

# Quad Cities Manufacturing Institute - Launching New Partnerships and Opportunities

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**QUAD CITIES**  
Manufacturing  
Institute

Pictured: (front row, left to right) Wendy Wintersteen (President, Iowa State), Tim Killeen (President, U of I system), Kristi Mindrup (Interim President, Western Illinois University); (back row, left to right) Sam Easterling (Dean, CoE, ISU), Jay Walsh (VP, Economic Development, UofI), Mark Mossman (Interim Provost, Western Illinois University)



Pictured: (bottom left to right) Mike Mason, Mayor of Davenport; Sangeetha Rayapati, Mayor of Moline; Col. David Guida, Commander JMTC



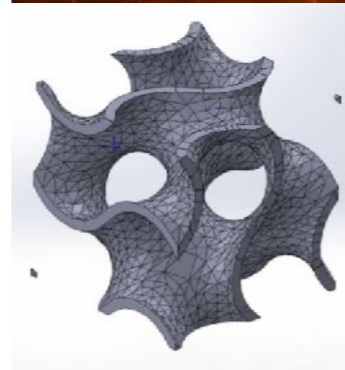
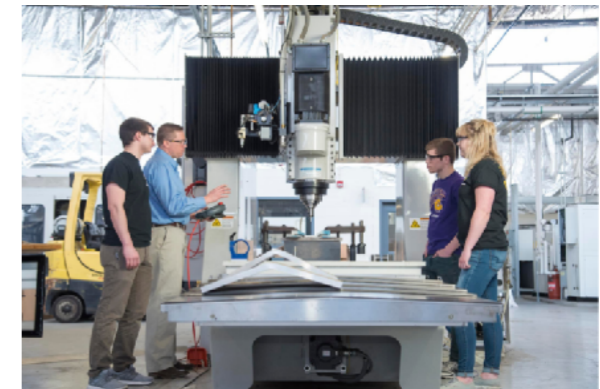
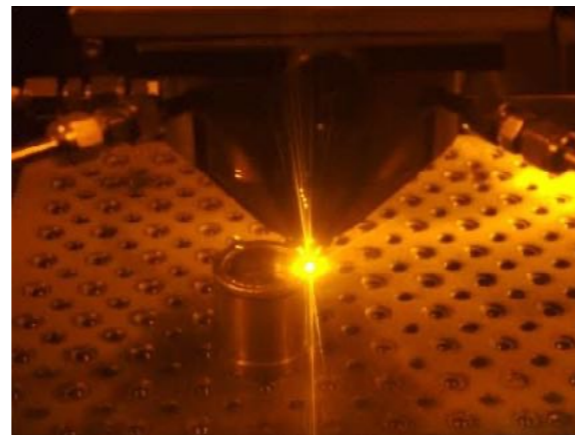
# Origin Story

- Group of civic leaders in the region
- A 501 (c) (3) non-profit organization
- Formed in 2006
  - First lab space in 2009
- Governed by Board of Directors
  - Industry leaders in QC region & beyond
- Focused on Advanced Materials & Manufacturing
  - Research & Development
  - Technology Transfer
  - Pilot Production
  - Workforce training & education
- 10,000 Sq. Ft. facility located on the Rock Island Arsenal (2010-2024)

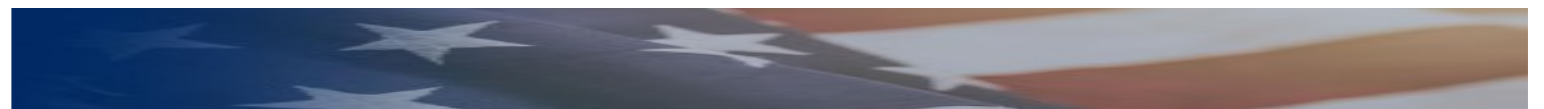
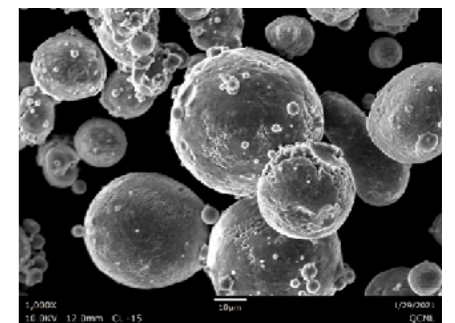


