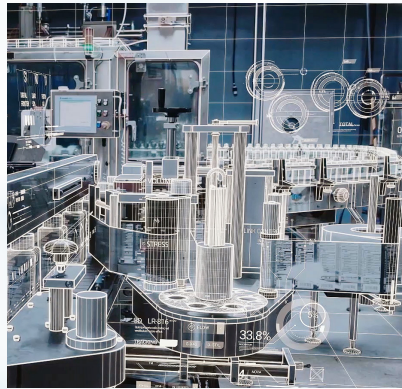




**OPEN 2023**  
CHICAGO | DALLAS | DETROIT | NEW ENGLAND

# Empowering people through automation



**OMRON**

# why be | 20 THERE? | 23

---

Omron OPEN 2023 features over 20 industry relevant sessions across four locations. Interested in a topic not available at your location? We have you covered. All sessions will be available on-demand

In addition, our Proof of Concept Centers are open throughout the event, featuring interactive demos for a more in-depth look at technologies that span sensing, control, safety, vision, motion and robotics.

We invite you to explore, learn and be inspired. Come share our passion for innovation as we strive to pursue the ideal in automation – where people and machines work together in harmony.

---

**Empowering people  
through automation**

Conference Rooms 1, 2 & 3				
8:00 AM	Registration Opens			
8:30 AM	Omron Opening Reception   Mark Sadie			
8:45 AM	Keynote: Is AI Coming for My Job? [The path towards harmony between people and machine]			
9:30 AM	Innovation Session: Inspect the Impossible, Seeing Beyond the Visual Spectrum			
10:00 AM	Break			
10:05 AM	Innovation Session: The Future of Robot Manufacturing: Emerging Trends and Innovation			
10:35AM	Break			
10:45AM	Innovation Session: Advancing Human Capital in Manufacturing: Embracing Innovative Training Strategies			
11:15 AM	Break			
11:50AM	Innovation Session: Safety			
11:50AM-1:00PM	Lunch			
1:00PM	Tech Talk: Seamless Integration: Unleashing Efficiency with Network Connectivity and CIP Safety			
1:30PM	Tech Talk: Unlocking Facility Performance: A Holistic Approach to IIOT and Analytics			
2:00PM	Break			
Sessions	Conf. Room 1	Conf. Rooms 2&3	Sakura Room 1	Training Room
2:10PM	Interactive Tech: The Complete IIOT Solution	Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Enhancing Your Applications: Advanced Motion Solutions	Interactive Tech: Sysmac Function Block Library revolutionizes Palletizing Solutions
2:40PM		Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Enhancing Your Applications: Advanced Motion Solutions	Interactive Tech: Sysmac Function Block Library revolutionizes Palletizing Solutions
3:10PM	Interactive Tech: The Complete IIOT Solution	Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Enhancing Your Applications: Advanced Motion Solutions	Interactive Tech: Sysmac Function Block Library revolutionizes Palletizing Solutions
3:40PM		Interactive Tech: Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets	Interactive Tech: Enhancing Your Applications: Advanced Motion Solutions	Interactive Tech: Sysmac Function Block Library revolutionizes Palletizing Solutions
Omron Chicago PoCC				
3:40PM-4:30 PM	PoCC Guided Tours			
4:30PM-6PM	Cocktail Hour			



## LOCATION

Omron Chicago Proof of Concept Center  
2895 Greenspoint Parkway, Hoffman Estates, IL 60169



**REGISTRATION OPENS: 8:00am**  
**Omron Opening Reception: 8:30am**



Omron PoCC and Technical experts are  
**available throughout the event.**



# Detailed Agenda Items Explained



## Innovation Session

A thought leadership session from an Omron subject matter expert that is designed to give a glimpse into the future and explore the ever-evolving landscape of the automation industry.



## Keynote Session

A keynote session at OmronOPEN is a featured presentation by a renowned expert or industry leader that provides valuable insights into current trends, innovations, and the event's overarching subject matter.



## Interactive Tech

An interactive technology session featuring practical real-world examples. Attendees will see a hands-on demonstration and learn from our technical experts.



## Student Session

A presentation by Omron Sakura Program employees sharing their unique journey on careers in Automation.



## Tech Talk

A presentation by an Omron technical expert that focuses on technology-related topics. Designed to cover emerging technologies and innovations to practical applications, best practices and industry trends.



## PoCC Guided Tour

A guided group tour of the Omron Proof of Concept Centers, where you'll have the opportunity to interact with technology leaders and experience a diverse range of live demonstrations showcasing our innovations.

# PoCC Demos and Technical Experts

Omron PoCC and Technical experts are **available throughout the event**. Visit the live demonstrations at your convenience to learn more about our innovative automation solutions.

