

# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025



# ICAM25

## PROGRAM OVERVIEW & TIMETABLE

Click on any symposium / keynote / panel title to jump directly to the list of presentations.

	MONDAY 06 OCTOBER 2025	TUESDAY 07 OCTOBER 2025	WEDNESDAY 08 OCTOBER 2025	THURSDAY 09 OCTOBER 2025	FRIDAY 10 OCTOBER 2025
AM	<ul style="list-style-type: none"> <li>▶ <b>ADVANCED TOPICS</b> IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING</li> <li>▶ <b>IN-SITU MONITORING</b> AND IN-PROCESS CONTROL</li> <li>▶ <b>DEFENSE</b></li> <li>▶ <b>AVIATION</b></li> <li>▶ <b>FEEDSTOCK</b> CHARACTERIZATION, SPECIFICATION, AND REUSE</li> <li>▶ <b>MODELING</b>, SIMULATION, AND DIGITAL TWINS</li> <li>▶ <b>NON-DESTRUCTIVE</b> EVALUATION AND INSPECTION</li> <li>▶ <b>ENERGY</b>, MARITIME, OIL AND GAS</li> <li>▶ <b>MICROSTRUCTURAL AND MECHANICAL</b> BEHAVIOR</li> <li>▶ <b>ROBOTICS AND AUTOMATION</b></li> <li>▶ <b>ENVIRONMENTAL</b> AND CORROSION</li> <li>▶ <b>GROUND TRANSPORTATION</b> AND HEAVY MACHINERY</li> <li>▶ <b>STUDENT ORAL PRESENTATION COMPETITION</b> FINAL EVALUATION</li> <li>▶ <a href="#">KEYNOTE 01 – TBA</a></li> </ul>	<ul style="list-style-type: none"> <li>▶ <b>ADVANCED TOPICS</b> IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING</li> <li>▶ <b>IN-SITU MONITORING</b> AND IN-PROCESS CONTROL</li> <li>▶ <b>DEFENSE</b></li> <li>▶ <b>AVIATION</b></li> <li>▶ <b>FEEDSTOCK</b> CHARACTERIZATION, SPECIFICATION, AND REUSE</li> <li>▶ <b>MODELING</b>, SIMULATION, AND DIGITAL TWINS</li> <li>▶ <b>NON-DESTRUCTIVE</b> EVALUATION AND INSPECTION</li> <li>▶ <b>ENERGY</b>, MARITIME, OIL AND GAS</li> <li>▶ <b>MICROSTRUCTURAL AND MECHANICAL</b> BEHAVIOR</li> <li>▶ <b>SECURITY ASPECTS</b></li> <li>▶ <b>DESIGN</b></li> <li>▶ <b>CERAMICS AND ELECTRONICS</b></li> <li>▶ <b>STUDENT ORAL PRESENTATION SESSIONS</b> (NON-COMPETING)</li> <li>▶ <a href="#">KEYNOTE 02 – TBA</a></li> </ul>	<ul style="list-style-type: none"> <li>▶ <b>ADVANCED TOPICS</b> IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING</li> <li>▶ <b>AVIATION</b></li> <li>▶ <b>FATIGUE</b> AND FRACTURE</li> <li>▶ <b>SPACE</b></li> <li>▶ <b>SINTER-BASED</b> TECHNOLOGIES</li> <li>▶ <b>CONSTRUCTION</b> ON EARTH AND BEYOND</li> <li>▶ <b>DIRECTED ENERGY DEPOSITION</b></li> <li>▶ <b>MEDICAL</b></li> <li>▶ <b>MODELING</b>, SIMULATION, AND DIGITAL TWINS</li> <li>▶ <b>ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, AND BIG DATA ANALYTICS</b></li> <li>▶ <b>DESIGN</b></li> <li>▶ <b>POLYMERS</b></li> <li>▶ <b>STUDENT ORAL PRESENTATION SESSIONS</b> (NON-COMPETING)</li> <li>▶ <a href="#">KEYNOTE 03 – TBA</a></li> </ul>	<ul style="list-style-type: none"> <li>▶ <b>ADVANCED TOPICS</b> IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING</li> <li>▶ <b>IN-SITU MONITORING</b> AND IN-PROCESS CONTROL</li> <li>▶ <b>FATIGUE</b> AND FRACTURE</li> <li>▶ <b>SPACE</b></li> <li>▶ <b>SINTER-BASED</b> TECHNOLOGIES</li> <li>▶ <b>CONSTRUCTION</b> ON EARTH AND BEYOND</li> <li>▶ <b>DIRECTED ENERGY DEPOSITION</b></li> <li>▶ <b>MEDICAL</b></li> <li>▶ <b>MICROSTRUCTURAL AND MECHANICAL</b> BEHAVIOR</li> <li>▶ <b>ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, AND BIG DATA ANALYTICS</b></li> <li>▶ <b>SUSTAINABILITY AND ECONOMICS</b></li> <li>▶ <b>POLYMERS</b></li> <li>▶ <b>STUDENT ORAL PRESENTATION SESSIONS</b> (NON-COMPETING)</li> <li>▶ <a href="#">KEYNOTE 04 – TBA</a></li> </ul>	<ul style="list-style-type: none"> <li>▶ <b>ADVANCED TOPICS</b> IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING</li> <li>▶ <b>IN-SITU MONITORING</b> AND IN-PROCESS CONTROL</li> <li>▶ <b>FATIGUE</b> AND FRACTURE</li> <li>▶ <b>SPACE</b></li> <li>▶ <b>SINTER-BASED</b> TECHNOLOGIES</li> <li>▶ <b>CONSTRUCTION</b> ON EARTH AND BEYOND</li> <li>▶ <b>DIRECTED ENERGY DEPOSITION</b></li> <li>▶ <b>MEDICAL</b></li> <li>▶ <b>MICROSTRUCTURAL AND MECHANICAL</b> BEHAVIOR</li> <li>▶ <b>ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, AND BIG DATA ANALYTICS</b></li> <li>▶ <b>SUSTAINABILITY AND ECONOMICS</b></li> <li>▶ <b>POLYMERS</b></li> <li>▶ <b>STUDENT ORAL PRESENTATION SESSIONS</b> (NON-COMPETING)</li> <li>▶ <a href="#">KEYNOTE 05 – TBA</a></li> </ul>
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## STUDENT ORAL PRESENTATION COMPETITION ROUND 01 EVALUATION

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### VIRTUAL

SESSION CHAIR (AM + PM SESSIONS):  
N/A

<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Predicting Cross-Sectional Geometry in Large Format Additive Manufacturing using Artificial Neural Networks</b> <a href="#">Daniele Vanerio</a> <sup>1,2</sup> ; <sup>1</sup> Caracol; <sup>2</sup> Politecnico di Milano
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Laser Powder Bed Fusion of Functionally Graded Nickel-Titanium Shape Memory Alloys</b> <a href="#">Taresh Guleria</a> <sup>1</sup> ; <sup>1</sup> Texas A&M University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Set-On-Demand in Digital Construction via Active In-Situ Carbon Sequestration</b> <a href="#">Sean Gip Lim</a> <sup>1</sup> ; <sup>1</sup> Nanyang Technological University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Thermographic Analysis of Plastic Strain for Monitoring Fatigue Life via Inverse Heat Transfer Technique</b> <a href="#">Mohammad Ali Amooie</a> <sup>1</sup> ; <sup>1</sup> Louisiana State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Advanced Characterization Methods for Fatigue Damage Evolution in Ti6Al4V Lattice Structures for Medical Applications</b> <a href="#">Sebastian Stammkötter</a> <sup>1</sup> ; <sup>1</sup> TU Dortmund University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Background Oriented Schlieren Imaging of the Metal Vapour Plume in Laser Powder Bed Fusion and the Plume's Effect on Laser Focus and Power</b> <a href="#">Jamie Bell</a> <sup>1</sup> ; <sup>1</sup> Imperial College London
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Addressing Adoption Barriers for Additive Manufacturing through Governance: An Inter-Organizational Perspective</b> <a href="#">Vincent Czynnik</a> <sup>1</sup> ; <sup>1</sup> Martin Luther University Halle-Wittenberg
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>A Phase Field-Crystal Plasticity Framework for Dislocation-Driven Residual Stress Evolution in LPBF of a Nickel-Based Superalloy</b> <a href="#">Mostafa Salem</a> <sup>1</sup> ; <sup>1</sup> University of Sheffield
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Process-Structure-Property Relationship Study of Creep in Additively Manufactured 316L SS by Laser Powder Bed Fusion</b> <a href="#">Raushan Singh</a> <sup>1</sup> ; <sup>1</sup> Utah State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Optimisation and Clinical Functionalisation of In Situ Alloyed and LPBFed Ti6Al4V-Cu Biomaterial</b> <a href="#">Nthabiseng Nhlapo</a> <sup>1</sup> ; <sup>1</sup> Central University of Technology, Free State

<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Improving the Gas Flow Distribution in the Build Chamber through Modifications in Ducting and Nozzle Design</b> <a href="#">Aaron Abeyta</a> <sup>1</sup> ; <sup>1</sup> University of Washington
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Optimizing Building Envelopes through Additive Manufacturing: A Computational Approach to Structural Efficiency and Fabrication</b> <a href="#">Ali Alhussain</a> <sup>1</sup> ; <a href="#">José Pinto Duarte</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Plasma Electrolytic Oxidation Coating of Additively Manufactured Ti-6Al-4V for Dental Implants</b> <a href="#">Aboli Chandrashekhhar Lakhe</a> <sup>1,2</sup> ; <sup>1</sup> University of Manchester; <sup>2</sup> A*STAR
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Comprehensive Microstructural Analysis via Directional Reflectance Microscopy (DRM) when Strain Evaluation with Digital Image Correlation (DIC)</b> <a href="#">Senorita Sarker</a> <sup>1</sup> ; <sup>1</sup> Utah State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Anti-Buckling Device for a Novel High Throughput Assembly to Characterize Fully-Reversed Fatigue Life</b> <a href="#">Mehedi Hasan Mahfuz</a> <sup>1</sup> ; <sup>1</sup> Utah State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Flow and Printability Analysis of Geopolymer Concrete Mix Designs for Additive Manufacturing</b> <a href="#">Shawn Khokher</a> <sup>1</sup> ; <sup>1</sup> University of Kansas
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Optimal Pixel Selection Algorithms for Memory Efficient In-Process Monitoring of Additive Manufacturing using Event Based Neuromorphic Imagers</b> <a href="#">Mahtab Heydari</a> <sup>1</sup> ; <sup>1</sup> Texas A&M University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Effects of Laser Type and Powder Reuse on Anisotropic Tensile and Fatigue Behaviors of LP-DED A6061-RAM2 Aluminum Alloy</b> <a href="#">Md Faysal Khan</a> <sup>1</sup> ; <sup>1</sup> Auburn University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Powder Gas Jet Stream Characterisation in Laser Directed Energy Deposition</b> <a href="#">João Pedro Madeira Araujo</a> <sup>1</sup> ; <sup>1</sup> Brunel University London
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Improving Digital Image Correlation (DIC) Techniques for Extreme Environments</b> <a href="#">Prasenjit Dewanjee</a> <sup>1</sup> ; <sup>1</sup> Utah State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>High-Throughput In-Situ Ultrasonic Monitoring of Melt Pool Dynamics and Phase Transformations in Laser Additive Manufacturing</b> <a href="#">Nathan Kizer</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University
<b>VIRTUAL STUDENT</b> ORAL ROUND 01	<b>Development of a Functional Gradient Material using a Wire Arc Additive Manufacturing Process</b> <a href="#">Lucas Weber</a> <sup>1,2,3</sup> ; <sup>1</sup> Clément Ader Institute; <sup>2</sup> ISAE-SUPAERO; <sup>3</sup> SEGULA Technologies