**QUAD CITY**  
**MANUFACTURING LAB**

*Strengthening American Manufacturing through Innovation*



Dr. Eric J. Faierson  
*Director*



# Core Capabilities

## QCML's Legacy

- **Advanced Manufacturing**

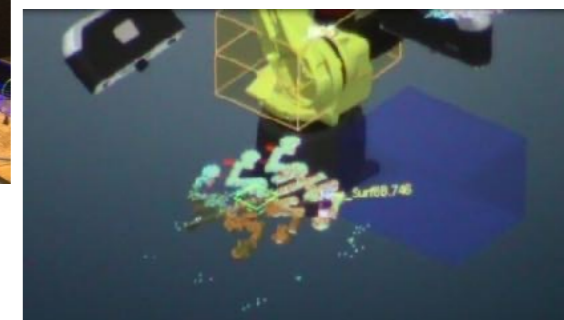
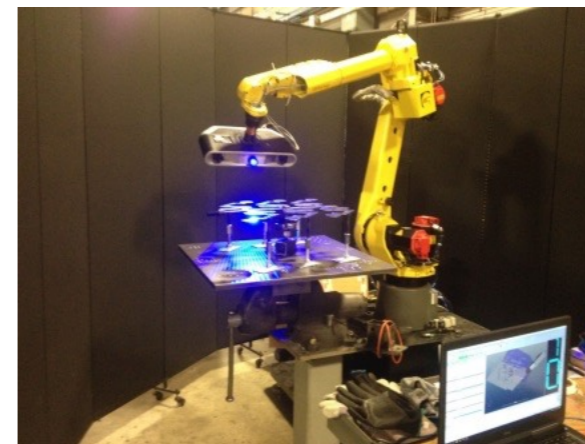
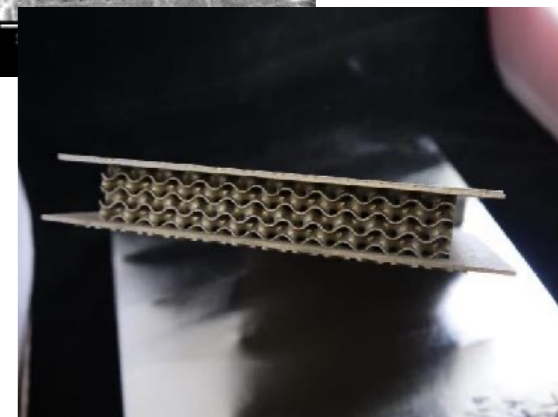
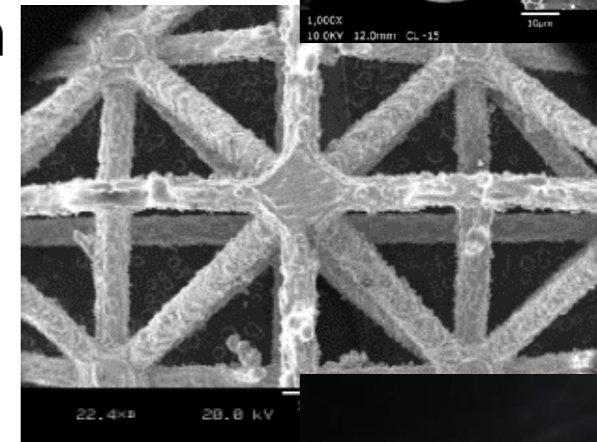
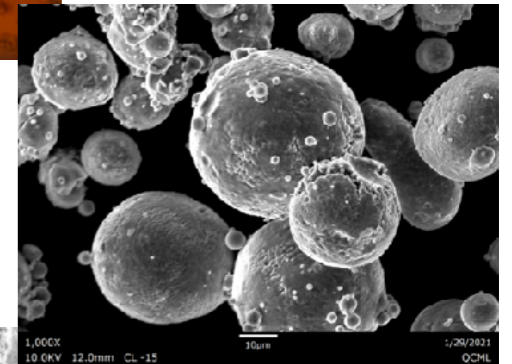
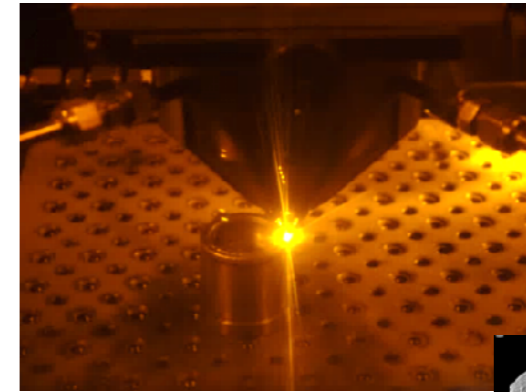
- Additive manufacturing
- Powder processing and high temperature consolidation
- Friction stir welding
- Advanced machining
- Collaborative robots

- **Advanced Materials and structures**

- Composite Ceramics
- Heavily interfaced materials

- **Advanced Analysis**

- Modeling and simulation
- Characterization
- Mechanical testing



# Partnerships with R1 Universities

## Flagship Universities in IL/IA

- **Both universities are Land Grant institutions**
  - Iowa State University (1862, 1st to agree to terms, designated 1864)
  - University of Illinois (1868)
  - Land Grant mission: *discover, educate, benefit society more broadly*
  - Equidistant. “Virtual combination” of the two would be equivalent to either the 2nd to 3rd largest university in US (~75,000) and 2nd largest engineering student enrollment (16,300).
- **QCML began working with both in ~2020**
  - Both institutions are known for excellence in engineering
  - Both leaders in materials and advanced manufacturing
  - Filled a few needs: *students, faculty, equipment*
- **Why the two *just make sense***
  - Strong history of connections with QC students and workforce.
  - Our wishes and visions align.



