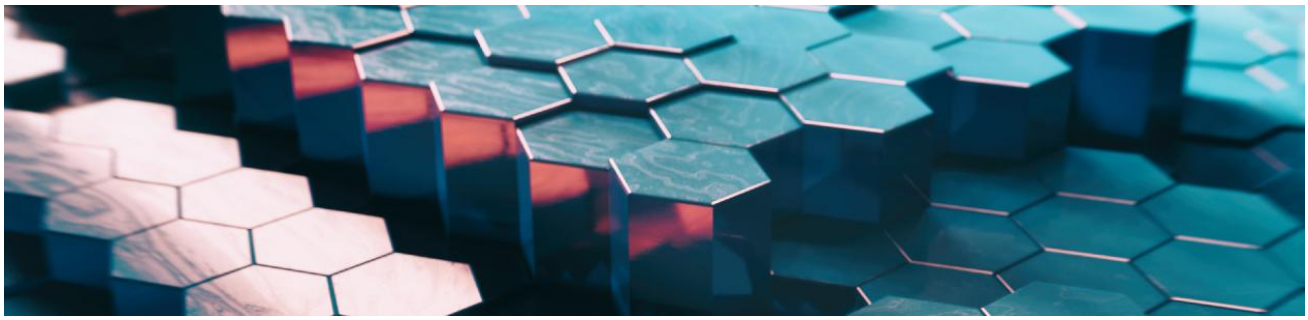
NATIONAL ACADEMIES Sciences Engineering Medicine

Workshop on State of the Art in Smart Manufacturing



National Academies of Science Building, Lecture Room
2101 Constitution Ave. NW, Washington, DC 20418

Presented by the Committee on the Options for a National Plan for Smart Manufacturing, under the auspices of the National Materials and Manufacturing Board (NMMB)

Study Chair - **Thomas Kurfess**, Georgia Institute of Technology
Workshop Lead - **Robert Gao**, Case Western Reserve University

Workshop 1 Committee Members - **Richard Braatz**, MIT; **Satyandra K. (SK) Gupta**, University of Southern California; **Chinedum Okwudire**, University of Michigan; **Karen A. Thole**, Pennsylvania State University

This workshop will bring together representatives from industry, federal agencies, academia (including community colleges), associations and societies, and manufacturing institutes to share their current focus/mission, highlight known capability gaps, examine current and emerging cutting-edge technologies, and discuss existing roadmaps for smart manufacturing (SM). Participants will discuss national priorities and explore opportunities in various industry sectors, including continuous, batch, and discrete manufacturing, software and hardware providers, smart manufacturing original equipment manufacturers, and supply networks.

Attendees can register to attend at:
https://events.nationalacademies.org/02-06-2023_workshop-on-state-of-the-art-in-smart-manufacturing

Workshop Agenda

February 6, 2023		
9:30 am ET/ 6:30 am PT	**Working Breakfast**	30 mins
10:00 am ET/ 7:00 am PT	**Welcome and Introduction** **Thomas Kurfess**, Study Chair **Robert Gao**, Workshop Chair **Sudarsan Rachuri**m (DOE), Presentation with Q&A	30 mins
Plenary Session 1 State-of-the-Art in SM Enabled by New Computational Tools and Methods		
10:30 am ET/ 7:30 am PT	**Speaker: Maja Vukovic**, IBM, Fellow, AI for Application Modernization - Q&A moderated by **SK Gupta** and **Richard Braatz**	20 mins 10 mins
11:00 am ET/ 8:00 am PT	**Speaker: Stephan Biller**, Purdue University, Harold T. Amrine Distinguished Professor, Industrial Engineering - Q&A moderated by **SK Gupta** and **Richard Braatz**	20 mins 10 mins
11:30 am ET/ 8:30 am PT	**Morning Coffee Break**	15 mins
Plenary Session 2 New Sensing Modalities and Digital Thread for SM		
11:45 am ET/ 8:45 am PT	**Speaker: Yongyao Cai**, TE Connectivity, Engineering Director for Innovation - Q&A moderated by **Richard Braatz** and **SK Gupta**	20 mins 10 mins
12:15 pm ET/ 9:15 am PT	**Speaker: Douglas Bellin**, Amazon Web Service, Head of Worldwide Smart Factory - Q&A moderated by **Richard Braatz** and **SK Gupta**	20 mins 10 mins

12:45 pm ET/ 9:45 am PT	**LUNCH BREAK**	60 mins
Panel 1 International Perspective on SM		
1:45 pm ET/ 10:45 am PT	• **Paul Faughnan**, Pratt & Whitney, Discipline Lead for Manufacturing • **Arun Ayyagari**, Boeing, Senior Technical Fellow • **Kelly Dodds**, Raytheon, Advanced Manufacturing Technology Director • **Detlef Zuhlke**, TU Kaiserslautern, Germany, Professor **Q+A and General Discussion** - Moderated by **Karen Thole** and **Chinedum Okwudire**	25 mins 35 mins
Panel 2 SM Technology Adoption Landscape: Large Corporations vs. Small and Mid-sized Manufacturer		
2:45 pm ET/ 11:45 am PT	• **Soundar Kumara**, PePenn State University, Allen E. Pearce and Allen M. Pearce Professor, Industrial Engineering • **Larry Megan**, Baldwin Richardson Foods, Head of Digital Information Technology • **Dean Bartles**, Manufacturing Technology Deployment Group, President & CEO • **Mike Molnar**, NIST, Director, Advanced Manufacturing National Program Office • **Rita Wouhaybi**, Intel, Senior Principal Engineer **Q+A and General Discussion** - Moderated by **Chinedum Okwudire** and **Karen Thole**	25 mins 35 mins
3:45 pm ET/ 12:45 pm PT	**Afternoon Coffee Break**	15 mins
Closing Sessions		

4:00 pm ET/ 1:00 pm PT	**Plenary Speaker: Barbara Humpton**, Siemens USA, CEO - Q&A moderated by **Robert Gao** and **SK Gupta**	20 mins 10 mins
4:30 pm ET/ 1:30 pm PT	**Group Discussion** by workshop participants on relevant topics as highlighted during the workshop, e.g., latest technologies to advance manufacturing in the US and engaging small and mid-sized manufacturers to accelerate adoption of SM technologies.	30 mins
5:00 pm ET/ 2:00 pm PT	**Adjourn for the day**	