

# ASTM INTERNATIONAL CONFERENCE ON ADVANCED MANUFACTURING

## Research to Application through Standardization

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# Mechanical Testing of AM Materials

Established testing standards exist for deriving different mechanical properties; however, it has become clear that conventional procedures may not always apply to additive manufactured materials due to the nature of the additive fabrication process. Additionally, unique mechanical characteristics and property dependence exist under different conditions such as geometry, process parameters, and post-process procedures.

#### Topics of interest include but are not limited to:

- Applicability of existing test methods to additive manufactured materials
- Development of new test methods, such as small-scale tensile testing, to represent the local material performance
- High throughput testing methods for build quality screening
- Properties assessment of miniaturized engineering structures
- Influence of process and post-process parameters on part performance
- Structure-property-performance relationships
- Build size, orientation, and location dependence of mechanical properties
- Characterization of multi-material components
- Material testing methodologies representative of the part performance



### **Symposium Organizers**

- Jimmy Campbell, Plastometrex, UK
- Joy Gockel, Colorado School of Mines, USA
- Ed Herderick, Ohio State University, USA
- Robert Lancaster, Swansea University, UK
- Jason Ten Jyi Sheuan, A\*STAR-SIMTech, Singapore



Research to Standards

ADDITIVE MANUFACTURING