

# 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](http://www.amcoe.org/icam2022)

## Non-Destructive Evaluation Methods of AM

While destructive evaluation methods such as mechanical testing and microstructural characterizations are often used to evaluate the mechanical performance of additively manufactured (AM) materials and parts, non-destructive evaluation (NDE) methods can provide significant insights without the need for sectioning and damaging the part. Since the presence of defects (e.g., pores, lack of fusion, surface roughness, etc.) often influences the mechanical performance of AM parts significantly, understanding the critical characteristics (such as type, size, and distribution) and location of these defects is key to managing performance expectations, and qualification and serviceability.

**This symposium covers current & novel NDE methods relevant to AM:**

- Applications of current NDE methods for AM parts
- Novel or improved NDE inspection capabilities
- Current status of standards and guidelines and needs for new standards
- Ultrasonic/resonance/x-ray/CT-scan as inspection methods for defects
- Enabling targeted inspection and identification of defect formation root cause
- Integration of NDE with in-process monitoring, structural modeling, validation, and qualification
- Techniques for evaluation and analysis of NDE results and measuring NDE process capability
- NDE modeling and simulation for AM
- Applications of NDE methods in serial production of AM parts: state of the art, limitations, capabilities and future needs



### Symposium Organizers

- Alphons Antonysamy, GKN Aerospace, UK
- Anton Du Plessis, Object Research Systems, Canada
- Ben Dutton, The MTC, UK
- Patrick Howard, GE Aviation, USA



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