CALL FOR ABSTRACTS

THE WORLD COMES HERE.

TMS 2018

147th Annual Meeting & Exhibition

MARCH 11 – 15, 2018
PHOENIX, ARIZONA

SUBMIT AN ABSTRACT TO:

ADDITIVE TECHNOLOGIES

ADVANCES IN ADDITIVE MANUFACTURING OF TITANIUM AND TITANIUM-BASED ALLOYS

Owing to their attractive balance of properties, use in demanding applications, and cost, titanium alloys are candidates for additive manufacturing. Indeed, many of the additive manufacturing research and development efforts underway include exploring the composition, processing, structure, property relationships for titanium-based alloys.

This symposium will integrate invited and contributed talks on the subject of advances in additive manufacturing of titanium and titanium-based alloys and will include the following:

- Experimental and computational approaches for establishing process-structure-property relationships
- Advances in processing, including process control strategies, new sensor technologies, and thermal management
- Microstructural quantification strategies for additively manufactured components
- Advanced design concepts, including (for example) graded structures and topologically optimized structures
- Experimental and computational investigations of beam-melt pool physics and models for the beam-molten pool-feed stock interactions, including multiphysics approaches to melting, solidification, vaporization, heat and material transport, and particle attachment
- Application of advanced characterization techniques to quantify the material state at multiple length-scales, including component-level testing
- Advances in non-thermal titanium additive processes
- Post-processing improvements for mechanical, microstructure, and surface properties
- Data analytic approaches
- Qualification approaches
- Investigations of a wide variety of titanium-based alloys, ranging from the α, α+α, and α alloys to titanium aluminides

ORGANIZERS

Peter Collins, Iowa State University, USA
Leon Prentice, CSIRO, Australia
Andrew Baker, The Boeing Company, USA
Craig Brice, Lockheed Martin Space Systems Company, USA

SPONSOR

TMS Additive Manufacturing Bridge Committee

ABSTRACT DEADLINE IS JULY 1, 2017. SUBMIT ONLINE AT www.programmaster.org/TMS2018.

QUESTIONS? CONTACT programming@tms.org