

Roadmapping Workshop:

Measurement Science for Metal-Based Additive Manufacturing
December 4-5, 2012 Gaithersburg, MD

AGENDA

| Tuesday, December 4, 2012 | | | |
|---------------------------|---|---|--|
| 7:30 am | Registration and Continental Breakfast | AML Conference Rm., Bldg. 215/216 | |
| 8:30 am | Opening Plenary Session | AML Conference Rm., Bldg. 215/216 | |
| | • Welcome ~ Shyam Sunder, Director, Engineering Laborato | ory, NIST | |
| | Stage-setting Presentations | | |
| | Workshop Scope and Objectives ~ Kevin Jurrens, Deputy Chief, Intelligent Systems Division, NIST | | |
| | Highlights of Prior Additive Manufacturing Roadmaps ~ Dave Bourell, Temple Foundation Professor, University of Texas at Austin, Co-Chair 2009 Roadmap for Additive Manufacturing | | |
| | ASTM F42 Strategic Framework for Additive Manufacturing Standards ~ Brent Stucker, Professor, University of Louisville, Chair of ASTM F42 | | |
| | NAMII Additive Manufacturing Pilot: Priority R&D Needs ~ Gary Fleegle, Vice President and Chief Operating Officer, National Center for Defense Manufacturing and Machining, NAMII Acting Deputy Director for Technology Development | | |
| 10:00 am | Break | | |
| 10:30 am | :30 am Industry Panel | | |
| | Moderated Session and Q&A on AM User Perspectives | | |
| | ➤ Moderator ~ Ed Herderick, EWI, Chair of Additive Manufacturing Consortium (AMC) | | |
| | > Panelists ~ | | |
| | Agnes Klucha, Program Manager, Engineering Innovation Center, Pratt and Whitney | | |
| | John Hunter, Director of Marketing & Sales, Carpenter Powder Products, Inc. | | |
| | Dean Robinson, Manager, Model-Based Manufacturing Lab, GE Global Research Center | | |
| | Hank Phelps , Senior Engineer, Technology Development & Integration, Airframe Design, Lockheed Martin Aeronautics | | |
| 11:40 am | Morning Wrap up and Instructions for Breakout Sessions | | |
| | > Joan Pellegrino, Energetics, Incorported | | |
| 11:45 am | Lunch | NIST Cafeteria, Bldg. 101 | |
| | After lunch, participants will move to their assigned breakouts | s: | |
| | AM materials | Bldg. 220, Rm. B321 | |
| | AM processes and equipment Outsition that a second control of a second control o | Bldg. 220, Rm. B105 | |
| | Qualification & certification of materials, processes, and processes, and processes Modeling and simulation of AM | products AML Conference Rm. Bldg. 220, Rm. B125 | |
| 1:00 pm | Breakout Session I: Desired Capabilities for Additive | | |
| · | Envisioned future: What capabilities do we want and ne | | |
| 3:00 pm | Break AML Conference Rm., Bldg. 215/216 | | |
| 3:20 pm | Breakout Session II: Challenges and Barriers for Achieving the Capabilities | | |
| | ➤ Barriers limiting the broad use of additive manufacturing | | |
| | ➤ Measurement and standards barriers, challenges, and gaps | | |
| 5:00 pm | Adjourn Day 1 | | |

| Wednesday, December 5, 2012 | | | |
|-----------------------------|---|---|--|
| 8:00 am | Continental Breakfast | AML Conference Rm., Bldg. 215/216 | |
| | After breakfast, participants will move to their assigned bred • AM materials | Bldg. 220, Rm. B321 | |
| | AM processes and equipment Qualification & certification of materials, processes, and Modeling and simulation of AM | Bldg. 220, Rm. B105 d products AML Conference Rm. Bldg. 220, Rm. B125 | |
| 8:30 am | Breakout Session III: Prioritization of Challenges ➤ Review, clarify, and vote on the top challenges ➤ Determine R&D priorities ➤ Identify standardization priorities for ASTM F42 | | |
| 10:15 am | Break | AML Conference Rm., Bldg. 215/216 | |
| 10:30 am | Small groups work to develop roadmap elements: R&D, standards, and other approaches for addressing priority challenges Next steps and actionable plan | | |
| 11:45 am | Lunch | NIST Cafeteria, Bldg. 101 | |
| 1:00 pm | Plenary Session • Breakout Group Reports (Part 1) | AML Conference Rm., Bldg. 215/216 | |
| 1:30 pm | Plenary Talk: Manufacturing the Road to Success Tom Kurfess, Assistant Director for Advanced Manufacturing, Office of Science and Technology Policy, Executive Office of the President | | |
| 2:00 pm | Breakout Group Reports (Part 2) Workshop Wrap up and Next Steps Kevin Jurrens, NIST | | |
| 2:30 pm | Adjourn Workshop | | |
| 3:00 pm | Interagency Roundtable (government only) | | |