

# Advanced Manufacturing

Dr. Eric K. Lin

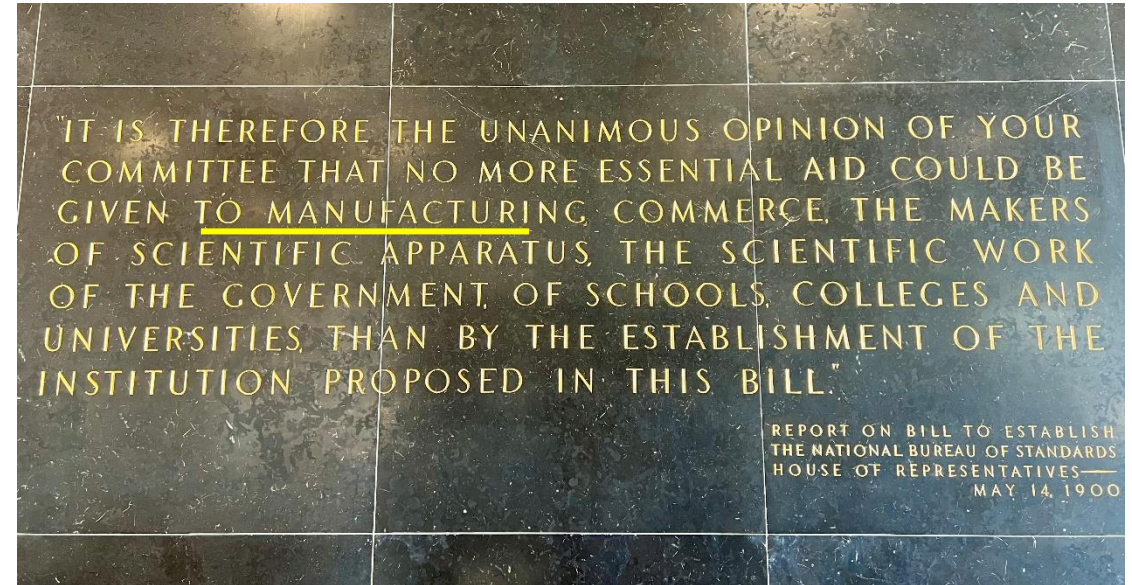
Acting Associate Director for  
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# Advanced Manufacturing

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How can the United States secure its position as the unrivaled world leader in critical and emerging technologies — such as artificial intelligence, quantum information science, and nuclear technology — maintaining our advantage over potential adversaries? We need to **accelerate research and development**, dismantle regulatory barriers, **strengthen domestic supply chains and manufacturing**, spur robust private sector investment, and advance American companies in global markets.

”



## A National Priority:

- Economic and national security
- Industrial competitiveness
- Critical and emerging technologies



# About Manufacturing USA

**VISION:** Securing U.S. Global Leadership in Advanced Manufacturing

**MISSION:** Connecting people, ideas, and technology to:

- Solve industry-relevant advanced manufacturing challenges
- Enhance industrial competitiveness and economic growth
- Strengthen our economic and national security



