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## 2<sup>nd</sup> Special Session for Additive Manufacturing Technologies

### Organized by:

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Additive Manufacturing (AM) is rising as an innovative process technology which could transform how products are designed and manufactured. With recent advancements in functional materials and metal printing technologies such as Selective Laser Melting / Sintering (SLS), Electron Beam Machining (EBM), etc., AM is making its way into production of fully functional parts in major industries such as aerospace, medical, automotive etc. In this special session, recent additive manufacturing technologies will be discussed, and trends will be analyzed. Original articles, focusing on design aspects, new AM process technologies and materials, process monitoring and control as well as industrial case studies are welcomed. Although not limited to, focus areas are as follows:

### Design and Modeling

Design for Additive Manufacturing

Topology Optimization

Modeling and simulation of physical processes at multiple scales

Multi material/functional component and device design

Heterogeneous Design

Life cycle issues, eco-design

Reverse engineering and digital tools

### Materials and Processes

Novel materials and composites

Advancement in additive manufacturing processes

Hybrid processes and systems with conventional processes

Characterization and performance analysis of new materials and processes

Process development for new materials

Process Monitoring and Control

Quality Control Methods for AM

NDT (Non-destructive testing) for AM

### Special and Industrial Applications

Aerospace and Defense Applications

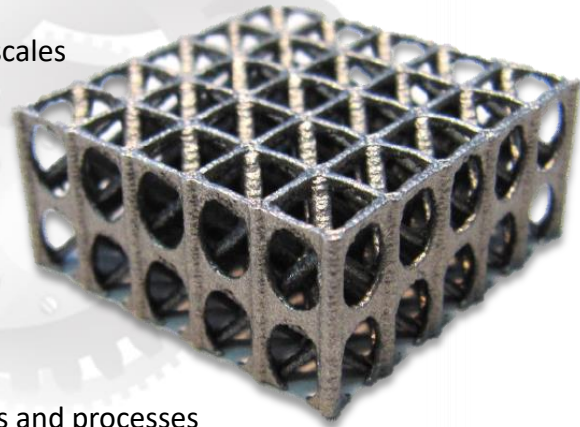
Medical and Biotechnology Applications

Tooling and Molding Applications

Micro-manufacturing, Mechatronics and Robotics

Construction and Building Applications

Validation, verification and qualification of AM parts in industry



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