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TMS2024
153rd Annual Meeting & Exhibition

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HYATT REGENCY ORLANDO
ORLANDO, FLORIDA, USA
#TMSAnnualMeeting



SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2024 SYMPOSIUM:

ADDITIVE MANUFACTURING

Incorporating Additive Manufacturing in Material Science and Engineering Education (2024 Student-led Symposium)

Additive manufacturing (AM) is a relatively new manufacturing method when compared to traditional techniques such as casting, forging, or machining. AM has exploded in recent years leading to applications in polymers, ceramics, metals, and composites while becoming increasingly accessible. This increased accessibility requires incorporating AM into traditional material science and engineering education to prepare future generations of engineers capable of developing new applications for and solving the problems associated with AM.

AM as an educational tool can be used to give students hands on experience with the material science tetrahedron of structure, properties, processing, and performance while also highlighting the engineering design process. AM can also be used as a tool to help visual learners by creating interactive visual aides to promote understanding of complex concepts.

This symposium will illustrate:

- Examples of AM integrated into material science and engineering education in recent years for various material systems and AM techniques.
- New advances in the AM field focusing on their potential applications in the education of future material science engineers.
- Perspectives from practitioners in the AM industry on educational needs going forward to help accelerate broad adoption in manufacturing and promote new discoveries.

ORGANIZERS

Bryan Crossman, The Ohio State University, USA
Elvin Beach, The Ohio State University, USA

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TMS Additive Manufacturing Committee
TMS Education Committee