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**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**A Multi-Scale Simulation Framework for Tensile Testing of Cellular Porous Materials**

[Ivan Senegaglia<sup>1</sup>](#); <sup>1</sup>University of Pisa

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Development of Silicon Carbide Components for Nuclear Applications using Additive Manufacturing**

[Zeyad Mohamed<sup>1</sup>](#); [Monica Guimaraes<sup>1</sup>](#); <sup>1</sup>University of Alberta

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Melt Pool Behavior in Laser Processing: Thermal Analysis using Co-Axial Multispectral Imaging**

[Ruihang Dai<sup>1</sup>](#); <sup>1</sup>Technical University of Munich

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Investigations on Use of Biochar in 3D Concrete Printing**

[Ji Hye Jhun<sup>1</sup>](#); <sup>1</sup>Nanyang Technological University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**On the Suitability of High Dynamic Range Neuromorphic Event Based Imagers for Two Color Pyrometry**

[Anthony LoRe Starleaf<sup>1,2</sup>](#); <sup>1</sup>Los Alamos National Laboratory; <sup>2</sup>Embry-Riddle Aeronautical University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Microstructure Prediction in Laser Powder Bed Fusion via Physics-Based Modeling and In-Situ Sensor Data Fusion**

[Kaustubh Deshmukh<sup>1</sup>](#); <sup>1</sup>Virginia Tech

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Characterisation of Transition Welds Manufactured using Laser Powder Bed Fusion (LPBF)**

[Kelsey Parker<sup>1</sup>](#); <sup>1</sup>Swansea University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Probabilistic Spot-Melting Scan Strategy for Microstructure Engineering in Electron Beam Additive Manufacturing**

[Salman Mohammad Ismail<sup>1</sup>](#); <sup>1</sup>Texas A&M University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Image-Based and Machine Learning Supported Powder Spreadability Analysis for Laser Powder Bed Fusion Additive Manufacturing Processes**

[Daniel Amoshie<sup>1</sup>](#); <sup>1</sup>McGill University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Advanced Coating Solutions for Turbine Blades using High-Entropy Alloys via Direct Energy Deposition**

[Lorenzo Pollicini<sup>1</sup>](#); <sup>1</sup>University of Applied Sciences and Arts of Southern Switzerland

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Process-Structure-Property Relationships for Laser Powder Bed Fusion 316L Stainless Steel via Ultrasonic Nondestructive Evaluation**

[Harshith Kumar Adepu<sup>1</sup>](#); <sup>1</sup>Purdue University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Influence of Direct Energy Deposition Process Condition on Crack Susceptibility of MAR 247 LC**

[Alessio Ronchetti<sup>1</sup>](#); <sup>1</sup>University of Applied Sciences and Arts of Southern Switzerland

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Identification of Process Influences on the Volume Generation of AISi10Mg by Means of HS-DED**

[Florian Fischer<sup>1</sup>](#); <sup>1</sup>RWTH Aachen University - Digital Additive Production

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Influence of Laser Metal Deposition Build Orientation on the Final Mechanical Properties of Large Ti-6Al-4V Components**

[Luca Marsilio<sup>1</sup>](#); <sup>1</sup>University of Applied Sciences and Arts of Southern Switzerland

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Advancing the Understanding of Fatigue in Additively Manufactured TPMS Metallic Metamaterials: Experiments and Modeling**

[Krista Dyer<sup>1</sup>](#); <sup>1</sup>Auburn University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Carbon Footprint of Wire Arc Additively Manufactured Optimized Steel Tubular Elements**

[Lidiana Arrè<sup>1</sup>](#); <sup>1</sup>University of Bologna

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Graph Theoretic Microstructure Informatics for Metal Additive Manufacturing**

[Mihir Darji<sup>1</sup>](#); <sup>1</sup>Virginia Tech

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Quantification of the Effect of Varying Cooling Conditions on Additively Manufactured PLA via Ultrasonic Nondestructive Evaluation**

[Partha Pratim Pandit<sup>1</sup>](#); <sup>1</sup>Purdue University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Impacts of Defects in Additively Manufactured Lattices: A Big Data Approach**

[Brandon Hill<sup>1</sup>](#); <sup>1</sup>University of Maryland

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Assessing the Effects of Particle Settling on Ceramic Vat Photopolymerization**

[Pandora Picariello<sup>1</sup>](#); <sup>1</sup>Colorado School of Mines

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**AI Unveils Plasma Dynamics in Next-Gen Ceramic Manufacturing using Microwaves**

[Bashu Aman<sup>1</sup>](#); <sup>1</sup>Carnegie Mellon University

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Characterization and Prediction of Part-Scale Tensile Properties of Additively Manufactured Ti-6Al-4V using Physics-Informed Machine Learning**

[Emmanuel De Leon<sup>1</sup>](#); <sup>1</sup>University of Oklahoma

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Towards Standardising DEM Calibration for Reliable Industrial Process Simulation**

[Ben Jenkins<sup>1,2</sup>](#); <sup>1</sup>Granutools; <sup>2</sup>University of Birmingham

**VIRTUAL  
STUDENT**  
ORAL ROUND 01

**Revealing 3D Melt Pools by Fusing In-Situ Imaging and Simulations During the Additive Manufacturing Process: A Practical Data-Driven Approach Towards Digital Twins**

[Yiming Liu<sup>1</sup>](#); <sup>1</sup>National University of Singapore

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ORAL ROUND 01

**Crystal-Symmetry-Driven Build Orientation in Laser Powder Bed Fusion**  
[Daniel Rainer](#)<sup>1</sup>; <sup>1</sup>Uppsala University

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Strength Starts at the Source: Unlocking Performance through Hotend Engineering**  
[Brent Griffith](#)<sup>1,2</sup>; <sup>1</sup>Labconco; <sup>2</sup>Pennsylvania State University

**VIRTUAL STUDENT**  
ORAL ROUND 01

**In-Situ Prediction of Flaw Formation and Microstructure in Laser Powder Bed Fusion using Physics and Data-Driven Machine Learning**  
[Antonio Carrington Jr.](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Cryogenic and Elevated Temperature Tensile and Fatigue Behavior of Monel K500 Alloy Fabricated via L-PBF and LP-DED**  
[Indrajit Nandi](#)<sup>1</sup>; <sup>1</sup>Auburn University - National Center for Additive Manufacturing Excellence

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Temperature-Dependent Tensile and Fatigue Behaviors of Alloy 718: A Comparison Among Multiple Additive Manufacturing Processes**  
[Alireza Bidar](#)<sup>1</sup>; <sup>1</sup>Auburn University

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Fatigue Crack Growth Behavior of L-PBF In718: Effects of Processing and Post-Processing Conditions**  
[Mikyle Paul](#)<sup>1</sup>; <sup>1</sup>Auburn University

**VIRTUAL STUDENT**  
ORAL ROUND 01

**3D Printing Concrete Infrastructure with Large Aggregates Around Rebar**  
[Masoud Forsat](#)<sup>1</sup>; <sup>1</sup>Oklahoma State University

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Development of a Multimaterials Dispenser Prototype for Binder Jet 3D Printing: A Senior Design Project Perspective**  
[Bryce Reid](#)<sup>1</sup>; [Noah Holt](#)<sup>1</sup>; <sup>1</sup>University of Central Oklahoma

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Addressing Data Scarcity and Reproducible Data Science through Data Management in Laser Powder Bed Fusion**  
[Jigar Patel](#)<sup>1</sup>; <sup>1</sup>University of Waterloo

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Cost-Effective Binder Jet Printing of Irregular Cu-30Ni Powder via Tailored Processing for Improved Densification and Microstructure**  
[Debasis Rath](#)<sup>1</sup>; <sup>1</sup>University of Pittsburgh

**VIRTUAL STUDENT**  
ORAL ROUND 01

**Replication-Based Manufacturing of Micro-Mechanical Metamaterials**  
[Hava Musa Bilyalova](#)<sup>1</sup>; <sup>1</sup>Delft University of Technology

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# ICAM25

## STUDENT ORAL PRESENTATION SESSIONS NON-COMPETING

07<sup>TH</sup> OCT 2025 (TUE) – 10<sup>TH</sup> OCT 2025 (FRI)

TBA  
< VENUE: TBA >

SESSION CHAIR (AM + PM SESSIONS):  
TBA

TBA  
STUDENT  
ORAL NON-  
COMPETING

Micro-Tensile Testing of Additively  
Manufactured Metallic Parts  
[Prudhvi Raj Pola](#)<sup>1</sup>; <sup>1</sup>Oklahoma State  
University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Multi-Fidelity Framework to Predict the  
Melt Pool Characteristics for Laser Powder  
Bed Fusion of Inconel 718  
[Abdul Khalad](#)<sup>1, 2</sup>; <sup>1</sup>Deakin University; <sup>2</sup>Indian  
Institute of Technology Hyderabad

TBA  
STUDENT  
ORAL NON-  
COMPETING

Quality Upgrading in the Argentine  
Manufacturing Sector: A Driver of Trade-  
Induced Wage Inequality?  
[Tarah Lynn Ramthun](#)<sup>1</sup>; <sup>1</sup>University of  
Göttingen

TBA  
STUDENT  
ORAL NON-  
COMPETING

Development of 3D Printable Magnesium  
Oxysulfate Concrete with Biochar:  
Towards to CO<sub>2</sub> Sequestration and Climate-  
Resilient Construction  
[Hanbin Cheng](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State  
University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Machine Learning Predicts Additively  
Manufactured Part Dimensions: Training  
Strategies for Patient-Specific Medical  
Devices  
[Ziteng \(Jack\) Wen](#)<sup>1</sup>; <sup>1</sup>University of Maryland

TBA  
STUDENT  
ORAL NON-  
COMPETING

Ion Beam-Induced Modification in the  
Microstructural and Mechanical Properties  
of 15-5PH Steel Fabricated by Selective  
Laser Melting  
[Pritam Patra](#)<sup>1</sup>; <sup>1</sup>Indian Institute of Technology  
Delhi

