

Automation: The Next Generation of Lean

Industry 4.0 for Manufacturing



**The Cove at UCI Applied Innovation
University of California, Irvine**

5141 California Avenue, Suite #250
Irvine, CA 92697

Thursday, June 7, 2018

Meet & Learn

The California Network presents this unique one-day summit for Manufacturing Innovation, Inc. (CNMI), a collaboration of universities, research laboratories and Manufacturing Extension Partnership Centers. The goal of the summit is to raise awareness of the benefits of taking lean manufacturing to the next level of improving performance through automation.

CNMI Leadership Team



Jose Anaya is the dean of community advancement at El Camino College. He has 12 years of experience working as a center director and statewide director with the Advanced Manufacturing initiative. His areas of expertise are product design, manufacturing, management, and economic and workforce development.



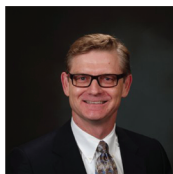
Patrick Dempsey is manager of strategic engagements at Lawrence Livermore National Laboratory (LLNL). He is leading the laboratory's national efforts to stimulate the economy through advancements in science and technology. Dempsey has developed innovative public/private partnerships in the energy and manufacturing sectors with entities ranging in size from large state-regulated corporations to small business enterprises.



Leonard Mitchell is a clinical professor of economic development at the University of Southern California (USC). He has over 35 years of experience as a counselor at law and consultant to executive level management in the areas of business law, business workouts and corporate acquisitions.



Elsie Quaite-Randall became the Berkeley Lab's (BL) chief technology transfer officer in June 2014, and in this role leads the lab's Innovation and Partnerships Office. With over a decade of experience as a research PI and 14 years of technology transfer experience, she has developed a deep understanding of the challenges facing technology transfer, industry engagement and public-private partnerships in research-intensive institutions.



Gene Russell is CEO and executive director of Manex and has 30 years of senior executive strategic planning, operation management and consulting experience in the manufacturing and technology sector. He led companies within several rapidly changing industries including telecommunications, wireless mobile, consumer electronics and major appliances.



Gregory Washington is the Stacey Nicholas Dean of the Samueli School of Engineering at the University of California, Irvine (UCI). His core area of interest lies in dynamic systems, modeling and control in the following applications: design and control of mechanically actuated antennas, advanced control of machine tools, design and control of hybrid electric vehicles, and structural position and vibration control with smart materials.



Jim Watson has been president and CEO of California Manufacturing Technology Consulting (CMTC) since 2011, and was previously vice president of operations and business development. He has over 30 years of management experience in the areas of strategic planning, operations management, organizational design, sales and marketing, and cultural alignment. His prior experience includes executive level roles at Western Airlines, SuperShuttle International and Anchor Audio.

Agenda

8:00 a.m. *Registration and Continental Breakfast*

9:00 a.m. **Welcome Remarks:**
Moderator - Rob White, Chief Strategist, Sierra Energy Corporation
Carolyn Stephens, Associate Director and Chief of Staff, UCI Applied Innovation (The Cove)

Keynote: **Practical Industry 4.0 Deployment**

9:15 a.m. **Joel Falcone**, Executive Vice President and COO, Excelitas Technologies

Panel 1: **Making the Connection between Lean and Automation**

9:45 a.m. **Moderator - Shekhar Chandrashekhar**, Smart Manufacturing Practice Lead, CMTC
Rob Schoenthaler, CEO, Founder at Atollogy, Inc.
Gautam Kavipurapu, COO, Ectron Corp.
Eric Brooks, Senior Director, YASKAWA Motoman Robotics

10:30 a.m. *Networking Break and Vendor Showcase*

Panel 2: Driving Process Improvement with Automation

11:00 a.m. **Moderator - Gregg Profozich**, Director, Advanced Manufacturing Technologies, CMTC
S.K. Gupta, P.h.D., Professor and Director, Center for Advanced Manufacturing, USC
Rod Parry, Managing Director, Factory IQ

11:45 a.m. *Lunch and Vendor Showcase*

Keynote: Artificial Intelligence, Automation and Manufacturing

1:00 p.m. **Pramod P. Khargonekar**, Vice Chancellor Research, UC Irvine

Panel 3: Increasing Competitiveness with Affordable Automation

1:30 p.m. **Moderator - Raminder Sandhu**, Advanced Robotics & Automation Practice Lead, CMTC
Cliff Tsugawa, Sales Development Manager, Universal Robots
Tim Martin, Managing Partner, Action Point Software Development
Greg McEntyre, President, HNJ Solutions, Inc.

2:15 p.m. *Closing Remarks*

2:30 p.m. **Tours:**
Calit2
FABWorks

Bios



Rob White, Chief Strategist, Sierra Energy Corporation

Rob White is the executive director of the Sierra Energy Research Park (SERP) and the Area 52 Accelerator, as well as the chief strategist for Sierra Energy, a waste gasification and renewable energy company. Named a White House “Champion of Change for Local Innovation,” White has been recognized by regional, national and international organizations for his work on economic development, regional innovation clusters and partnership with federal agencies. As a state of California registered professional geologist, White has broad experience in waste management and disposition, environmental engineering, regulations and risk management. White’s primary role at Sierra Energy is the planning, design and implementation of SERP and Area 52, co-located in Davis, CA, and the future build-out of the Zero Waste Innovation Park (ZWIP) located in Yolo County.