Demo	Description
Complete Sysmac Platform Solutions	The System platform provides powerful complete automation solution with high-performance, flexible, open architecture using one software for control, safety, motion, vision and robotics.
One Total Solution Provider	The ILO+S (Input, Logic, Output, + Safety) display shows examples of Omron's comprehensive portfolio of products and technologies that can be used to help solve the most demanding applications.
Integrated Multi-Robot Demo	Advanced and high-performance Sysmac robotics functionality integrated in the NJ machine controller fully operates 3 robots for high-speed, multi-robot PnP with integrated vision and safety.
Delta Linear PnP Demo	Demonstrate the power of Sysmac for custom kinematics, advanced motion, linear and rotary servo in integrated solution with vision and safety.
Vision Rotary Demo	Our vision rotary demonstrates a wide variety of Omron's code reading and smart camera products functioning with Omron Automation control and component products.
Panel Builder Demo	Our value design for panel concept guides the development of control panel products that reduce time and labor costs, power consumption and control cabinet size.
Traceability Demo	Omron provides a complete solution suite for traceability, including marking, verification, reading and communication.
FH 3D and TM Robot Bin Picking	Omron's new FH 3D vision system, paired with the Omron TM cobot, demonstrates quick, precise 3D robotic bin picking. Easily integrate FH 3D vision technology with a variety of robots.
SCARA Cell Demo	The SCARA robot cell highlights Omron's integrated controller, FH Vision guidance and flexible feeding with flexible parts feeding.
Hornet Cell Demo	The Hornet fixed robot cell highlights Omron's delta robot technology, vision guidance conveyor tracking capabilities and packaging software expertise.
Quattro Cell Demo	The Quattro fixed robot cell highlights Omron's fastest fixed robot, vision guidance and conveyor tracking capabilities and Omron's total automation solution.
Viper Cell Demo	Fully integrated control, software architecture and development environment meet current and future needs for process design, flexible operation and predictable maintenance.
Machine Safety Solutions	Omron's comprehensive lineup of machine safety components provides everything you need to protect your team with full integration for every part of your automation system.
NC Tabletop Demo	The NC integrated controller provides both NC and PLC functionality and synchronizes all devices at high speed, significantly reducing the machine cycle time.
SCARA Demo	Our newest SCARA, integrated with our IPC application controller, provides a cost-effective powerful robotics solution for a variety of automation applications.
Advanced Safety Servo Demo	The advanced 1S Series servo drive can improve not only equipment safety but also production efficiency by shortening production facility downtime.
Servo with Motion Safety and Advanced Safety Networks	The 1SA servo with motion safety functions and Omron's advanced safety networks protect machine operators and equipment, reduce machine downtime, minimize cost and wiring complexity.
AI Controller Demo	The AI Controller is able to identify abnormal machine behavior without being explicitly programmed to do so using models generated from data.
Autonomous Mobile Robot (AMR) Fleet	Omron mobile robots are self-navigating AMRs designed to dynamically move material in challenging dynamic environments - requiring no facility modifications.
Mobile Robot Simulation Service	Our engineers can simulate Omron's mobile fleet in your facilities using either a robot scan or a digital drawing to validate the layout and vehicle count.
Automation Inspection Systems	SPI, AOI and AXI. Suitable for a wide variety of SMT applications, Omron's automated inspection solutions are designed to ensure the highest degree of quality and consistency in PCB production.

# Presentation Abstracts

---

## General Keynote

*Is AI Coming for My Job ?[The path towards harmony between people and machine]*

---

## Paul Anderson, Technical manager - Americas application engineering

AI has exploded into society thanks to tools like ChatGPT, and it is predicted to both eliminate and create many jobs in the coming years. The automation industry is not immune. How will it change? Am I going to be replaced by AI? Who will succeed in the age of AI? This tech talk will discuss various types of AI used in automation today, present potential trends for AI, and provide some recommendations on preparing yourself and your organization for the changes just down the road.

---

## Interactive Tech

*Streamlining Vision System Calibration: Automating Precision with Unknown-Size Calibration Targets*

---

## Glenn Johnson, Field Application Engineer, FS Engineer (TÜV Rheinland)

Calibration of vision systems has traditionally been a costly and time-consuming endeavor, necessitating recalibration each time precise measurements in real-world units are required. In this hands on demonstration, we delve into an innovative approach that automates the calibration process, demonstrating the feasibility of achieving accurate measurements by employing unknown-sized parts as calibration targets. Our research showcases a promising avenue for enhancing efficiency and cost-effectiveness in vision system calibration, offering valuable insights for industries reliant on precise measurements for your operations.

---

## Interactive Tech

*Sysmac Function Block Library revolutionizes Palletizing Solutions*

---

## James Mortell, Automation Engineer

Palletizing poses challenges for manufacturers looking to boost productivity while still ensuring safety and maintaining flexibility. Adding palletizing solutions into existing production lines often presents challenges including lack of in-house expertise, space constraints, and product variation complexities.