# Manufacturing USA Institutes



## ELECTRONICS



Integrated Photonics  
Albany, NY  
Rochester, NY



Flexible Hybrid  
Electronics  
San Jose, CA



Digital Twins for  
Semiconductor  
Manufacturing  
Durham, NC



Wide Bandgap  
Semiconductors  
Raleigh, NC

## MATERIALS



Advanced Fibers  
and Textiles  
Cambridge, MA



Advanced  
Composites  
Knoxville, TN



Materials  
Detroit, MI  
Caguas, Puerto Rico



Sustainable  
Manufacturing  
Rochester, NY

## DIGITAL/AUTOMATION



Additive Manufacturing  
Youngstown, OH  
El Paso, TX



Advanced Robotics  
Pittsburgh, PA



Smart  
Manufacturing  
Los Angeles, CA



Cybersecurity in  
Manufacturing  
San Antonio, TX



Digital Manufacturing  
Chicago, IL

## BIOMANUFACTURING



Regenerative  
Manufacturing  
Manchester, NH



Bioindustrial  
Manufacturing  
St. Paul, MN



Biopharmaceutical  
Manufacturing  
Newark, DE

## ENERGY/PROCESSES

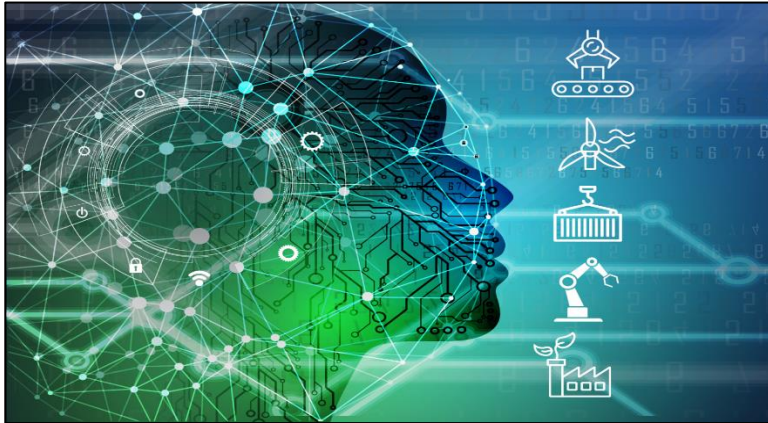


Electrified Industrial  
Processes  
Tempe, AZ



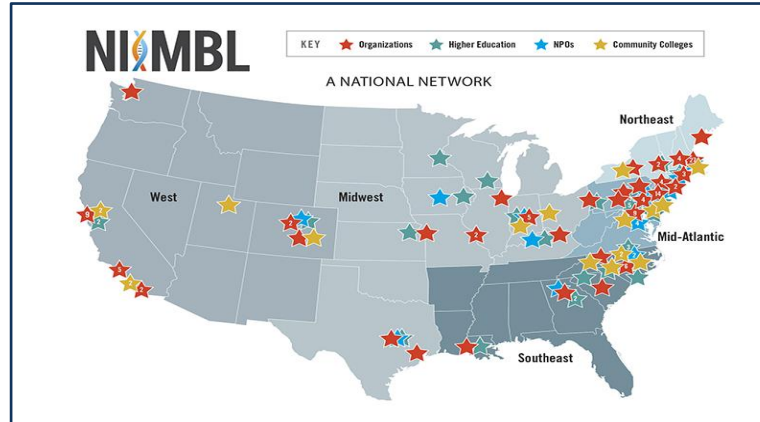
Modular Chemical  
Process Intensification  
New York, NY

# DOC Manufacturing USA Institutes



## AI for Resilient Manufacturing

Reviewing applications:  
up to \$70 million over five  
years



## NIIMBL

National Institute for  
Innovation in Manufacturing  
Biopharmaceuticals



## SMART USA

Semiconductor Research  
Corporation Manufacturing  
Consortium Corporation  
(SRCC) awarded \$285 million  
over five years





## New MFG USA Strategic Plan

- Increase competitiveness of U.S. manufacturing
- Facilitate the transition of innovative technologies
- Accelerate the development of the workforce

## NASEM Study

- A Vision for the Manufacturing USA Program in 2030 and 2035
- Goal: Recommend ways to strengthen technology transfer, scale-up, and workforce development

## Benchmarking with China's MICs

- A review of China's 33 Manufacturing Innovation Centers w/ goals from the "Made in China 2025" national strategy

# Next: Accelerate Technology Adoption



## VISION

NIST accelerates the **adoption** of **advanced technologies** by domestic manufacturers that strengthen U.S. industrial **competitiveness**.

## STRATEGY

- Identify and select critical manufacturing areas
- Identify the key barriers (technical, financial, infrastructural) to adoption at scale by industry
- Provide integrated solutions that leverage NIST expertise, partnerships, and programs
- Leverage other agency partners, i.e. DOD DIB
- Catalyze capital investment

## NIST Laboratories

- World-class expertise
- Research facilities
- Standards
- Measurement services

## Manufacturing USA

- 18 advanced manufacturing areas
- Public-private partnerships
- Strong interagency partnerships