TBA  
STUDENT  
ORAL NON-  
COMPETING

Towards AM 2.0: Standardizing Information  
Models for Resilient Digital Manufacturing  
Ecosystem  
[Osama Desouky](#)<sup>1</sup>; <sup>1</sup>Texas A&M University at  
Qatar

TBA  
STUDENT  
ORAL NON-  
COMPETING

Design and Analysis of Active Cooling  
Brake Disc in Lattice Structure for Additive  
Manufacturing  
[Abdulcelil Bayar](#)<sup>1</sup>; <sup>1</sup>Turkish Aerospace

TBA  
STUDENT  
ORAL NON-  
COMPETING

Toward Large Scale ODS Alloy  
Manufacturing: Comparison of Multiple  
Feedstocks in Laser Directed Energy  
Deposition Integrated with Multi-Scale,  
Multi-Physics Modeling of Oxide  
Precipitation  
[Seongun Yang](#)<sup>1</sup>; <sup>1</sup>Oregon State University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Small Crack Growth Behavior of Additively  
Manufactured Materials under Multiaxial  
Stress States: Experimental and  
Probabilistic Investigation  
[Mohammad Khaboushani](#)<sup>1</sup>; <sup>1</sup>Auburn  
University - National Center for Additive  
Manufacturing Excellence

TBA  
STUDENT  
ORAL NON-  
COMPETING

A Novel Cyber Infrastructure Enabling AI-  
Driven Analytics and Digital Twins for Real-  
Time 3D Printing Monitoring  
[Ahmed Ben Sidhom](#)<sup>1</sup>; <sup>1</sup>Rowan University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Constraint-Aware and Safe Reinforcement  
Learning for Industrial Robotics in High-  
Risk Environments through Enforcing  
Strict Safety Constraints  
[Mahdi Bonyani](#)<sup>1</sup>; <sup>1</sup>Louisiana State University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Enhancing Safety in Manufacturing  
through Digital Twin-Based Reasoning and  
Simulated Dataset  
[Maryam Soleymani](#)<sup>1</sup>; <sup>1</sup>Louisiana State  
University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Influence of Surface Modification on the  
Mechanical Performance of Additively  
Repaired Ti-6Al-4V Alloy using Wire-Based  
Direct Energy Deposition Method  
[Lukas Seggi](#)<sup>1</sup>; <sup>1</sup>University of Akron

TBA  
STUDENT  
ORAL NON-  
COMPETING

Control of Weld Pool Height and  
Temperature under Uncertain Heat Source  
Efficiency in Robotic Welding  
[Ahmed Khalil](#)<sup>1</sup>; <sup>1</sup>Texas A&M University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Mechanical Response of Bimetallic Inconel  
625 and Stainless Steel 316 Fabricated via  
Laser Powder Bed Fusion  
[Saneer Samad](#)<sup>1</sup>; <sup>1</sup>Utah State University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Optimizing Induction Brazing Parameters  
for High-Integrity Copper Pipe Joints in  
Heat Pump Manufacturing using an  
Automated Filler Feeding System  
[Eyuel Abate Lemma](#)<sup>1</sup>; <sup>1</sup>University of Aveiro

TBA  
STUDENT  
ORAL NON-  
COMPETING

Oxidation Behavior of Spark Plasma  
Sintered Tungsten Alloys for High  
Temperature Metal Alkali Heat Pipes  
[Abhilash Prasad](#)<sup>1</sup>; <sup>1</sup>University of Central  
Florida

TBA  
STUDENT  
ORAL NON-  
COMPETING

Unified Model for Multiphysics and  
Multiphase Phenomena in Plasma Arc  
Directed Energy Deposition Process  
[Gaurab Neupane](#)<sup>1</sup>; <sup>1</sup>Northeastern University

TBA  
STUDENT  
ORAL NON-  
COMPETING

Structural Sensing in Metal: Exploring the  
Effects of Embedding Sensors on the  
Mechanical Performance of Parts Made via  
Additive Friction Stir Deposition  
[Henry Claesson](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

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**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Biochar-Based Polymer Filaments for Sustainable Manufacturing and Circular Economy**  
[Diana Rose Rivera](#)<sup>1</sup>; <sup>1</sup>De La Salle University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Improving the Manufacturability of Additively Manufactured Polysalt-Derived PMDA/DDS Polyimide Parts via the Incorporation of Dicarboxylate-Dimethyl Esters**  
[John Will](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Toughness through Nature: 3D-Printed Sponge-Inspired Cylinders for Next-Gen Biomedical Devices**  
[Armaghan Hashemi Monfared](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Estimation of Bead Height in Wire Arc Additive Manufacturing on Curved Surfaces using Geometric Modeling**  
[Mihir Patel](#)<sup>1</sup>; <sup>1</sup>Ganpat University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**SiC Reinforced Al-5052: A Molecular Dynamics Dive into Microstructure & Performance Gains via FSP**  
[Shazman Nabi](#)<sup>1</sup>; <sup>1</sup>National Institute of Technology Srinagar

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Tribological Properties of Titanium-Aluminium Doped WS<sub>2</sub> Coatings on Steel for Extreme Environmental Applications**  
[Satyam Upadhyay](#)<sup>1</sup>; <sup>1</sup>Birla Institute of Technology Mesra

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Hybridization of Commercial Directed Energy Deposition System for In-Situ Repair of Parts**  
[Juan Pablo Garcia Chavira](#)<sup>1</sup>; <sup>1</sup>University of Texas at El Paso - W.M. Keck Center for 3D Innovation

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Residual Stress Modeling in Laser Powder Bed Fusion of Transversely Isotropic Metals: Analytical and FEM Approaches**  
[Farshad Samadpour](#)<sup>1</sup>; <sup>1</sup>Purdue University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Effects of Different Scanning Strategies on Grain Morphology of Bulk Inconel 718 Parts Fabricated by EB-PBF**  
[Shadman Tahsin Nabil](#)<sup>1</sup>; <sup>1</sup>University of Texas at El Paso - W.M. Keck Center for 3D Innovation

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Development and Evaluation of Geomaterial for 3D Printing in Construction**  
[Akash Tanshette](#)<sup>1</sup>; [Zoheb Faisal](#)<sup>1</sup>; <sup>1</sup>Texas A&M University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Additive Manufacturing of Polycarbonate Shields for Women's Lacrosse Goggles: A Mechanical Performance Assessment**  
[Jennifer Ray](#)<sup>1</sup>; <sup>1</sup>Wentworth Institute of Technology

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Microstructure Evolution, the Influence on Material Properties, and the Optimized Processing Parameters Search in Additive Manufacturing**  
[Wei Huang](#)<sup>1</sup>; <sup>1</sup>Georgia Institute of Technology

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Investigating the Effect of Dishwashing on 3D Printed Food Contact Material**  
[Geremew Kailo](#)<sup>1</sup>; <sup>1</sup>Hungarian University of Agriculture and Life Sciences

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Comparative Study of Traditional Coating vs. Nanocoating in Corrosion Resistance**  
[Lakshya Jaiswal](#)<sup>1</sup>; <sup>1</sup>Central University of Jharkhand

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Real-Time Algorithmic Fault Detection in FDM Printing using Stepper Motor Current**  
[Alexander Isiani](#)<sup>1</sup>; <sup>1</sup>Louisiana Tech University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Impact of Particle Size on Spreadability and Print Quality in Laser Powder Bed Fusion of Ti6Al4V**  
[Seyed Masoud Ashrafzadeh](#)<sup>1</sup>; <sup>1</sup>McGill University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Driving LPBF Scalability via AI Predictive Process Control: A Case Study**  
[Chukwuemeka Okolo](#)<sup>1</sup>; <sup>1</sup>Brandenburg University of Technology Cottbus-Senftenberg

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Thermal History and Mechanical Performance of Polymer-Polymer Interfaces in Fused Filament Fabrication: A Case Study on Nylon 6**  
[Julian Kligenbeck](#)<sup>1</sup>; <sup>1</sup>University of the Bundeswehr Munich

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Understanding the Effects of Thermal Accumulation on Melt Pool Behaviour in Laser Powder Bed Fusion**  
[Hugh Hallas](#)<sup>1</sup>; <sup>1</sup>Imperial College London

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Adaptive Stiffness and Damage Mechanisms in TPMS Lattice Structures: From Fundamental Understanding to Implant Design**  
[Sebastian Stammkötter](#)<sup>1</sup>; <sup>1</sup>TU Dortmund University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Exploring the Interplay of Porosity and Mechanical Integrity in High Porosity Metallic Lattice Structures Fabricated by Powder Bed Fusion**  
[Daniyal Sayadi](#)<sup>1</sup>; <sup>1</sup>University of North Carolina at Charlotte

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Enhancing the UAV Wing Leading Edge Crashworthiness Against Bird Strike Events: An Innovative Additive Manufacturing Solution**  
[Muhammad Arslan Muneer](#)<sup>1</sup>; <sup>1</sup>University of Campania "Luigi Vanvitelli"

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**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**A Look at Vibrofinishing for Fatigue Specimen Preparation**  
[Rodolfo \(Rudy\) Villa<sup>1</sup>](#); <sup>1</sup>University of Oklahoma

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Microstructural and Fatigue Characterization of Stitched Zones in Ti6Al4V Printed via Multi-Laser Powder Bed Fusion**  
[Rodolfo \(Rudy\) Villa<sup>1</sup>](#); <sup>1</sup>University of Oklahoma

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Comprehensive Powder Bed Feedstock Sampling and Characterization Approach for Laser Powder Bed Fusion**  
[Nicolas Pielczyk<sup>1</sup>](#); <sup>1</sup>Georgia Institute of Technology - Aerospace Systems Design Laboratory

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Size Effect in Direct Energy Deposition of Colmonoy 227-F Thin Structure: Investigating Process Parameters, Microstructure and Mechanical Response**  
[Gabriele Grima<sup>1</sup>](#); <sup>1</sup>Marche Polytechnic University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Temperature-Dependent Tensile and Fatigue Behaviors of A6061-RAM2 Aluminum Alloy: The Effect of Additive Manufacturing Technology**  
[Md Faysal Khan<sup>1</sup>](#); <sup>1</sup>Auburn University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Tribocorrosion Study of D2 Tool Steel Fabricated by Extrusion-Based Sintering-Assisted Additive Manufacturing**  
[Pritam Patra<sup>1</sup>](#); <sup>1</sup>Indian Institute of Technology Delhi

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**A Novel 3D Printing Scheme for Lunar Construction with Extremely Low Binder Utilization**  
[Zifan Geng<sup>1</sup>](#); <sup>1</sup>Nanyang Technological University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Hybrid Feedforward-Feedback Process Control of Thermal History in Laser Powder Bed Fusion (LPBF) of Inconel 718 through Physics-Based Modeling and Real-Time In-Situ Sensor Data**  
[Kaustubh Deshmukh<sup>1</sup>](#); <sup>1</sup>Virginia Tech