# Status of QCMi today?

Technical leads: Dr. William King (UIUC) and Dr. Peter Collins (ISU)

Many other faculty will be involved at both institutions

- **Evolving physical space**

- Expected: Physical space both at RIA-JMTC and off of the island (WIU)
- Additional space through university partners
  - Main campuses + ISU space in Davenport

- **The “doers”**

- Board of Directors (3 institutions) + boots on the ground + champions
- Faculty, staff and students at engaged institutions - *subject matter experts*
- Community - manufacturers & businesses - the drivers

- **Equipment resources**

- Enhanced access to equipment

- **Workforce development**

- Exceptional local partners (WIU, EICC, BHC, SC, ...)

# Core Capabilities

## QCMI's capabilities

- **Advanced Manufacturing**

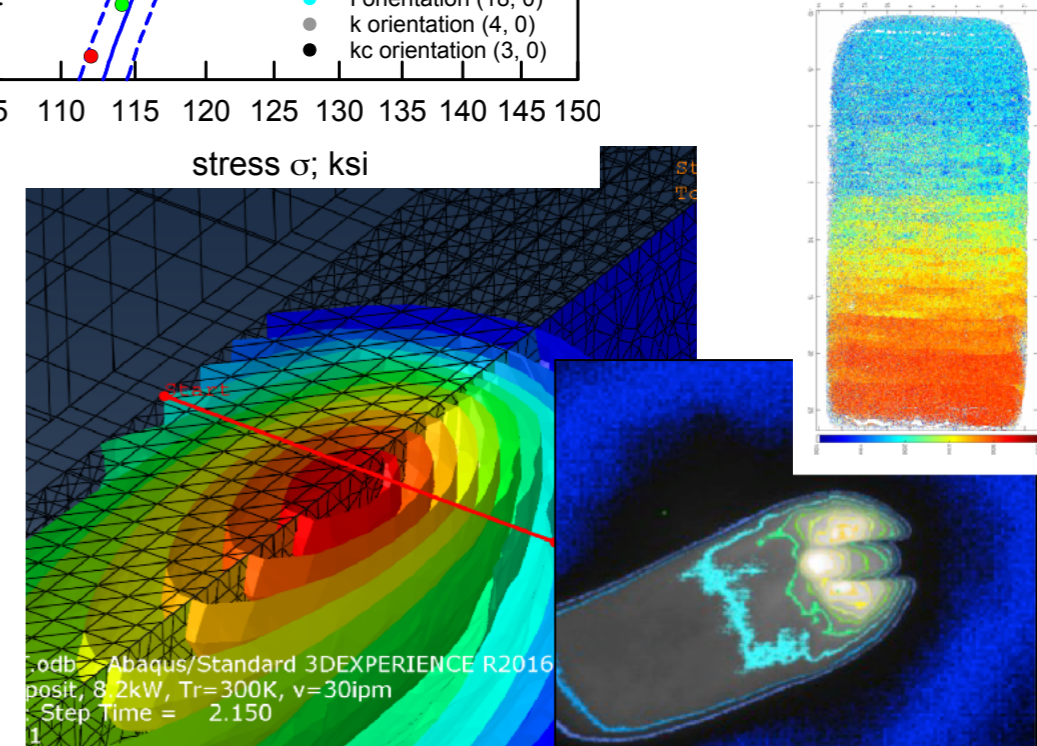
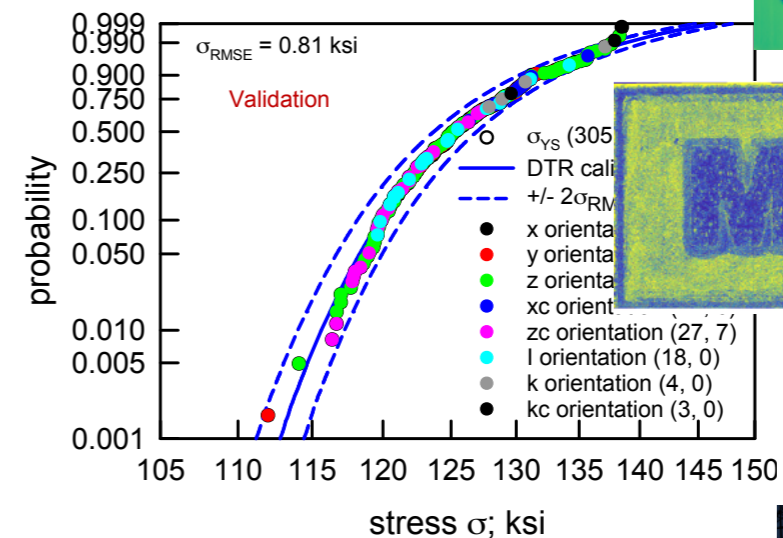
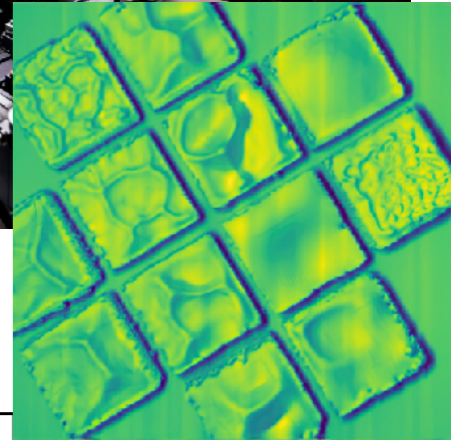
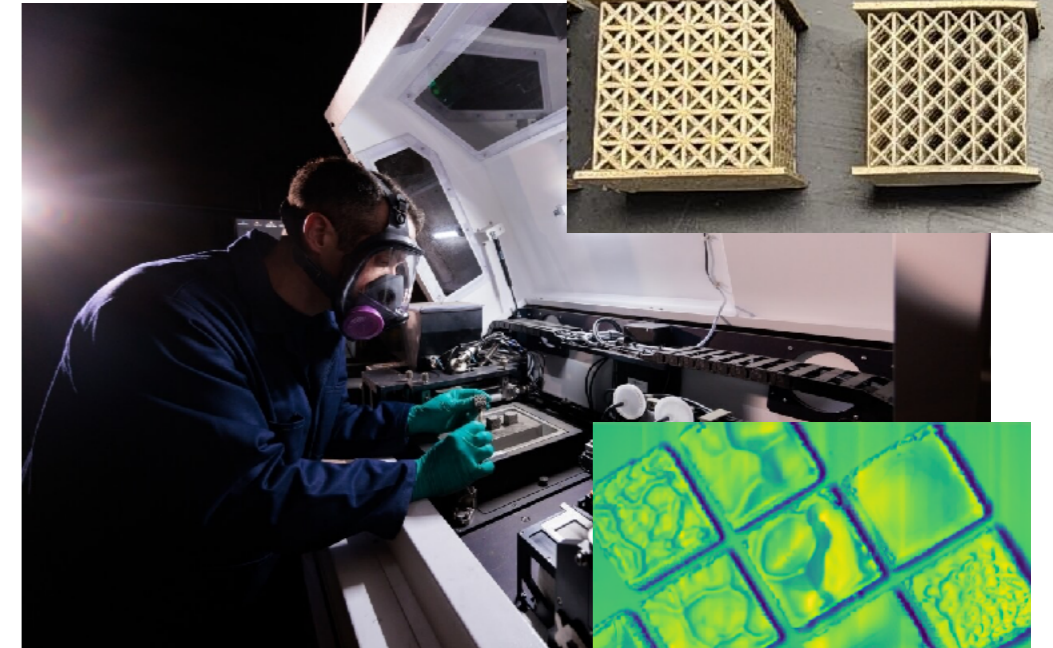
- Additive manufacturing (most / all variants)
- Hybrid manufacturing
- Powder processing and high temperature consolidation
- Advanced machining
- Collaborative robots

- **Advanced Materials and structures**

- Composite Ceramics
- Polymer based composites
- Heavily interfaced materials
- Gradient materials
- Control of mechanical behavior and performance

- **Advanced Analysis**

- Modeling and simulation
- Advanced topological imaging
- Characterization - some globally unique assets
- Mechanical testing
- NDE



# Engaging in partnerships

## Hearing the QC manufacturing base

- **Technical partnerships**

- What keeps you up at night?
- What are your pain points?
  - Your pain points suggest opportunities, even though they may not align with noted core strengths of QCMI.
  - Time? Investment? Opportunity cost? Lead times? Secondary processing? Digital threads? Sensors? Qualification? Virtual factory floor? Safety & training?

- **Workforce development partnerships**

- What are the needs and opportunities facing existing workforces?
- What are the needs and opportunities facing your future workforces?
- What would an ideal workforce development partnership look like? *Location, time, etc.*

# Thank you!

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