Measurement Science for Metal-Based Additive Manufacturing
October 10 -12, 2023
National Cybersecurity Center of Excellence (NCCOE)
9700 Great Seneca Hwy, Rockville, MD 20850
Agenda

Tuesday, October 10, 2023

8:30 am	Registration
9:00 am	Opening Plenary Session – Room 3ABC • **Welcome** ~ Joannie Chin, NIST Engineering Laboratory Director (tentative) • **Workshop Scope and Objectives** ~ Kevin Jurrens, Division Chief, Intelligent Systems Division, NIST • **2012 Additive Manufacturing Roadmap: A Decade of NIST Progress** ~ Paul Witherell, NIST • **Preliminary Findings in Additive Manufacturing – Roadmaps and R&D** ~ Shawn Moylan, NIST
10:30 am	Break
10:45 am	Panel: Updates on Key Additive Manufacturing Technical Areas – Room 3ABC • Materials Characterization • Process Monitoring and Control • Supply Chains and Cybersecurity
12:00 pm	Lunch (on your own – locations provided*)
1:00 pm	Instructions for Breakout Sessions (and move to breakout rooms)
	Parallel Breakout Sessions: Materials Characterization (Room 3ABC), Process Monitoring and Control (Room 3D), and Supply Chains and Cybersecurity for AM Ecosystems (Room 5)

1:10 pm	Breakout Session I: Desired Future Capabilities and Technologies for Additive Manufacturing
	• Envisioned future:
	  o Emerging and anticipated future applications for AM.
	  o Capabilities we want and need the most.

1:40 pm	Breakout Session II: Challenges and Barriers to Achieving Capabilities and Applications • Barriers limiting the broader use of additive manufacturing. • Measurement and standards barriers, challenges, and gaps. • Prioritization and identification of top challenges (individual voting).
2:30 pm	Break
2:45 pm	Breakout Session III: R&D and Approaches to Address Challenges • R&D, strategic approaches, and standards/measurements to address top challenges. • Prioritization and identification of top R&D (individual voting).
3:45 pm	• Selection of priority actionable topics for Roadmap. • Preliminary Ideas for Roadmap Priority Action Plans.
4:15 pm	Wrap Up and Plan for Next Day (Main Session Room)
4:30 pm	Adjourn

Wednesday, October 11, 2023

8:30 am	Registration
9:00 am	Opening Plenary • **Welcome and Goals for Today** ~ Paul WItherell, NIST • **Keynote (industry)** ~ **The Future of AM** ~ Speaker TBD

10:30 am	Break
10:45 am	Panel: Updates on Key Additive Manufacturing Technical Areas • Testing and Inspections • Rapid Qualification and Quality Assurance Methods • Communications and Systems
12:00 pm	Lunch (on your own – locations provided*)
1:00 pm	Instructions for Breakout Sessions
	Parallel Breakout Sessions: Testing and Inspections (Room 3ABC), Rapid Qualification and Quality Assurance Methods (Room 3D), and Communications and Systems (Room 5)

1:10 pm	Breakout Session I: Desired Future Capabilities and Technologies for Additive Manufacturing
	• Envisioned future:
	    o Emerging and anticipated future applications for AM.
	    o Capabilities we want and need the most.

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3:45 pm	• Selection of priority actionable topics for Roadmap. • Preliminary Ideas for Roadmap Priority Action Plans.
4:15 pm	Wrap Up and Plan for Next Day (Main Session Room)
4:30 pm	Adjourn

Thursday, October 12, 2023

8:30 am	Registration
9:00 am	Opening Plenary • **Welcome and Goals for Today** ~ Paul Witherell, NIST
9:15 am	Instructions and Assignments for Breakouts/Roadmap R&D Technical Topic Areas
9:25 am	Break and move to assigned R&D Topic Area Rooms

9:35 am	Breakout Session IV: Pathways for Measurement Science Roadmap (all topics)
	• **Small groups work to develop roadmap action plans:**
	    ➢ R&D, standards, and other approaches for addressing the high priority challenges.
	    ➢ Next steps and actionable plan

11:00 pm	Report Outs on Priority Topics
12:00 pm	Wrap Up and Adjourn