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Part-Scale PBF-LB/M Simulation without Calibration: Advanced Material Modeling for First-Time-Right Manufacturing**  
[Stefan Brenner<sup>1</sup>](#); <sup>1</sup>University of the Bundeswehr Munich

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Real-Time Dynamic Force Prediction in Machining using Tooltip Acceleration and Interpretable Operator Learning**  
[Chin-Cheng \(Jim\) Shih<sup>1</sup>](#); <sup>1</sup>Texas A&M University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Strategies for Reducing the Impact of Process Interruptions in Laser-Based Powder Bed Fusion (PBF-LB/M)**  
[Martin Moser<sup>1</sup>](#); <sup>1</sup>University of the Bundeswehr Munich

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Comparing Corrosion Fatigue Behavior and Stress Corrosion Cracking of Direct Energy Deposition and Laser Powder Bed Fusion Print Strategies for Additively Manufactured 17-4PH Stainless Steel**  
[Cody Urso<sup>1</sup>](#); <sup>1</sup>University of Virginia

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**What Does it Take for the Printed Strength to Reflect the Material Strength in FDM? A Story of ULTEM 9085**  
[Colin Marquis<sup>1</sup>](#); <sup>1</sup>University of Washington

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Influence of Process Interruptions on the Mechanical Behavior of LPBF-Fabricated Stainless Steel 316L**  
[Tasrif Ul Anwar<sup>1</sup>](#); <sup>1</sup>Utah State University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Comparing the Microstructure of Inconel-GRCo 42 Dissimilar Joint fabricated by IR LDED versus Blue Laser LDED**  
[Nahal Ghanadi<sup>1</sup>](#); <sup>1</sup>Oregon State University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Supportless Overhangs: An Evaluation of Underlying Physics Elucidated by Process Control Software**  
[Austin Tiley<sup>1</sup>](#); <sup>1</sup>Ohio State University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Comprehensive Investigation of Mechanical Bandgaps in TPMS Lattice Structures**  
[Mohammad Shaaban<sup>1</sup>](#); <sup>1</sup>Texas A&M University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Effects of Build Orientation on Interfacial Formation Mechanisms for Highly Conductive Alloys via Multi-Material Laser Powder Bed Fusion**  
[Jacklyn Griffis<sup>1</sup>](#); <sup>1</sup>Pennsylvania State University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Temperature-Dependent Tensile Behaviors of Inconel 625: A Comparison Among Multiple Additive Manufacturing Processes**  
[Alireza Bidar<sup>1</sup>](#); <sup>1</sup>Auburn University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Polymer Concrete as a Joint Material for Modular Construction and 3D Printed Bridges**  
[Sammelan Pokharel<sup>1</sup>](#); <sup>1</sup>University of Nevada, Reno

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Relating Powder Properties to Part Performance in PBF Additive Manufacturing using Modulated Laser Thermal Interrogation (MLTI)**  
[Sina Ghadi<sup>1</sup>](#); <sup>1</sup>Binghamton University

**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Design of a Fatigue Test Bench for Drill Strings**  
[Kehinde Ogunjobi<sup>1</sup>](#); <sup>1</sup>Howard University

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**TBA**  
**STUDENT**  
ORAL NON-  
COMPETING

**Digital Twin of the Spreading Process in  
Metal Additive Manufacturing Based on the  
Discrete Element Method**  
[Olivier Gaboriault](#)<sup>1</sup>; <sup>1</sup>Polytechnique Montréal



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## STUDENT POSTER COMPETITION

06<sup>TH</sup> OCT 2025 (MON)

TIME: 17:15 TO 18:45 PM

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

STUDENT POSTER	Localized Mechanical Properties of Additively Manufactured Metallic Parts <a href="#">Prudhvi Raj Pola</a> <sup>1</sup> ; <sup>1</sup> Oklahoma State University
STUDENT POSTER	Hybrid Manufacturing through Adhesive Bonding of AM Sub-Components <a href="#">Michael Ascher</a> <sup>1</sup> ; <sup>1</sup> University of the Bundeswehr Munich
STUDENT POSTER	A Comprehensive Review of Hybrid Direct Energy Deposition Processes <a href="#">Daniyal Sayadi</a> <sup>1</sup> ; <sup>1</sup> University of North Carolina at Charlotte
STUDENT POSTER	Structural Evaluation of Hybrid Double Lap Shear Bolted Connections with Additive Manufactured Inner Plates <a href="#">Hasan Almuhanha</a> <sup>1</sup> ; <sup>1</sup> University of Sheffield
STUDENT POSTER	Hybrid Numerical and Machine Learning Approach for Residual Stress Prediction in LPBF: Incorporating Geometric Features via the Modified Inherent Strain Method <a href="#">Mehran Bagheri</a> <sup>1</sup> ; <sup>1</sup> University of North Carolina at Charlotte
STUDENT POSTER	Effects of Printing Defects on the Creep Behaviour of 316L SS Manufactured via Laser Powder Bed Fusion <a href="#">Raushan Singh</a> <sup>1</sup> ; <sup>1</sup> Utah State University
STUDENT POSTER	Electrospin-Coating of 3D-Printed Ti6Al4V Implants with Bio-Compatible Polymer Nanofibers <a href="#">Nthabiseng Nhlapo</a> <sup>1</sup> ; <sup>1</sup> Central University of Technology, Free State
STUDENT POSTER	Rheology-Driven Mixture Design of 3D Printable Lightweight Concrete: A Modified Excess Paste Theory Considering the Water Absorption Behavior of Porous Aggregate <a href="#">Hanbin Cheng</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University
STUDENT POSTER	A High-Throughput Approach to Speed Up Low Cycle Tensile-Fatigue Testing of Metals <a href="#">Mehedi Hasan Mahfuz</a> <sup>1</sup> ; <sup>1</sup> Utah State University
STUDENT POSTER	Joining Inconel 718 and GRCop42: A Framework for Developing Transition Compositions to Avoid Cracking and Brittle Phase Formation <a href="#">Tyler Finch</a> <sup>1</sup> ; <sup>1</sup> Oregon State University

STUDENT POSTER	Comparing Ultrasonic Gas Atomization (AMEZMET) to Standard Gas Atomized Metal Powders <a href="#">Mithrandir Eichner</a> <sup>1</sup> ; <sup>1</sup> Oregon State University
STUDENT POSTER	Additive Manufacturing for Roof Structures: Improving Geometric Accuracy, Design Flexibility, and Strength <a href="#">Gaurav Lunawat</a> <sup>1</sup> ; <a href="#">Shadi Nazarian</a> <sup>1</sup> ; <sup>1</sup> University of Texas at Arlington
STUDENT POSTER	Process-Microstructure-Property Comparison of C103 Wire DED via IR and Blue Laser <a href="#">Nicolene Gould</a> <sup>1,2</sup> ; <sup>1</sup> ATI; <sup>2</sup> Oregon State University
STUDENT POSTER	Using Shorter Wavelengths of Light for Improved Digital Image Correlation Measurements at High Magnifications <a href="#">Prasenjit Dewanjee</a> <sup>1</sup> ; <sup>1</sup> Utah State University
STUDENT POSTER	Processing Optimization and Microstructural Analysis of ODS Alloy Fabricated via Wire-Powder Laser Directed Energy Deposition with Advanced Computational Modeling Validation <a href="#">Seongun Yang</a> <sup>1</sup> ; <sup>1</sup> Oregon State University
STUDENT POSTER	Particle Bonding Optimization of Silica Sand through Additive Manufacturing <a href="#">Pablo Castrejon</a> <sup>1</sup> ; <sup>1</sup> University of Tennessee, Knoxville
STUDENT POSTER	Fatigue Life Prediction of AM Ti-6Al-4V under Multiaxial Loading Conditions: Experimental Validation and Crack Growth Modeling <a href="#">Mohammad Khaboushani</a> <sup>1</sup> ; <sup>1</sup> Auburn University - National Center for Additive Manufacturing Excellence
STUDENT POSTER	Investigating Creep Mechanisms in LPBF-Fabricated Haynes 282 at High Temperature <a href="#">Farin Khan Raisa</a> <sup>1</sup> ; <sup>1</sup> Utah State University
STUDENT POSTER	Performance of Additively Manufactured ZnMg for Biomedical Implant Applications <a href="#">Florian Fischer</a> <sup>1</sup> ; <sup>1</sup> RWTH Aachen University - Digital Additive Production
STUDENT POSTER	Fabrication of Durable and Inextensible Silicon Rubber Molds Tailored for High-Pressure Embossing of IR Transparent Materials <a href="#">Abolfazl Vaheb</a> <sup>1</sup> ; <sup>1</sup> University of Alberta
STUDENT POSTER	Contextual Guidance in Robotic for Long-Horizon Manipulation Tasks: An LLM-Powered Approach to Manufacturing Automation <a href="#">Mahdi Bonyani</a> <sup>1</sup> ; <sup>1</sup> Louisiana State University

