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TMS 2018
147th Annual Meeting & Exhibition



MARCH 11 – 15, 2018
PHOENIX, ARIZONA

SUBMIT AN ABSTRACT TO:

ADDITIVE TECHNOLOGIES

APPLICATION OF SOLIDIFICATION FUNDAMENTALS TO CHALLENGES IN METAL ADDITIVE MANUFACTURING

Additive manufacturing (AM) is a disruptive technology, offering increased part complexity, short lead times, and opportunities for local microstructure control. Microstructure and defect development in AM processes is influenced by the solidification and melt pool dynamics, but currently the application of fundamental solidification theories to AM process conditions has not been fully explored. Furthermore, increased demand for customized material properties and localized microstructure control will inevitably require a detailed understanding of solidification in these processes.

The goal of this symposium is to highlight research in metal additive manufacturing that applies fundamental solidification theory to understand and solve contemporary processing challenges. This symposium will inform the solidification community about the unique characteristics of AM and guide the AM community to recognize the parallels that exist in the welding and solidification literature. Both experimental and modeling submissions are encouraged, especially in which modeling or theory is connected to experimental results or in-situ characterization to rationalize process challenges and propose novel solutions. The symposium will consist of four total sessions.

ORGANIZERS

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TMS Additive Manufacturing Bridge Committee

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

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