The new palletizing Sysmac Function Block Library from Omron has been designed to minimize those challenges by standardizing various components of palletizing applications. This modular approach streamlines setup by reducing development and minimizing complexity, as well as providing long term stability to lower maintenance costs. Leveraging this library along with the Sysmac machine controller family, Omron provides developers a head-start with a robust solution.

---

Continued on the next page

Continued from the previous Page

---

### **Interactive Tech**

*Enhancing Your Applications: PMAC Programming and Solutions*

---

#### **Mark Skaer, Automation Engineer**

Join us for an immersive exploration of how Omron's PMAC solution can transform your applications. In this engaging technical demonstration, we will reveal the remarkable capabilities of PMAC products, including the newly released CK5M, CK3C and CK3A, as well as the CK3E, UMAC and Brick Products. See how these controllers help to equip you with essential PMAC programming techniques. Discover how these innovative solutions effectively address your application challenges and enhance overall performance. Don't miss this opportunity to harness the power of PMAC technology for your projects and take your application to new heights.

---

### **Tech Talk**

*Seamless Integration: Unleashing Efficiency with Network Connectivity and CIP Safety*

---

#### **Elliott McCarthy, Field Application Engineer**

As manufacturers continue to intertwine standard network communications and safety communications on the same networks, Omron has risen to the challenge with the NX502 family of products. By expanding the number of Ethernet ports that a single CPU can support to 10, and greatly expanding the overall number of network connections, manufacturers are now able to tackle large scale projects including large scale manufacturing lines with a single controller. In this tech talk, we will explore the NX502's networking capabilities, with a focus on CIP safety, including 3rd party CIP Safety connections, and database connectivity.

---

### **Tech Talk**

*Unlocking Facility Performance: A Holistic Approach to IIOT and Analytics*

---

#### **Ulises Vich, System Architecture Manager**

Are you ready to elevate your facility's performance to new heights? Join our System Architecture team and discover our holistic approach to the Industrial Internet of Things (IIOT). In this dynamic landscape, analytics takes center stage as data acquisition systems become essential for boosting productivity and ensuring operational resilience.

Gain insights into deploying industry-proven IIoT solutions that efficiently gather data without disruption or hidden costs. Learn how to capture data at its source without compromising machine performance, securely transmit it to centralized locations, and harness the power of data visualization for informed action

---

### **Innovation Session**

*The Future of Robot Manufacturing: Emerging Trends and Innovation*

---

#### **Mark Noschang, Applications Engineering Manager for Robotic Solutions**

What key transformative trends are shaping the robotics industry? From the evolution of collaborative robots to the integration of Industry 4.0 technologies, the rise of mobile robots and the challenges and opportunities posed by low volume, high mix production we explore the cutting edge of innovation. Join us as we envision the future of robot manufacturing and discuss how these trends are revolutionizing the way we design, produce and integrate robots into our industrial landscape.

---

Continued on the next page

Continued from the previous Page

---

### **Innovation Session**

*Inspect the Impossible, Seeing Beyond the Visual Spectrum*

---

#### **Jason Mack, Omron Advanced Sensing Sales Manager - Americas**

How do you solve an unsolvable problem? These types of questions and answers have plagued automation and vision engineers for decades. How do we inspect a cookie that is already inside of a package? Can we utilize machine vision to see if rice has mold to determine if it is safe to eat? How do we remove particulate from the air or from the great cosmos? Solving these problems can lead to safer food, better electronics, and maybe even unveiling the universe like never seen before.

In this session, join Ryan Marti as he reviews some of the most difficult to solve problems in the machine vision and automation world and how we can go beyond our normal visual spectrums to solve problems never before solved in the automation world. Get a firsthand look at how these technologies work, and the methodology used. If you want to see some of the latest and cutting edge technology in machine vision, do not miss this session!

---

### **Innovation Session**

*Advancing Human Capital in Manufacturing: Embracing Innovative Training Strategies*

---

#### **Liz Lopez, Training Services Manager**

In this era of rapidly evolving technology, offering diverse training options becomes essential. Companies can provide technology training, integrating hands-on modules and theory-based learning, with tailored courses for engineers, maintenance professionals, and system designers. Safety training will enhance employee expertise in safety products, ensures proper system maintenance, and demonstrates a commitment to employee development. By making training available on-demand, in person, or remotely, companies can provide flexible options for learners in terms of time, location, and training methods. This approach ensures equal access to education. Join Omron Training Services Manager, Liz Lopez, to explore strategies for offering services across regions. This includes researching instructors locally, leveraging their expertise to meet regional and linguistic requirements, nurturing education coordinators, and implementing a global learning management system to cater to customer education needs.

---