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

<b>STUDENT POSTER</b>	<b>Multiaxial Fatigue of Additively Manufactured TPMS Lattice Structures: Experiments and Modeling</b> <a href="#">Krista Dyer</a> <sup>1</sup> ; <sup>1</sup> Auburn University	<b>STUDENT POSTER</b>	<b>Molecular Dynamics Investigation of Aluminium 5052 / Carbon Nanotube Interfaces in Friction Stir Processed Surface Composites</b> <a href="#">Shazman Nabi</a> <sup>1</sup> ; <sup>1</sup> National Institute of Technology Srinagar
<b>STUDENT POSTER</b>	<b>Microstructure of Cobalt Alloy Fabricated by Laser Wire Directed Energy Deposition</b> <a href="#">Marco Alvarado</a> <sup>1</sup> ; <sup>1</sup> Oregon State University	<b>STUDENT POSTER</b>	<b>Optimizing Pre-Processing of High-Performance Thermoplastics through Lyophilization</b> <a href="#">Brent Griffith</a> <sup>1</sup> ; <sup>1</sup> Labconco
<b>STUDENT POSTER</b>	<b>Large-Scale Printing of Wood Composites using a Multi-Axis 3D Printing System</b> <a href="#">Senami Hodonu</a> <sup>1</sup> ; <sup>1</sup> University of Idaho	<b>STUDENT POSTER</b>	<b>Fabricating a Photopolymeric Ceramic Slurry for Vat Photopolymerization</b> <a href="#">Otoniel Durán Hernández</a> <sup>1</sup> ; <sup>1</sup> Colorado State University
<b>STUDENT POSTER</b>	<b>Structure-Performance Relationships of Multi-Material Jetting Polymeric Composites Designed at the Voxel Scale: Distribution and Composition Effects</b> <a href="#">Niusha Daneshdoost</a> <sup>1</sup> ; <sup>1</sup> Duke University	<b>STUDENT POSTER</b>	<b>Crystal Plasticity Simulation of Fatigue Crack Initiation in Additively Manufactured Metallic Parts Characterized by Laboratory Diffraction Contrast Tomography</b> <a href="#">Indrajit Nandi</a> <sup>1</sup> ; <sup>1</sup> Auburn University - National Center for Additive Manufacturing Excellence
<b>STUDENT POSTER</b>	<b>Feasibility Study of Ti-6Al-4V Additive Manufacturing Process Characterization for Point of Care Manufacturing</b> <a href="#">Shivangi Sarkar</a> <sup>1,2</sup> ; <sup>1</sup> Mayo Clinic; <sup>2</sup> Arizona State University	<b>STUDENT POSTER</b>	<b>Improving the Buildability of Enclosed 3D Concrete Printed Structures: A Simulation-Driven Design Approach</b> <a href="#">Nusrat Tabassum</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University
<b>STUDENT POSTER</b>	<b>Characterizing Spatial Variations in Spatter in LPBF of Ti-6Al-4V: Towards Predicting Spatter-Related Defects using Machine Learning</b> <a href="#">Daniel Lund</a> <sup>1</sup> ; <sup>1</sup> University of Washington	<b>STUDENT POSTER</b>	<b>Fatigue Crack Growth Behavior of Additively Manufactured Aluminum Alloys</b> <a href="#">Mikyle Paul</a> <sup>1</sup> ; <sup>1</sup> Auburn University
<b>STUDENT POSTER</b>	<b>Dynamic Fluid-Assisted Continuous Multi-Material 3D Printing for Seamless Gradient Structures</b> <a href="#">Yao Wang</a> <sup>1</sup> ; <sup>1</sup> Arizona State University	<b>STUDENT POSTER</b>	<b>3D Printing with Ready Mix Concrete</b> <a href="#">Masoud Forsat</a> <sup>1</sup> ; <sup>1</sup> Oklahoma State University
<b>STUDENT POSTER</b>	<b>Study of Permeability and Hydrogen Embargobility of 18%Ni Ferrous Alloys Obtained by Continuous Casting and Additive Manufacturing</b> <a href="#">Andreia de Souza Martins Cardoso</a> <sup>1</sup> ; <sup>1</sup> São Paulo State University	<b>STUDENT POSTER</b>	<b>Integrating Physics Informed Machine Learning and Experiments for Predictive Modeling in Metal Additive Manufacturing</b> <a href="#">Mohamed Fattouh</a> <sup>1</sup> ; <sup>1</sup> Texas A&M University
<b>STUDENT POSTER</b>	<b>Adhesive Reinforced 3D Printed Spicule Inspired Cylinders for Superior Fracture Toughness</b> <a href="#">Armaghan Hashemi Monfared</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University	<b>STUDENT POSTER</b>	<b>Additive Manufacturing of Cu-30Ni: Comparing Microstructural Evolution and Mechanical Performance in W-DED and LPBF</b> <a href="#">Debasis Rath</a> <sup>1</sup> ; <sup>1</sup> University of Pittsburgh
<b>STUDENT POSTER</b>	<b>Bandgap Formation and Tuning in Gyroid Lattice Structures: Simulations and Experiments</b> <a href="#">Mohammad Shaaban</a> <sup>1</sup> ; <sup>1</sup> Texas A&M University	<b>STUDENT POSTER</b>	<b>Simulation-Driven Optical Inspection Optimization for Sub-30nm Particle Detection in Semiconductor Manufacturing</b> <a href="#">Hyoseop Shin</a> <sup>1,2</sup> ; <sup>1</sup> Sungkyunkwan University; <sup>2</sup> Samsung Electronics
<b>STUDENT POSTER</b>	<b>Multi-Material Laser Powder Bed Fusion: Effects of Build Orientation on Defects, Material Structure and Mechanical Properties</b> <a href="#">Jacklyn Griffis</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University	<b>STUDENT POSTER</b>	<b>Toward Field-Ready UHPC for Underwater 3D Printing: Evaluating the Effect of Temperature on Rheological and Mechanical Behavior</b> <a href="#">Masoud Pasbani</a> <sup>1</sup> ; <sup>1</sup> Louisiana State University

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## INDUSTRIAL SECTOR

### AVIATION

06<sup>TH</sup> OCT 2025 (MON) – 08<sup>TH</sup> OCT 2025 (WED)

#### CO-ORGANIZERS:

**Cindy Ashforth**  
Federal Aviation  
Administration, USA

**Daniel Braley**  
Precision Additive Solutions,  
USA

**Tamas Havar**  
Gulfstream Aerospace,  
USA

**Bradley Hughes**  
GKN Aerospace, United  
Kingdom

**Morgan Mader**  
Joby Aviation, USA

**Simone Romano**  
Avio Aero, USA

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

SESSION CHAIR (AM SESSION):  
TBA

**AM  
REGULAR** Ensuring Additive Manufacturing  
Consistency: A Multi-Batch Evaluation of  
Microstructure and Mechanical  
Performance  
[Abdulcelil Bayar](#)<sup>1</sup>; <sup>1</sup>Turkish Aerospace

**AM  
REGULAR** Characterizing and Qualifying Parts to MIL-  
STD-1587 for Semi-Critical Applications  
[David Wickersham](#)<sup>1</sup>; <sup>1</sup>TRIUMPH

**AM  
INVITED** Certification Paths and Market Response to  
No- / Low-Criticality AM Parts in Aircraft  
Cabins  
[Pärtel-Peeter Kruuv](#)<sup>1</sup>; <sup>1</sup>AM Craft

**AM  
INVITED** Overview of Current Problems Hindering  
Qualification and Certification of Laser  
Powder Bed Fusion (LPBF) for Aerospace  
Applications & Proposed Solutions  
[Daniel Braley](#)<sup>1</sup>; <sup>1</sup>Precision Additive Solutions

**AM  
INVITED** FAA Lessons Learned from the JMADD  
Program  
[Cindy Ashforth](#)<sup>1</sup>; <sup>1</sup>Federal Aviation  
Administration

**AM  
INVITED** A Proposal for Cost Effective Quality  
Assurance - The Use of Statistical Process  
Control in Additive Manufacturing to  
Sample Non-Destructive Testing  
[Josef Spachtholz](#)<sup>1</sup>; <sup>1</sup>MTU Aero Engines

**AM  
REGULAR** Deploying Process Compensated  
Resonance Testing (PCRT) for Additive  
Manufacturing Qualification in Aviation:  
Enhancing and Integrating Next-Generation  
Q&C Practices  
[Jim Colovos](#)<sup>1</sup>; <sup>1</sup>Vibrant

SESSION CHAIR (PM SESSION):  
TBA

**PM  
INVITED** Joint Metal Additive Database Definition  
(JMADD): Ti-6Al-4V Baseline Qualification  
and Expansion Activities  
[Neville Kuang Yu Tay](#)<sup>1</sup>; <sup>1</sup>Wichita State  
University - National Institute for Aviation  
Research

**PM  
INVITED** B-Basis Allowables Qualification for FGF  
Processed ESD-PEKK  
[Felix Tran](#)<sup>1</sup>; [Krysten Minnici](#)<sup>2</sup>; <sup>1</sup>Eaton;  
<sup>2</sup>Arkema

**PM  
INVITED** Additively Manufactured Metallic Material  
Allowables - MMPDS Progress & Lessons  
Learned  
[Doug Hall](#)<sup>1</sup>; <sup>1</sup>Battelle Memorial Institute

**PM  
INVITED** Composite Materials Handbook (CMH-17)  
Volume 7 on Non-Metallic Additive  
Manufacturing  
[Teresa Vohsen](#)<sup>1</sup>; <sup>1</sup>Wichita State University -  
National Institute for Aviation Research

**PM  
REGULAR** Nadcap Program Developments in Metallic  
& Non-Metallic Additive Manufacturing  
[Richard Freeman](#)<sup>1</sup>; <sup>1</sup>Performance Review  
Institute

**PM  
REGULAR** SAE G-37 Committee, Process Intensive  
Materials Certification Guidance Update  
[Shane Nicholson](#)<sup>1</sup>; <sup>1</sup>Parker Aerospace

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

SESSION CHAIR (AM SESSION):  
TBA

**AM  
REGULAR** Next-Generation Turboprop Engine  
Development: High-Performance Turbine  
Design and Advanced Cooling Hole  
Manufacturing  
[Krzysztof Klimek](#)<sup>1</sup>; [Marcin Trajer](#)<sup>1</sup>; <sup>1</sup>GE  
Aerospace

**AM  
REGULAR** Development of the Advanced Turboprop  
Engine Power Turbine Containing 3D  
Printed Hardware  
[Michał Hetlof](#)<sup>1</sup>; <sup>1</sup>GE Aerospace

**AM  
INVITED** Circularity in Aviation - Recycling Parts for  
Resilience and Environmental  
Sustainability Following the "Tornado 2  
Tempest" Program  
[Robert Higham](#)<sup>1</sup>; <sup>1</sup>Additive Manufacturing  
Solutions

**AM  
INVITED** The Successful Story of the Fabricated Fan  
Case Mount Ring - From Idea to  
Industrialization  
[Andreas Andersson](#)<sup>1</sup>; <sup>1</sup>GKN Aerospace

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# ICAM25

**AM INVITED** How to Reach 10x Capacity Before 2027 through Convergent Multi-Modalities Additive Manufacturing Systems  
[Steve Fournier](#)<sup>1</sup>; <sup>1</sup>General Atomics - Aeronautical Systems

**AM REGULAR** Aircraft Repair of AI Components with Cold Spray while using Economic Nitrogen as Propelling Gas  
[Markus Brotsack](#)<sup>1</sup>; <sup>1</sup>Impact Innovations

**AM REGULAR** Waste Heat Recovery Heat Exchanger for Next-Gen Propulsion  
[Brian Fisher](#)<sup>1</sup>; <sup>1</sup>RTX Technology Research Center

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**SESSION CHAIR (PM SESSION):**  
TBA

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**PM INVITED** Large Scale AM of Ti6Al4V for Aerospace Application at GKN Aerospace - M&P Perspective  
[Alphons Antonysamy](#)<sup>1</sup>; <sup>1</sup>GKN Aerospace

**PM INVITED** The Impact of Process Size Effects on the Mechanical Performance of Laser Powder Bed Fusion Ti-6Al-4V  
[Subbarao Raikar](#)<sup>1</sup>; <sup>1</sup>Joby Aviation

**PM INVITED** Machine Learning-Improved X-CT Detection of Fatigue Critical Defects in AM Alloys  
[Stefano Beretta](#)<sup>1,2</sup>; <sup>1</sup>Politecnico di Milano; <sup>2</sup>Auburn University

