Objective
As additive manufacturing (AM) technologies are adopted by various industries, establishing feedstock-process-structure-property-performance relationships becomes essential for qualification and certification of parts, specifically in safety critical applications. This conference will address application specific requirements of various industry sectors in addition to covering the fundamentals of AM process chain. Industry, academia, and government agency professionals in the AM community are invited to participate and help address the need for industry standards, design principals, as well as qualification and certification challenges. Materials of interest include metals, polymers, composites, and ceramics.

About the event
This is ASTM International's fifth event related to standardization, qualification and certification with an emphasis on industry specific requirements addressing the entire AM process chain. Previous versions of this ASTM International event included:
- 4th event: symposium on structural integrity of AM parts and materials – Washington, D.C., October 7-10, 2019
- 3rd event: symposium on fatigue and fracture of AM parts – Washington, D.C., November 6-8, 2018
- 2nd event: symposium on fatigue and fracture of AM materials and components – Atlanta, Ga., November 15-16, 2017
- 1st event: workshop on mechanical behavior of additive manufactured components – San Antonio, Texas, May 4-5, 2016

With the creation of ASTM International Additive Manufacturing Center of Excellence (AM CoE) in early 2018, and the growth of the AM industry, the effort has been led by the ASTM AM CoE and involves additional technical committees. This year event is now a full international conference with an even wider scope still related to standardization, qualification, and certification. This will be an event involving more ASTM committees and external stakeholders, setting the stage to bring experts from all around the world to exchange the latest development in the field of additive manufacturing with emphasis on transition of research to standardization.

The implementation of AM training and recruitment programs such as student presentation competition and young investigator/engineer awards, will also be addressed. Additionally, the recipients of the two prestigious 2020 ASTM International Additive Manufacturing Awards of Excellence in both Research and Standardization will be announced during this event.
There will be several symposia organized during this conference, including:

– Structural Integrity, Qualification and Certification of AM
– Industry 4.0 (Data, Cyber, AI, IoT, Robotics, Automation, Sensors, etc).
– AM Feedstock
– Application of AM in Construction on Earth and Beyond
– AM of Ceramics
– Application of AM in Maritime, Oil and Gas Industry
– Polymers and Polymer Matrix Composites in AM
– Microstructural Aspects of AM
– Non-Destructive Evaluation Methods for AM
– Fatigue and Damage Tolerance of Additively Manufactured Materials
– Mechanical Property Characterization of Additive Manufactured Materials and Components
– AM of Electronics
– Challenges and Opportunities of using AM in the Medical Industry
– General AM Topics
– AM Applications in Aviation and Space Flight
– AM Applications for Automotive Transportation/Heavy Machinery
– AM for Defense Applications
– Student Presentation Competition

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