Carolyn Stephens, Associate Director and Chief of Staff, UCI Applied Innovation (The Cove)

Prior to joining UCI Applied Innovation in January of 2015, Stephens was visiting clinical assistant professor at The George L. Argyros School of Business and Economics and assistant director at the Leatherby Center for Entrepreneurship and Business Ethics at Chapman University. Prior to that she was associate professor and department chair, business & management, at Vanguard University. Stephens’ business experience includes executive marketing and general management positions in multiple publicly traded high-tech firms, as well as founder of a high tech startup. She received her doctorate from Claremont, MBA from Pepperdine University, and a bachelor’s degree in economics from USC.

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Keynote Speaker

Joel Falcone, Executive Vice President and COO
Excelitas Technologies

As COO, Joel Falcone is responsible for overseeing Excelitas Technologies Global Operations including production, supply chain and operational excellence throughout the over 18 manufacturing facilities in North America, Europe and Asia. Falcone earned a bachelor's degree in Finance from the University of Arizona and holds an MBA from San Jose State University. He is also a certified six sigma green belt, certified management accountant and lead inventor of the patented illumination device with integrated thermal imaging sensor.



Panel 1 Moderator

Shekhar Chandrashekhar, Smart Manufacturing
Practice Lead, CMTC

Shekhar Chandrashekhar is a forward-thinking leader, strategist and innovator with a history of driving process, system and product improvements that streamline operations and increase profitability on a global scale. His background in business and technology leadership and deep knowledge and advanced training in engineering management have provided him with a unique talent—the ability to transform organizations and influence company and product positioning worldwide. Shekhar has a doctorate and is a certified project management professional (PMP).

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Panelist

Rob Schoenthaler, CEO, Founder at Atollogy, Inc.

Rob Schoenthaler is the CEO and founder of Atollogy, Inc. located in the San Francisco Bay area. Atollogy's mission is to make operational excellence easy and accessible for manufacturers of all shapes and sizes. Atollogy's proprietary algorithms and capabilities are revolutionizing how companies manage operations by integrating the physical world with artificial intelligence. He holds a bachelor's degree in mechanical engineering from Northwestern University.



Panelist

Gautam Kavipurapu, COO, Ectron Corp

Gautam Kavipurapu has 20 years of experience at both large and small companies (Xilinx, Nortel Networks, Texas Instruments) in operations, technology and management roles, including setting up and running geographically distributed teams of over 150 employees (India, U.S. and Europe). Kavipurapu has 12 issued and several pending patents covering systems, networking and computer architecture. He also has several trade and IEEE conference papers to his credit. Kavipurapu's team at IRIS Holdings in 2001 demonstrated a "Virtual Router," a software router (modeled as a dataflow machine similar to google tensor) on a PC with NIC cards as part of the integrated routing and intelligent switching system development (today's NFV). His inventions and innovations have preceded major technology trends, and some are licensed to various companies in storage and computing industry worldwide for millions of dollars and some are cited in more than 350 patents.

Kavipurapu, has an executive MBA from INSEAD and a bachelor's degree in electrical engineering from the Georgia Institute of Technology.

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Panelist

Eric Brooks, Senior Director, YASKAWA Motoman Robotics

Eric Brooks is the senior director of YASKAWA Motoman Robotics in Irvine, California, the second largest robot manufacturer in the world. During his 26-year career in automation, Brooks has worked as a mechanical design engineer, project engineer, project manager, manufacturing manager, director of engineering and director of operations for the west regional office of YASKAWA. He was awarded a patent for the design of a high speed test tube sortation robot in 2002. Brooks has personally designed automation systems for producing steel saw blades, eyeglass lenses, inkjet printer cartridges, fighter jet canopies, linear motor windings, automobile dashboards, downhole drilling tools and glass solar panels among others. Production processes he has automated include PC board drilling, high speed pick and place assembly, CNC machine loading, laser welding, sortation, centrifugation, sample splitting, decapping and recapping of test tubes, UV coating and curing, sealant dispensing and fresh produce handling, packaging and palletizing, among others. Brooks is a Licensed Professional Engineer. He has an MBA from California State University Long Beach and a bachelor's degree in mechanical engineering from the University of Texas at Austin.



Panel 2 Moderator

Gregg Profozich, Director, Advanced Manufacturing Technologies, CMTC

Gregg Profozich is a manufacturing, operations and technology executive who works to assist small and medium manufacturers to identify, qualify and adopt technologies that will help them remain globally competitive. Across his 25 year career in manufacturing, operations and consulting, Profozich worked in companies from startups to the Fortune 500. He was a key contributor on a team that enabled a global automobile manufacturer

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to win the JD Powers and Associates Most Improved Plant Award and has delivered over \$1.2 billion in improvements through shop floor and back-office technology initiatives. Profozich, in his current role at CMTC, is leading the development of services that assist manufacturers in adopting advanced technologies. Current practices in development include additive manufacturing, flexible hybrid electronics, smart manufacturing, advanced robotics in automation, and supply chain optimization. Profozich has a bachelor's of business administration, finance and business economics from the University of Notre Dame.