**PM REGULAR** Effect of Process Variable Drift within Tolerances on the Mechanical Behavior of Laser Powder Bed Fused Ti-6Al-4V  
[Sajith Soman](#)<sup>1</sup>; <sup>1</sup>Auburn University

**PM REGULAR** Leveraging Machine Learning for Porosity Prediction in AM using FDM for Pretrained Models and Process Development  
[Khadija Ouajjani](#)<sup>1</sup>; <sup>1</sup>Wichita State University - National Institute for Aviation Research

**PM REGULAR** Fully Automated Inspection, Damage Detection, and Decision-Making for Aeroengine Compressor Blades and Repair Geometry Generation by Morphing the CAD-Data on Actual Blade Condition Ready for Export to Any AM Technology  
[Simon Feicks](#)<sup>1</sup>; <sup>1</sup>additiveStream4D

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**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

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**AM REGULAR** Genetic Design of Maraging Steels and Nickel-Based Superalloys for Additive Manufacturing  
[Pedro Rivera](#)<sup>1</sup>; <sup>1</sup>University of Southampton

**AM REGULAR** High Strength Aluminium Laser Powder Bed Fusion (LPBF) Development  
[Guillaume Fallot](#)<sup>1</sup>; <sup>1</sup>Airbus Helicopters

**AM INVITED** Treating Aerospace Surfaces: Coatings and Laser Peening  
[Lloyd Hackel](#)<sup>1</sup>; <sup>1</sup>Curtiss-Wright Surface Technologies - Metal Improvement Company

**AM INVITED** Facilitating Aerospace Innovation Arburg Plastic Freeforming Technology  
[Sean Dsilva](#)<sup>1</sup>; <sup>1</sup>ARBURG

**AM INVITED** AI-Driven Design Optimization for Additive and Subtractive Manufacturing in Aerospace Applications  
[Michael Bogomolny](#)<sup>1</sup>; <sup>1</sup>InfiniTForm

**AM INVITED** Automate Advanced Aerospace Part Engineering: Discover Cognitive Design, A Generative Concurrent Engineering Platform Accelerating Complex Product Developments  
[Rhushik Matroja](#)<sup>1</sup>; <sup>1</sup>Cognitive Design Systems

**AM REGULAR** Ecological Optimization of Hybrid Manufacturing, using Energy Simulation in Eco-Design, As Well As a Modified Topsis Approach for Multi-Criteria Decision Making  
[Susanne Hemes](#)<sup>1</sup>; <sup>1</sup>Access

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# ICAM25

## INDUSTRIAL SECTOR

### CONSTRUCTION ON EARTH AND BEYOND

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Ramona Fayazfar**  
Ontario Tech University,  
Canada

**Islam Mantawy**  
Rowan University, USA

**Timothy Wangler**  
ETH Zürich, Switzerland

**Ali Kazemian**  
Louisiana State University,  
USA

**Ming Jen Tan**  
Nanyang Technological  
University, Singapore

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Hardened Property Testing of Extracted Additively Constructed Concrete  
[Hunter Starr<sup>1</sup>](#); [Robert Devine<sup>1</sup>](#); <sup>1</sup>Wiss, Janney, Elstner Associates

**AM REGULAR** Shotcrete 3D Printing: Transforming Construction, Layer by Layer  
[Robin Dörrie<sup>1</sup>](#); <sup>1</sup>Technical University of Braunschweig

**AM INVITED** Construction on Earth and Beyond  
[Francesca Moretti<sup>1</sup>](#); <sup>1</sup>WASP

**AM INVITED** Balancing Materials Design with Real-World Expectations: A Reality Check for 3DCP  
[Dominic Jampo<sup>1</sup>](#); <sup>1</sup>Heidelberg Materials

**AM INVITED** Development of Low-Carbon Digital Cast Concrete via Static Mixing  
[Yaxin Tao<sup>1,2</sup>](#); <sup>1</sup>ETH Zürich; <sup>2</sup>Tongji University

**AM INVITED** Additively Constructed Hempcrete Structures for Sustainability and Resilience  
[Petros Sideris<sup>1</sup>](#); <sup>1</sup>Texas A&M University

**AM INVITED** Sustainability in Construction 3D Printing  
[Ming Jen Tan<sup>1</sup>](#); <sup>1</sup>Nanyang Technological University

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Additive Construction of Concrete Structures: Bridging Research and Practice  
[José Pinto Duarte<sup>1,2</sup>](#); <sup>1</sup>Pennsylvania State University; <sup>2</sup>X-Hab 3D

**PM INVITED** Additive Manufacturing for Underwater Construction: Challenges, Innovations, and Future Directions  
[Yen-Fang Su<sup>1</sup>](#); <sup>1</sup>Louisiana State University

**PM REGULAR** Additively Constructed Seismic Protective Bridge System  
[Islam Mantawy<sup>1</sup>](#); <sup>1</sup>Rowan University

**PM REGULAR** Structural Performance of Multi-Material Topology Optimized 3D-Printed Reinforced Concrete Beams  
[Humayun Basha Syed<sup>1</sup>](#); <sup>1</sup>Huaqiao University

**PM REGULAR** From Prescription to Prediction: Leveraging Data-Driven Certification for Performance-Engineered Cementitious Materials  
[Nick Sonnentag<sup>1</sup>](#); <sup>1</sup>Sunnyday Technologies

**PM INVITED** Tor Alva - The Tallest 3D Printed Structure in the World: Material and Process Development  
[Timothy Wangler<sup>1</sup>](#); <sup>1</sup>ETH Zürich

09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Printing Concrete Like Plastic - On-Demand Setting of Concrete for 3D Printing  
[Shravan Muthukrishnan<sup>1</sup>](#); <sup>1</sup>Dresden University of Technology

**AM REGULAR** Advancing Additive Manufacturing with Sustainable Geopolymer Materials and Equipment for 3D Construction Printing  
[Jose Emiliano<sup>1</sup>](#); [Tarek Maassarani<sup>1</sup>](#); <sup>1</sup>Geopolymer International

**AM INVITED** Innovation through Participatory Customization - Could Non-Speculative Co-Operative Housing and Additive Manufacturing be Mutually Beneficial Partners for Experimentation?  
[Sascha Delz<sup>1</sup>](#); <sup>1</sup>University of Southern California

**AM INVITED** Robotics and Automation for Complex Systems Integration in Buildings and Energy Generation, Storage, and Distribution Infrastructure on Earth and Beyond  
[Naveen Kumar Muthumanickam<sup>1</sup>](#); <sup>1</sup>National Renewable Energy Laboratory

**AM INVITED** The New 3DCP Moonshot: How the Commercial Sector is Advancing Additive Manufacturing  
[Zachary Mannheimer<sup>1</sup>](#); <sup>1</sup>Alquist

**AM INVITED** Closing the Loop: Eco-Friendly 3D Printing Construction with Waste-Derived Materials  
[Ramona Fayazfar<sup>1</sup>](#); <sup>1</sup>Ontario Tech University

**AM REGULAR** Resilient Indigenous Infrastructure Materials for 3DP Construction  
[Hunain Alkhateb<sup>1</sup>](#); <sup>1</sup>University of Mississippi

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# ICAM25

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## SESSION CHAIR (PM SESSION):

TBA

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|-----------------------|---|
| <b>PM<br/>INVITED</b> | <b>Additively Manufactured Seismic Metal Fuses for Braced Frames</b><br><a href="#">Islam Mantawy</a> <sup>1</sup> ; <sup>1</sup> Rowan University  |
| <b>PM<br/>INVITED</b> | <b>Metal 3D-Printed Diamond-Shaped Lattice Steel Structural Elements: Design Concept and Structural Behavior</b><br><a href="#">Giada Gasparini</a> <sup>1</sup> ; <a href="#">Vittoria Laghi</a> <sup>1</sup> ; <sup>1</sup> University of Bologna         |
| <b>PM<br/>INVITED</b> | <b>Investigation of Sustainable and High-Performance Thermoplastic Materials for Architectural and Construction Applications via Robotic Large Format Additive Manufacturing</b><br><a href="#">Fabio Caltanissetta</a> <sup>1</sup> ; <sup>1</sup> Caracol |
| <b>PM<br/>REGULAR</b> | <b>Robotic 3D Printing of Clay-Hemp Based Structural Wall for the Sustainable Construction Industry</b><br><a href="#">Eden Binega Yemesegen</a> <sup>1,2</sup> ; <sup>1</sup> Simpson Gumpertz & Heger; <sup>2</sup> Pennsylvania State University         |
| <b>PM<br/>REGULAR</b> | <b>Revolutionizing Concrete Quality Control with IoT and Machine Learning</b><br><a href="#">Jaymi Fridley</a> <sup>1</sup> ; <sup>1</sup> Verifi   |
| <b>PM<br/>REGULAR</b> | <b>Computer Vision to Control Interlayer Bond Quality in 3DCP</b><br><a href="#">Rakesh Khan</a> <sup>1</sup> ; <sup>1</sup> ARTx   |
| <b>PM<br/>REGULAR</b> | <b>Digital Image Correlation Analysis of 3D Printed Concrete Walls under Reversed In-Plane Cyclic Lateral Loading</b><br><a href="#">Mohammad Aghajani Delavar</a> <sup>1</sup> ; <sup>1</sup> Walker Consultants   |

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**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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## SESSION CHAIR (AM SESSION):

TBA

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|-----------------------|--|
| <b>AM<br/>REGULAR</b> | <b>AI-Enhanced Robotic Fabrication of Customizable Ceramic Facade Modules for Passive Cooling Applications</b><br><a href="#">Eleni Stefania Kalapoda</a> <sup>1</sup> ; <sup>1</sup> Columbia University - Graduate School of Architecture, Planning and Preservation |
| <b>AM<br/>REGULAR</b> | <b>Construction Robotic 3D Print Concrete Commercialization Now and General Purpose AI Powered Giantroids for Future</b><br><a href="#">Ziyou Xu</a> <sup>1</sup> ; <sup>1</sup> RIC Robotics  |
| <b>AM<br/>INVITED</b> | <b>Telerobotic Fabrication in Extreme Environments: Remote Control and Monitoring Schemes</b><br><a href="#">Ali Kazemian</a> <sup>1</sup> ; <sup>1</sup> Louisiana State University   |

**AM  
INVITED**

**Autonomous Mobile 3D Construction for Contingency Infrastructure: A Systems-Level Approach to Military Hardening and Rapid Deployment**  
[Bruce Kraselsky](#)<sup>1</sup>; <sup>1</sup>X-Hab 3D

**AM  
INVITED**

**Using Robotic Crawler 3D Concrete Printing to Expand Industrialized Construction Capabilities in Virginia**  
[Andrew McCoy](#)<sup>1</sup>; <sup>1</sup>Virginia Tech - Virginia Center for Housing Research

**AM  
INVITED**

**Real-Life Lessons from Modular Development, Design, and Construction**  
[Derek Leavitt](#)<sup>1</sup>; <sup>1</sup>Ehrlich Yanai Rhee Chaney Architects

