

# Smart Manufacturing Systems: Improving Processes and Ensuring Product Quality

written by Lauri Moon | May 1, 2020

In the expanding world of Industry 4.0, manufacturers are under greater pressure than ever to be flexible and efficient. By leveraging the vast amounts of data generated by IoT, AI, and other technologies, today's smart measuring systems can provide many of the key capabilities smart factories need to improve process efficiencies and ensure product quality.

In this webinar, you'll hear from experts about how these innovative systems use measurement and instrument functionality data to improve production rates, enhance accuracy and quality, increase measurement insights and provide critical, real-time information about the condition and status of production machines.

You'll learn how smart measuring systems can help you:

- Enable remote monitoring of measurement machines and parts
- Get a complete view of the quality process and enable 24/7 measurement
- Reduce downtime and unexpected issues
- Gain data management visibility into all connected instruments
- Achieve long-term preventive/predictive maintenance and use statistics
- Achieve your vision of the future of quality measurement at the Smart Factory

## Speakers

**Hany Abdel-Motaleb, MeasurLink & Data Management Specialist, Mitutoyo America Corporation**

Hany Abdel-Motaleb is Mitutoyo's MeasurLink & Data Management Specialist. Hany has Bachelor's degrees from Northern Illinois University in Communications and Industrial Management & Technology with an emphasis in Computer-Integrated

Manufacturing. Hany assists customers in sales, support, training, and consultation with all things related to data collection, data management, and Statistical Process Control.

**Gene Hancz, Coordinate Measuring Machine Product Specialist, Mitutoyo America Corporation**

Gene Hancz is a Coordinate Measuring Machine Product Specialist with Mitutoyo America Corporation. Gene has more than 35 years of experience in the dimensional metrology field. He has an extensive background in coordinate measuring and has stayed closely tied to evolving CMM technology and market trends throughout his career.

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# Surviving a Cyberattack

written by Lauri Moon | May 1, 2020

Every 39 seconds!

On average, there is a cyberattack every 39 seconds. That's 2,244 attacks a day. The effects of which can either bring a company down or bring them together to become stronger than ever.

Pilz was hit with a ransomware cyberattack on October 13, 2019. Pilz chose not to comply with the attacker's demands because doing so would have rewarded their efforts and financed additional attacks on others. More importantly, Pilz chose to stand strong to guarantee their data and the data of their customers wasn't further compromised, potentially leaving them vulnerable to future attacks.

Learn how Pilz not only survived the attack, but is coming back stronger than ever. Learn what you can do to help make your company stronger in any crisis.

Materials and examples presented on:

- The role of corporate culture
- Communication - who, what, when and why
- Gaining customer and supplier support
- Encouraging and fostering a creative atmosphere among employees
- Turning a negative into a positive

## Speaker



**Michael Beerman, CMSE® *Certified Machinery Safety Expert*  
CEO, Pilz Automation Safety, L.P.**

Michael Beerman has a Master's in Business Administration from Xavier University

and has been certified as a CMSE® - *Certified Machinery Safety Expert*, by TÜV Nord. Michael started his 18 year career at Pilz as a Sales Engineer and rose through the ranks to become the CEO nearly 10 years ago. Mr. Beerman is a contributing member of the ANSI B11 ASC and a voting member of the ASTM F24 Standards committee.

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# **Applying Machine Learning to Improve Build Quality of Laser-based Additive Manufacturing**

written by Lauri Moon | May 1, 2020

Join us for this webinar by the team led by Dr. Qian Wang, Professor of Mechanical Engineering, The Pennsylvania State University. This project is supported by a 2018

DCED Manufacturing PA Innovation Program Award.

Laser-based additive manufacturing (AM) processes involve a large number of process parameters that affect the final geometry, mechanical property, material microstructure, and surface roughness. Existing analytical models are often restricted by over-simplified assumptions and thus not suitable for real applications, whereas high-fidelity numerical models such as finite-element-analysis based models can be computationally expensive to be used in real-time build control.

This project proposes a machine learning approach to model the relationship between process parameters and the build geometry, by utilizing physics-based insights to define input features as well as modeling architecture. A suite of machine learning algorithms will be examined for their efficacy in model prediction. Simulated data generated from the Autodesk's Netfabb Local Simulation are mainly used for model training and testing, and experimental data will also be collected to further calibrate the model. Success of the project will help reduce the level of trial and error currently required in AM industry and thus help reduce the associated cost.

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# **Webinar: How the IoT in Manufacturing Can Boost Asset Performance - and Returns**

written by Lauri Moon | May 1, 2020

In manufacturing, four factors — speed, agility, quality, and reliability — typically decide winners from losers. But most of today's plants are missing the secret to improving these areas: data. In fact, only a fraction of all data generated in manufacturing plants ever gets analyzed for insights, with little of that in real time. The industrial Internet of Things (IIoT) can change all that, while helping plant

operators boost asset performance and returns.

In this info-packed webinar, two of the world's top experts on the IIoT and data science will offer you:

- A fresh view on the value of connected devices and how to exploit their data
- The skills and mindsets needed to reap a digital transformation's benefits
- What IIoT in manufacturing really means in practical terms, such as basic technologies, data analytics, integration, and application examples
- How you can get started quickly with minimum cost, time, and no production disruptions

## **Speakers**

### **✘ Joe Barkai, International consultant, IIoT technologies, product lifecycle strategies**

Today a consultant, speaker, author, and blogger, Joe Barkai was once vice president of research at IDC, one of the world's top market research firms. He specializes in charting market strategies for a connected world: the Internet of Things; connected cars; innovation; and product lifecycles. He has more than 30 years of experience in helping organizations map out their product and market strategies. He's been at the nexus of business and technology, consulting with hundreds of organizations across diverse industries, giving him a unique ability to "connect the dots" and clearly articulate the always-evolving business value of technology.

