



## ASTM INTERNATIONAL CONFERENCE ON ADVANCED MANUFACTURING

Research to Application through Standardization

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Submit an Abstract at [www.amcoe.org/icam2023](http://www.amcoe.org/icam2023)

### Design for AM

One of the critical success factors to making the most out of Additive Manufacturing (AM) is to utilize Design for Additive Manufacturing (DfAM) fundamentals and optimization techniques to take advantage of the opportunistic design freedom that additive manufacturing allows. As AM technology evolves, design and optimization go beyond the traditional user-CAD input. Engineers also need to factor in stress analysis, thermal analysis, process simulation, microstructural evolution modeling, material-process-microstructure-property relationships, and cost estimation to effectively influence the design of AM components. Understanding and applying DfAM fundamentals and current state-of-the-art optimization techniques are critical to creating quality, value-added solutions, accelerating the adoption of AM, and reducing the time and cost of AM implementation.

Topics of interest include but are not limited to:

- DfAM fundamentals (best practices, guidelines, standards)
- Design, modeling, and simulation tools and methodologies with DfAM focus
- DfAM methods, including materials, processes, and post-processing (e.g., post-machining, heat treatment, etc.)
- Reverse engineering, 3D scanning applications, and DfAM methodologies (such as for legacy parts)
- Optimization of AM designs (e.g., generative design, topology optimization, CAE, A.I., etc.)
- AM design and simulation needs that standards should address
- Case studies, industrial use-cases, and applications
- Design of architected materials (e.g., graded materials, cellular materials, etc.)



### Symposium Organizers

- Ian Campbell, Wohlers Associates, United Kingdom
- David Rosen, Georgia Institute of Technology/A\*STAR-IHPC, USA/Singapore
- Tim Simpson, Penn State University, USA
- Andrew Thompson, Northrop Grumman, USA
- Andrew Triantaphyllou, The MTC, UK



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ADDITIVE MANUFACTURING