**AM  
INVITED**

**3D AIT Housing Program - Complexities and Realities**  
[Pete Evans](#)<sup>1</sup>; <sup>1</sup>Iowa State University

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## INDUSTRIAL SECTOR

### DEFENSE

06<sup>TH</sup> OCT 2025 (MON) – 07<sup>TH</sup> OCT 2025 (TUE)

#### CO-ORGANIZERS:

**Jesse Boyer**  
Pratt & Whitney, USA

**Fernando Lasagni**  
Novaindef, Spain

**Cindy Waters**  
Naval Surface Warfare Center  
- Carderock Division, USA

**Sascha Hartig**  
Germany Navy, Germany

**Travis Mayberry**  
Divergent, USA

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** America Makes' Roadmap Advisory Group: Current Vision of Advancing Additive Manufacturing and a Path Forward  
[John Martin](#)<sup>1,2</sup>; [Andrew Thompson](#)<sup>3</sup>; <sup>1</sup>America Makes; <sup>2</sup>National Center for Defense Manufacturing and Machining; <sup>3</sup>Northrop Grumman

**AM REGULAR** ColdMetalFusion - Titanium Part for Defense Applications  
[John Calhoun](#)<sup>1</sup>; <sup>1</sup>CADmore Metal

**AM INVITED** We Build Giants, Additive Manufacturing in Naval Applications  
[Cynthia Waters](#)<sup>1</sup>; <sup>1</sup>Naval Surface Warfare Center - Carderock Division

**AM INVITED** Additive Manufacturing Qualification Approach for the UK's Submarines  
[Anna Tholen](#)<sup>1</sup>; <sup>1</sup>Ministry of Defence - Submarine Delivery Agency

**AM INVITED** Strengthening Operational Capabilities through Additive Manufacturing in the Spanish Armed Forces  
[Fernando Lasagni](#)<sup>1</sup>; <sup>1</sup>Novaindef

**AM INVITED** Scaling Decentralized Additive Manufacturing in Operational Environments  
[Véronique Zijlstra](#)<sup>1</sup>; <sup>1</sup>Fieldmade

**AM INVITED** Advancements in Additive Manufacturing - Challenges and Opportunities for Defense  
[Heiko Blunk](#)<sup>1</sup>; <sup>1</sup>Fraunhofer IAPT

**AM REGULAR** Snowbird Technologies' Supports US Navy Exercises with DED Manufacturing Platform  
[Jeremy Heerdink](#)<sup>1</sup>; <sup>1</sup>Snowbird Technologies

**AM REGULAR**

**Military Drone Technology: Using Additive and Advanced Manufacturing to Enhance Capabilities**  
[Benjamin Wolf](#)<sup>1</sup>; <sup>1</sup>Bundeswehr (German Armed Forces)

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** NoviVision: Novineer's AI-Enhanced Reverse Engineering for Maintenance, Repair, and Overhaul  
[Ali Tamijani](#)<sup>1,2</sup>; <sup>1</sup>Novineer; <sup>2</sup>Embry-Riddle Aeronautical University

**PM INVITED** Nikon Advanced Manufacturing Ecosystem to Enable and Scale the Defense Industrial Base on U.S. Soil  
[Behrang Poorganji](#)<sup>1</sup>; <sup>1</sup>Nikon AM

**PM INVITED** Securing the Frontline: Strategic Applications and Risks of 3D Printing in Military Operations  
[Jiří Průša](#)<sup>1</sup>; <sup>1</sup>Prusa Research

**PM REGULAR** Reactive Extrusion Additive Manufacturing using Thermoset Polyurethane for Spare Parts in Military-Maritime Applications  
[Fabian Mussbach](#)<sup>1</sup>; <sup>1</sup>Helmut Schmidt University / University of the Federal Armed Forces Hamburg

**PM REGULAR** Enterprise AI Integration: Revolutionizing America's Defense Industrial Base through Intelligent Manufacturing  
[Ivan Madera](#)<sup>1</sup>; <sup>1</sup>Adaptiv AI

**PM REGULAR** Additive Manufacturing in Army Ground Vehicles - Air Inlet Duct Case Study  
[Tad Steinberg](#)<sup>1</sup>; <sup>1</sup>Siemens Energy

**PM INVITED** Successes and Challenges of AM in Military Aerospace Sustainment  
[Joe Ott](#)<sup>1</sup>; <sup>1</sup>Pratt & Whitney

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** A Performance-Based Approach to Metal AM Qualification  
[Mark Shaw](#)<sup>1</sup>; <sup>1</sup>Wichita State University - National Institute for Aviation Research

**AM REGULAR** GMA-DED Alloy 625 for Critical Defense Applications  
[Edward Peterson](#)<sup>1</sup>; <sup>1</sup>Laser Welding Solutions

**AM INVITED** CuNi10 Development for Defense Applications using Laser Powder Bed Fusion Technology  
[Alex Garcia Olcoz](#)<sup>1</sup>; <sup>1</sup>Renishaw

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# ICAM25

- AM INVITED** **NCAMP-DRAM: A New Center Formed for the Rapid Publication of Advanced Materials Databases for US Defense Interests**  
[Rachael Andrulonis](#)<sup>1</sup>; <sup>1</sup>Wichita State University - National Institute for Aviation Research
- AM INVITED** **Unique Advantage of LPBF-AM, Unlocking Alloy Performance with Breakthrough Improvement**  
[Youping Gao](#)<sup>1</sup>; <sup>1</sup>Castheon
- AM INVITED** **Understanding Fatigue Behavior in Additively Manufactured Nickel Aluminum Bronze**  
[Aeriel Leonard](#)<sup>1</sup>; <sup>1</sup>Ohio State University
- AM INVITED** **Innovative Chemical Approach for Mitigating Internal Channel Obstructions in Metal Additive Manufacturing Heat Exchangers**  
[Hunter Rauch](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University - Applied Research Laboratory
- AM INVITED** **Growing Confidence in Ahead CP1 Aluminum using LPBF Technology for Real World Applications including Casting Replacements in Defense**  
[Ravi Shahani](#)<sup>1</sup>; <sup>1</sup>Constellium

- PM INVITED** **Enhancing Defense Readiness through Directed Energy Deposition: Meltio's AM Technology in Action**  
[Alejandro Nieto Jiménez](#)<sup>1</sup>; <sup>1</sup>Meltio

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## SESSION CHAIR (PM SESSION):

TBA

- PM INVITED** **AI-Enhanced Additive Manufacturing for Rapid Deployment of High-Quality Defence Spare Parts**  
[Gregor Reischle](#)<sup>1</sup>; <sup>1</sup>Qualified AM
- PM INVITED** **Qualifying Elastomers in Defense Applications: From Propellant to Spare Parts**  
[Cora Leibig](#)<sup>1</sup>; <sup>1</sup>Chromatic 3D Materials
- PM INVITED** **Plasma Arc Manufacturing for Aerospace and Defense**  
[Reece Fiebich](#)<sup>1</sup>; <sup>1</sup>Coronal Technologies
- PM REGULAR** **Application of Additive Manufacturing to Armament Systems**  
[Alexandra Vest](#)<sup>1</sup>; <sup>1</sup>U.S. Army Combat Capabilities Development Command - Armaments Center (Benét Laboratories)
- PM REGULAR** **Standardizing Process Compensated Resonance Testing (PCRT) for Additive Manufacturing Across Defense Platforms**  
[Jim Colovos](#)<sup>1</sup>; <sup>1</sup>Vibrant
- PM REGULAR** **Deployable In-Situ Additive Manufacturing and Repair with Molten Metal Deposition Technology**  
[Jan De Pauw](#)<sup>1</sup>; <sup>1</sup>ValCUN

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# ICAM25

## INDUSTRIAL SECTOR

### ENERGY, MARITIME, AND OIL & GAS

06<sup>TH</sup> OCT 2025 (MON) – 07<sup>TH</sup> OCT 2025 (TUE)

#### CO-ORGANIZERS:

**Ali Bonakdar**  
University of North Carolina  
at Charlotte, USA

**Soumya Nag**  
Oak Ridge National  
Laboratory, Italy

**Yash Parikh**  
EOS, USA

**Isabella van Rooyen**  
Pacific Northwest National  
Laboratory, USA

**Carlo De Bernardi**  
ConocoPhillips, USA

**Igor Ortiz**  
Ikergune / Etxetar, Spain

**Valeria Tirelli**  
AIDRO, Italy

**Mostafa Yakout**  
University of Alberta,  
Canada

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Framework for Qualification Testing of Additively Manufactured Components in the Energy Industry  
[Dave Waldbillig](#)<sup>1</sup>; <sup>1</sup>InnoTech Alberta

**AM REGULAR** Application-Based Corrosion Performance Study of SS316L, SS410L, Inconel 625, and Inconel 718 Alloys for Valve Components in Oil and Gas Environments  
[Ankit Sahu](#)<sup>1</sup>; <sup>1</sup>Objectify Technologies

**AM INVITED** Setting the Benchmark: Additive Manufacturing Standards in the Oil and Gas Industry  
[Andrew Duggan](#)<sup>1</sup>; Satya Ganti<sup>1</sup>; <sup>1</sup>Baker Hughes

**AM INVITED** Manufacturing a New Paradigm  
[Charles Fisher](#)<sup>1</sup>; <sup>1</sup>Office of Naval Research

**AM INVITED** Large Scale Additive Manufacturing for Supply Chain Resilience and Sustainability  
[Pin Lu](#)<sup>1</sup>; <sup>1</sup>Solvus Global

**AM INVITED** Convergent Manufacturing of Large-Scale Components for Nuclear Applications  
[Soumya Nag](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**AM REGULAR** Qualification of Additively Manufactured Alloy 718 in Sour Service Environment - A Printing / Heat Treatment Optimization Approach  
[Hernan Rincon](#)<sup>1</sup>; [Sid Raje](#)<sup>2</sup>; <sup>1</sup>ConocoPhillips; <sup>2</sup>Velo3D

**AM REGULAR** Building Blocks for Additive Manufacturing Safe Adoption on Critical Parts for Oil & Gas Subsea Applications  
[Victor Hugo Oliveira](#)<sup>1</sup>; <sup>1</sup>TechnipFMC

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Impact of AM Processing of a Low Emission Steel Powder on Material Properties and Sustainability of a Final Component  
[Hanna Nilsson Åhman](#)<sup>1</sup>; <sup>1</sup>SSAB

**PM INVITED** Driving Sustainability through Additive Manufacturing: Life Cycle Assessment in the Production of Hydraulic Components  
[Stefania Cacace](#)<sup>1</sup>; <sup>1</sup>Politecnico di Milano

**PM INVITED** Industrial Gas Turbines Decarbonization Triggered by Additive Manufacturing  
[Vladimir Navrotsky](#)<sup>1</sup>; <sup>1</sup>Siemens Energy