### **✘ Jagannath Rao, Senior Vice President, Siemens Cloud Application Services**

Jagannath Rao is responsible for the data-driven services business of the industrial Internet of Things (IIoT), which includes MindSphere, the secure, cloud-based, open IoT operating system built for industry. His portfolio of responsibilities includes the widespread application of "Big Data" technologies in the realm of manufacturing, covering topics such as plant analytics, asset analytics, artificial intelligence, machine learning, and other digital services. He advises companies around the world how to best employ IIoT strategies and technologies.



## Technical Details

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# Webinar: The Latest in Field Service Management Tech

written by Lauri Moon | May 1, 2020

Field service management technologies of the past have often disappointed, resulting in high service costs, excessive warranty expenses, and dissatisfied customers.

A new wave of emerging technologies, ranging from the smart internet-connected devices to augmented reality and artificial intelligence-driven technician support systems promise to deliver a new level of field service efficiency.

In this webinar, industry analyst Joe Barkai will discuss whether these and other

emerging technologies will deliver on the renewed promise, or will history repeat itself: organizations and individuals are slow to adopt promising new technologies and incorporate them efficiently into existing culture and workflow.

Joe will explain why many product organizations fail to fully exploit the power of cloud-based service technology and propose guidance for successful deployment of field service management technologies. He will discuss how using a cloud platform as a foundation will help service organizations assume a greater role not only in delivering service, but become an integral part of the product development and lifecycle management.

## **Speaker**

### **✘ Joe Barkai, Industry Analyst**

Joe Barkai is a recognized industry analyst, strategy adviser, blogger, and published author. His focus is on researching, forecasting, and the strategic application of technology to drive innovation, competitiveness, and business processes excellence.

With more than 30 years of experience helping organizations across diverse industries chart their product and market strategies, Joe offers a unique ability to “connect the dots” and articulate the business value of emerging technologies such as the Internet of Things, artificial intelligence, augmented reality, and machine learning.

In his book *The Outcome Economy: How the Industrial Internet of Things is Changing Every Business*, Joe explores the impact of the Industrial Internet of Things on manufacturing companies and offers a perspective on product innovation and operation in an always-connected world.

Previously, as Vice President of Research at IDC, a leading global market research firm, Joe led global research across a broad spectrum of industries, including automotive, industrial equipment, aerospace, construction machinery, medical devices and high-tech.





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# **Webinar: The Power of Context - Making IoT Relevant and Practical**

written by Lauri Moon | May 1, 2020

You've likely heard the basic premise behind the Internet of Things (IoT) and may even have your own projects in the works. But, do you know what separates data overload from data insight? It's context. And, it's easy to lose.

Listen to a panel of industry experts discuss how to walk the fine line between "data chaos" and data which is relevant, consumable, and can be turned into very practical applications. Learn how to tell the difference between "so what?" reports and "code red!" triggers which demand fast action—or even automated responses.

Make sure your IoT project truly drives results.

## **Key takeaways**

- How to effectively contextualize data for business decisions
- Tips for collecting and consuming data effectively
- The importance of cloud deployment's elasticity in storing contextual data
- How condition-based monitoring can trigger a maintenance call

- Steps to prioritizing practical applications of IOT and projecting the ROI

## Speakers

### ✘ **Mark Humphlett, Senior Director, Industry & Solution Strategy, Infor**

With 20 years of experience in technology and 25+ years in the manufacturing and distribution industry, Mark Humphlett joined the Infor team through an acquisition in 2006. He previously led supply chain solutions marketing and served as a principal business consultant leading presales, solution design, and implementations for several software solutions. Mark also spent three years as the director of supply chain sales and business development in Europe. Prior to entering the technology industry, he held positions with Southern Alloy of America, a division of Metals USA, and Lockheed-Martin. Mark earned a bachelor's degree in Industrial Engineering from the Georgia Institute of Technology.

### ✘ **Kevin Price, Technical Product Evangelist & Strategist, Infor**

For the last 20+ years Kevin has been globally responsible for Product Management, Product Marketing, and Strategy functions for the Infor EAM, Infor MP2, iProcure, Spear Technologies, and Energy Performance Management product families at Infor. He has been published in a number of industry journals and publications including Plant Services, Plant Engineering, BUSRide, Maintenance Online, and others.

### ✘ **Nick Castellina, Director of Industry and Solution Strategy, Infor**

Prior to Infor, Nick was Vice President and Research Group Director of the Aberdeen Group's Business Planning and Execution research practice. There he worked with software vendors and end users to analyse trends and produce industry-leading content in topics related to Enterprise Resource Planning, Enterprise Performance Management, Project Portfolio Management, and Business Process Management. He was also responsible for managing a team of analysts dedicated to manufacturing, product innovation and engineering, supply chain management, and financial management and GRC.



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# **Webinar: From Remote Monitoring to Predictive Analytics**

written by Lauri Moon | May 1, 2020

Remote monitoring of assets is the proven first step for manufacturers like you to leverage the Internet of Things to increase your operational efficiency and improve profitability. Once connected, you can monitor how assets are performing in the field and can collect valuable data.

However, to take the next step and understand the significance of your data, it has to be transformed and turned into business intelligence.

Analytics makes it possible to gain insight into areas of your enterprise that were previously inaccessible. In this webcast, you will learn how to begin your analytics journey with remote monitoring and see how it can evolve with predictive analytics.

Join us to learn how IoT and analytics can help your business achieve:

- Significant increases in first time fix rates and customer uptime
- Faster repair times and lower service costs
- A solid foundation for your future predictive analytics strategy

**Speaker: Chris MacDonald, PTC**



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