



## Technology Exchange Metallic Materials for Additive Manufacturing

*Defining the Current and Future State of the Metallic Materials Supply Chain for Additive Manufacturing*

Sponsored by the Open Manufacturing Program of the Defense Advanced Research Project Agency (DARPA)  
Center for Innovative Materials Processing through Direct Digital Deposition (CIMP-3D)

Tuesday, November 5, 2013  
Penn Stater Conference Center and Hotel, University Park, PA

7:30 AM	8:00 AM	Registration	
8:00 AM	8:30 AM	Welcome/Introductions OM Strategy for Acceleration of Metals Additive Manufacturing	Mick Maher, <i>DARPA Open Manufacturing</i>
<b>Perspective of Materials Producers</b>			
8:30 AM	8:55 AM	Cost Effective Titanium PREP Powder	Bill MacDonald, <i>Timet</i>
8:55 AM	9:20 AM	Gas Atomized Powders for Additive Manufacturing	Brian McTiernan, <i>ATI Powders</i>
9:20 AM	9:45 AM	Mapping AM Products and Services: Implications for the Materials Industry	Brett Connor, <i>YSU/NAMII</i>
9:45 AM	10:10 AM	Computer-Aided Materials Design for Additive Manufacturing Through Thermodynamic and Kinetic Modeling	Zi-Kui Liu, <i>Penn State</i>
10:10 AM	10:40 AM	Questions/Panel Discussion	
10:40 AM	10:55 AM	Break	
<b>Standardization and Codes</b>			
10:55 AM	11:20 AM	An Overview of the ASTM Metal Powders and Additive Manufacturing Committees & Their Standards/A Brief Introduction of Hot Isostatic Pressing as It Pertains to AM	Jane LaGoy, <i>ASTM B09/Bodycote</i>
11:20 AM	11:45 AM	AM Standards for Metallic Materials	John Slotwinski, <i>NIST</i>
11:45 AM	12:10 PM	Path to Inclusion of Static Design Properties in the Metallic Materials Properties and Development Standardization (MMPDS) Handbook	Jana Rubadue, <i>Battelle</i>
12:10 PM	12:40 PM	Questions/Panel Discussion	
12:40 PM	1:30 PM	Lunch	
1:30 PM	2:15 PM	Examining Supply Chain Drivers for AM Adoption	Alex Scott
<b>End Users and Materials</b>			
2:15 PM	2:40 PM	Aerospace Perspective	TBD
2:40 PM	3:05 PM	Opportunities for Additive Manufacturing for Implantable Medical Devices	A.J. Ries and Markus Reiterer, <i>Medtronic</i>
3:05 PM	3:20 PM	Break	
3:20 PM	3:45 PM	Material and Manufacturing Issues in Nuclear Power Plant components	Tom Congedo, <i>Westinghouse Nuclear</i>
3:45 PM	4:10 PM	The Challenge of Additive Manufacturing Structures onto Semiconductors	Larry Greenberg, <i>Northrop Grumman</i>
4:10 PM	4:40 PM	Questions/Panel Discussion	
4:40 PM		Adjourn	