Panelist

S.K. Gupta, Professor and Director, Center for Advanced Manufacturing, USC

Satyandra K. Gupta is the Smith International Professor in the Department of Aerospace and Mechanical Engineering at the University of Southern California. He is the founding director of the Center for Advanced Manufacturing at USC. He served as a program director for the National Robotics Initiative at the National Science Foundation from September 2012 to September 2014. Gupta's interest is in the area of physics-aware decision making to facilitate automation. He serves on the Technical Advisory Committee for the Advanced Robotics for Manufacturing Institute, headquartered in Pittsburgh, Pennsylvania.



Panelist

Rod Parry, Managing Director, Factory IQ

Rod Parry is the managing director at Factory IQ, helping to transform companies with smart manufacturing, IIoT and energy strategies; connecting people, process and technology. He is a certified six sigma black belt and has a

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process management, system integration and product development background. Parry has 30 years of experience in supply chain planning, advanced manufacturing, energy, quality and factory automation. He serves as a subject matter and industry group expert on teams with Lawrence Berkeley Labs, WSU, Clean Tech Alliance, MESA, ISA-95 and APICS.



Keynote Speaker

Pramod P. Khargonekar, Vice Chancellor Research,
UCI Irvine

Pramod Khargonekar earned a bachelor of technology degree in electrical engineering at Bombay's Indian Institute of Technology in 1977 and a master's degree in mathematics and a doctorate in electrical engineering at the University of Florida in 1980 and 1981, respectively. He has held faculty positions at the University of Minnesota, the University of Michigan and the University of Florida. At Michigan, Khargonekar was chair of the Department of Electrical Engineering & Computer Science from 1997 to 2001 and also was the Claude E. Shannon Professor of Engineering Science. At Florida, he was dean of the College of Engineering from 2001 to 2009. In addition, he served as deputy director for technology at the U.S. Department of Energy's Advanced Research Projects Agency-Energy. Khargonekar was appointed by the National Science Foundation to serve as assistant director for the Directorate of Engineering in March 2013, a position he held till June 2016. In this position, Khargonekar led the ENG Directorate with an annual budget of more than \$950 million. He also served as a member of the NSF senior leadership and management team and participated in setting priorities and policies. In June 2016, he assumed his current position as UCI's vice chancellor for research and distinguished professor of electrical engineering and computer science. Khargonekar's research and teaching interests are centered on theory and applications of systems and control.

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Panel 3 Moderator

Raminder Sandhu, Advanced Robotics & Automation Practice Lead, CMTC

Raminder Sandhu is the advanced robotics & automation practice lead at California Manufacturing Technology Consulting (CMTC). Sandhu brings over 30 years of experience in engineering, manufacturing automation and technical sales to CMTC. He has worked at a diverse range of organizations, from Silicon Valley startups to Fortune 500 companies. Throughout his career, Sandhu has thrived in roles that require technical expertise and direct customer contact. He has trained customers on robot and vision system programming, installed manufacturing lines, and sold manufacturing equipment, software and services. Sandhu's professional experience includes robotics, machine vision, portable power systems, medical device and surgical tool development, CAD/CAM and industrial design. Sandhu holds a master's in mechanical engineering from Stanford University and a bachelor's with honors in electrical engineering from Texas A&M University. In addition to his responsibilities with the CMTC Manufacturing Extension Partnership, Sandhu is the regional representative for the Advanced Robotics for Manufacturing (ARM) Institute, headquartered in Pittsburgh, Pennsylvania.



Panelist

Cliff Tsugawa, Sales Development Manager, Universal Robots

Cliff Tsugawa has been on the frontline for Universal Robots in the southwestern U.S., breaking down the robotics barriers of entry for small and medium-sized companies. He has spent several years engineering on the production floor and grew to manage R&D development projects between American, Asian and European teams. He then dedicated the next decade to introducing emerging markets

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to new construction technologies developing sustainable distribution networks. He is a full-blooded Anteater with a bachelor's in mechanical engineering and an MBA from UC Irvine.



Panelist

Tim Martin, Managing Partner, Action Point Software Development

Since 2009, Tim Martin has been leading the business development team for Action Point, an award-winning Irish-owned custom software development company with clients across the globe. He has brought technology solutions to a wide range of companies including MCA/Universal, DirecTV, Oak Hill capital, Childnet and Palos Verdes Land Conservancy. He sits on the Board of Directors for the Bresee Foundation, the Martin Trust and LAFC.



Panelist

Greg McEntyre, President, HNJ Solutions, Inc.

Greg McEntyre is CEO, president and owner of HNJ Solutions Inc. His areas of expertise include startups, entrepreneurship, quality control, solution selling, international sales, collaborative robotics, automation, RFDI+, barcode scanning solutions, key account management, trend analysis, process improvements, B2B, strategic planning, contract negotiations and strategic alliances. McEntyre graduated from Loyola Marymount University with a bachelor's degree in business administration in information systems.

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