ICAM 2022

ASTM INTERNATIONAL CONFERENCE ON ADDITIVE MANUFACTURING

Research To Application Through Standardization

October 31 – November 4, 2022 | Orlando, FL
JW Marriott Orlando Bonnet Creek Resort & Spa

Submit an Abstract at www.amcoe.org/icam2022

Industry 4.0: Data Management for AM

Additive manufacturing (AM) is uniquely characterized by massive amounts of data generated from various steps of the AM process. These steps include design, process planning, building, in-situ monitoring, post-processing, inspection, characterization, and testing, as well as the operating performance of an AM component during its service life. While such data can be used to understand key process variables (KPVs) and support decision-making, the management of the distributed, big data has become a challenge. Methods of AM data annotation, acquisition, storage, analysis, security, and sharing have yet to be fully explored. Although many companies have developed internal procedures to address the above challenges, the AM community would benefit from standards and best practices that are widely accepted and available to the public, particularly small and medium-sized enterprises (SMEs).

This symposium aims to bring together the growing community of AM data practitioners to explore the following topics:

- Landscape analysis: AM data management experiences and lessons

Case studies, challenges, and best practices for:
- AM Data modeling – data dictionary, semantic models, and data exchange formats
- Automated data acquisition
- Data management and governance in AM
- Data publishing and sharing in AM
- AM data Integration and federation
- AM data registration

- AM data management requirements
- Application of IoT and big data technology in AM Data Management
- Material database
- Application of simulation in the development of AM material databases
- Data and software integration for findability, accessibility, interoperability, and reusability
- Streamlining AM workflow with data management
- Standardization gaps for AM data management

Symposium Organizers

- **Amber Andreaco,** GE Additive, USA
- **Matthew Jacobsen,** Air Force Research Laboratory, USA
- **Alex Kitt, EWI,** USA
- **Yan Lu, NIST,** USA
- **Nick Parry, Authentize,** USA

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Research to Standards

ADDITIVE MANUFACTURING