TMS2016
145th Annual Meeting & Exhibition

FEBRUARY 14-18 DOWNTOWN NASHVILLE, TENNESSEE MUSIC CITY CENTER

Connecting the Global Minerals, Metals, and Materials Community.

Additive Manufacturing: Building the Pathway towards Process and Material Qualification

This symposium will serve as a venue for the international Additive Manufacturing (AM) community—including government, academia, and industry—to define the fundamental interrelationships between feedstock, processing, microstructure, shape, mechanical behavior/materials properties, and function/performance. This will be accomplished through experimental observations, theoretical advances, and computational modeling of physical processes to provide insight and understanding of the nature of the final product and the evolution of microstructure resulting in final part properties and performance.

Areas of interest include:

- **Fabrication:**
  - Machines: emerging technologies and advancing current capabilities
  - Processing: feedstock material (including powder, wire, and filament), process and process monitoring (both freeform and direct write), build parameters, repair parameters, post processing (e.g., heat treatment)
  - Specimen Design: net-shaped parts; parts machined to shape based on scaling; as built laboratory test specimens/coupons; specimens/coupons machined from larger builds
- **Developing Constitutive Relationships:** coupling microstructure measurements and experimental stress analysis to characterize mechanical behavior/materials properties targeting performance
- **Closing the Feedback Loop:** microstructure measurements feedback to fabrication; performance (mechanical behavior, materials properties, and/or functional) feedback to fabrication

Organizers include:
John Carpenter, Los Alamos National Laboratory (USA)
Allison Beese, Pennsylvania State University (USA)
David Bourell, University of Texas at Austin (USA)
Reginald Hamilton, Pennsylvania State University (USA)
Edward Herderick, GE Corporate (USA)
and others

Learn More at www.tms.org/TMS2016

Join us at TMS2016 in Downtown Nashville, Tennessee, February 14-18!