalty by providing competitive intelligence. Leveraging artificial intelligence and data analytics, our tool reveals competitor prices and lead times for every part in an OEM's portfolio. OEM's use this information to see how their parts are priced relative to the market and then identify opportunities to increase sales. Our easy-to-use software helps manufacturers better understand the competitive landscape for their parts, quickly benchmark prices, and increase their selling advantage. Therefore over 100 aftermarket and service leaders from around the world rely on MARKT-PILOT. We boost parts revenue, profit, and customer loyalty.

IMTS 2022 Booth #134348
https://meet.markt-pilot.com/IMTS

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MARKT PILOT

Boost parts revenue with market data for prices and lead times

Machine manufacturers leave money on the table for 73% of their purchased parts...

...it's time for that to change!

Increase Prices
for underpriced parts

Capitalize on Exclusivity
for parts with limited competition

Boost Sales Volume
and increase customer loyalty

Alex Morbe
Chief Revenue Officer
312-885-1203
alex.morbe@markt-pilot.com

Tim Geyer
Strategy & Growth Manager
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Meet us at booth 134348!

meet.markt-pilot.com/imts

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CHICAGO 9.14.22

JOIN US FOR A GOOD CAUSE!

2022 RACE INFO

Race Start:
Wednesday, September 14
7:00 a.m.

Race Location:
DuSable Harbor
150 N. Lakeshore Dr.
Chicago, IL 60601

Pricing:
5K: $35 / $40 day of
1 mile: $25 / $30 day of

PACKET PICK-UP

McCormick Place Level 2.5

Sunday, September 11:
12:00 p.m. - 5:00 p.m

Monday, September 12:
10:00 a.m. - 5:00 p.m.

Tuesday, September 13:
10:00 a.m. - 5:00 p.m

Race Day Packet Pick-Up (DuSable Harbor):
6:15 a.m. - 6:45 a.m.

100% of the proceeds from every Miles for Manufacturing 5k goes toward equipment needed to further manufacturing education. To date, **more than $125,000 has been donated to various schools** throughout the country.

Sign up at: racepenguin.com/events/miles-for-manufacturing/