**PM REGULAR** From Physical Stock to Digital Warehouse: Transforming Supply Chain in Energy Industry  
[Faisal Iqbal](#)<sup>1</sup>; [Mitchell Loyd](#)<sup>2</sup>; <sup>1</sup>Baker Hughes; <sup>2</sup>Woodside Energy

**PM REGULAR** Cold Metal Fusion for Impeller Manufacturing: Enhancing Efficiency and Performance through an Integrated Additive Manufacturing Approach  
[Marcel Strobel](#)<sup>1</sup>; <sup>1</sup>Headmade Materials

**PM REGULAR** Productivity Enhancement of PBF-LB/M by Laser Beam Defocusing: A Review on In-Situ Alloy 718 Microstructure and Properties  
[Niccolò Baldi](#)<sup>1</sup>; [Lokesh Chandrabalan](#)<sup>1</sup>; <sup>1</sup>Baker Hughes

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Gas Turbine Isolation Rings - Successful Transition From Conventional to AM  
[Tad Steinberg](#)<sup>1</sup>; <sup>1</sup>Siemens Energy

**AM REGULAR** Additive Manufacturing of WC-Reinforced Metal Matrix Composites via Laser Powder Bed Fusion for Wear-Resistant Applications  
[Dave Waldbillig](#)<sup>1</sup>; <sup>1</sup>InnoTech Alberta

**AM INVITED** Blisk Repair Automation by Laser Powder Directed Energy Deposition  
[Igor Ortiz](#)<sup>1,2</sup>; <sup>1</sup>Ikergune; <sup>2</sup>Etxetar

**AM INVITED** Dynamic Beam Laser (DBL) for Metal AM & Welding  
[Stan Guthrie](#)<sup>1</sup>; <sup>1</sup>Civan Lasers

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# ICAM25

**AM**  
**INVITED** **Extreme High-Speed Laser Material Deposition (EHLA) as a Key Technology in the Energy Sector: A Technical Overview**  
[Viktor Glushych](#)<sup>1</sup>; <sup>1</sup>Fraunhofer ILT

**AM**  
**INVITED** **The Application of Additive Manufacturing Technology to Korea Independent Model of Gas Turbine**  
[Jiwon Lee](#)<sup>1</sup>; <sup>1</sup>Doosan Enerbility

**AM**  
**REGULAR** **Big Parts, Lean Setup: Qualification Requirements for Large-Scale WAAM**  
[Filippo Gilardi](#)<sup>1</sup>; <sup>1</sup>MX3D

**AM**  
**REGULAR** **Superior Magnetic Properties in Structurally-Tailored 3D-Printed Electric Motor Cores**  
[Paria Karimi](#)<sup>1</sup>; <sup>1</sup>OptiFab Technologies

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## SESSION CHAIR (PM SESSION):

TBA

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**PM**  
**INVITED** **Advanced Manufactured A709 Material Fabrication and Response to High Temperature Ion Irradiation**  
[Isabella van Rooyen](#)<sup>1</sup>; <sup>1</sup>Pacific Northwest National Laboratory

**PM**  
**INVITED** **Progress Toward Deploying PM-HIP Alloys for Nuclear Energy Applications**  
[Janelle Wharry](#)<sup>1</sup>; <sup>1</sup>University of Illinois Urbana-Champaign

**PM**  
**INVITED** **Effect of Post-Build Heat Treatment on Mechanical Behavior of LBPF Cu-30Ni-Nb**  
[Zachary Harris](#)<sup>1</sup>; <sup>1</sup>University of Pittsburgh

**PM**  
**REGULAR** **Effects of WAAM Process Parameters on Carbon Steel's Surface Finish and the Resulting Performance of Coatings for Sub-Sea Applications**  
[Afif Batal](#)<sup>1</sup>; <sup>1</sup>DEEP Manufacturing

**PM**  
**REGULAR** **Effects of Post-Heat Treatment on the Microstructure and Mechanical Properties of Wire Arc Additively Manufactured Nickel Aluminum Bronze**  
[Selda Nayir](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**PM**  
**INVITED** **Surface Finishing of Haynes® 282 Superalloy using Chemical and Chemical-Mechanical Polishing**  
[Joshua Boykin](#)<sup>1</sup>; <sup>1</sup>REM Surface Engineering

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# ICAM25

## INDUSTRIAL SECTOR

### GROUND TRANSPORTATION AND HEAVY MACHINERY

06<sup>TH</sup> OCT 2025 (MON)

#### CO-ORGANIZERS:

**Pascal De Guio**  
SNCF Reseau, France

**Ante Lausic**  
General Motors, USA

**Thierry Marchione**  
Caterpillar, USA

**Diego Montoya-Zapata**  
Etxetar, Spain

**Linus Tillmann**  
Mobility goes Additive,  
Germany

PM  
**REGULAR**

**Polymer and Metal Additive Manufacturing with Continuous Fiber Injection Process as a Post Process for Rail Infrastructure Spare Part Production**  
[Pascal De Guio<sup>1</sup>](#); [Philippe Kuchly<sup>1</sup>](#); <sup>1</sup>SNCF Réseau

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06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

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#### SESSION CHAIR (AM SESSION):

TBA

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**AM REGULAR**     **Leveraging AI to Reduce Product Cost and Carbon: How Leading Manufacturers Do It during Design**  
[Mark Rushton<sup>1</sup>](#); <sup>1</sup>aPriori Technologies

**AM REGULAR**     **Benefits of Additive Manufacturing in Tooling and Non-Tooling Applications**  
[Marcus Pettersson<sup>1</sup>](#); <sup>1</sup>Uddeholm

**AM INVITED**     **Printing a Battery: High Volume Additive Manufacturing for Rechargeable Lithium Batteries**  
[Karl Littau<sup>1</sup>](#); <sup>1</sup>Sakuu

**AM INVITED**     **Area Printing by Seurat - No Compromise AM for the Transportation Sector**  
[Michael Kenworthy<sup>1</sup>](#); <sup>1</sup>Seurat Technologies

**AM INVITED**     **Magnus Metal's Digital Casting Capability**  
[Ardy Johnson<sup>1</sup>](#); <sup>1</sup>Magnus Metal

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#### SESSION CHAIR (PM SESSION):

TBA

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**PM INVITED**     **Schneider Electric Journey to Deploy Additive Manufacturing at Industrial Scale**  
[Guillaume Fribourg<sup>1</sup>](#); [Louise Bailey<sup>1</sup>](#); <sup>1</sup>Schneider Electric

**PM INVITED**     **Beyond the Lab: Industrialization of Laser Powder DED for the Automotive Industry**  
[Diego Montoya-Zapata<sup>1</sup>](#); <sup>1</sup>Etxetar

**PM INVITED**     **Selective Coating of Mining Components with High-Speed Directed Energy Deposition (DED): Enhancing Wear Resistance and Durability**  
[Oleg Raykis<sup>1</sup>](#); [Simone Maffia<sup>1</sup>](#); <sup>1</sup>Ponticon

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# ICAM25

## INDUSTRIAL SECTOR

### MEDICAL

07<sup>TH</sup> OCT 2025 (TUE) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Amit Bandyopadhyay**  
Washington State  
University, USA

**Sophie Cox**  
University of Birmingham,  
United Kingdom

**David Dean**  
Ohio State University,  
USA

**Matthew Di Prima**  
U.S. Food and Drug  
Administration, USA

**Laura Gilmour**  
LG Strategies, USA

**Ryan Kircher**  
rms Company, USA

**Sean McEligot**  
Mayo Clinic, USA

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Precision in Porosity: Advancing Control of Lattice Density in Additively Manufactured Titanium Implants  
[Aleck Nelson](#)<sup>1</sup>; [Alex Gobran](#)<sup>1</sup>; <sup>1</sup>rms Company

**PM INVITED** Design Considerations and Controls for Patient-Matched, 3D Printed Surgical Guides  
[Megan Loghry](#)<sup>1</sup>; [Victoria Sears](#)<sup>1</sup>; Mayo Clinic

**PM INVITED** Personalized, Osseointegrative, 3D Printed Orthopedic Implants  
[Ken Gall](#)<sup>1,2</sup>; <sup>1</sup>Duke University; <sup>2</sup>restor3d

**PM REGULAR** Rapid Tooling for Intraoperative Fabrication of Patient-Specific Cranial Implants using Additive Manufacturing  
[Eugen Musienko](#)<sup>1</sup>; <sup>1</sup>Helmut Schmidt University / University of the Federal Armed Forces Hamburg

**PM REGULAR** Additive Manufacturing of Nanocomposite Contact Lenses and Biophotonic Devices  
[Haider Butt](#)<sup>1</sup>; <sup>1</sup>Khalifa University

**PM REGULAR** Topology Optimization and Additive Manufacturing Techniques to Create Biomimetic Light-Weight Vertebral Bone  
[Hacene Ameddah](#)<sup>1</sup>; <sup>1</sup>University of Batna 2

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Exploring Ceramic Additive Manufacturing in Dentistry: Improvement or Impairment?  
[Les Kalman](#)<sup>1</sup>; <sup>1</sup>Western University

**AM REGULAR** Improved Dental and Orthopedic Implants Additively Manufactured with a Novel Laser Sheet Fusion Technique  
[Chang Quan \(CQ\) Lai](#)<sup>1</sup>; <sup>1</sup>Nanyang Technological University

**AM INVITED** Transforming Orthopedic Care: Integrating Computational Design and 3D Printing at the Point of Care  
[Ali Kiapour](#)<sup>1,2</sup>; <sup>1</sup>Harvard Medical School - Massachusetts General Hospital; <sup>2</sup>WEB Medical

**AM INVITED** Modified Standard Test Methods Supporting the Characterization of Additively Manufactured Titanium Porous Material  
[Jason Langhorn](#)<sup>1</sup>; <sup>1</sup>Element Materials Technology

**AM INVITED** Acoustic NDT of AM Medical Devices  
[Daniel Rodríguez Sanmartín](#)<sup>1</sup>; <sup>1</sup>Theta Technologies

**AM REGULAR** Radiological Characterization of Additively Manufactured Phantoms: Assessing Material-Layering Effects and Infill Strategies for CT Equivalency  
[James Harold Cabalhug](#)<sup>1</sup>; <sup>1</sup>DOST - Metals Industry Research and Development Center (AMCen)

**AM REGULAR** Evaluation of DMLS Lattice Compression Test Specimen Geometry Effects on Results Variability  
[Ryan Gruell](#)<sup>1</sup>; [Trey Rodgers](#)<sup>1</sup>; <sup>1</sup>Zimmer Biomet

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Corrosion Fatigue Behavior of Additively Manufactured Ti6Al4V Alloy  
[Amit Bandyopadhyay](#)<sup>1</sup>; <sup>1</sup>Washington State University

**PM INVITED** Effects of Creep in Titanium at Room Temperature during Tensile and Profilometry-Based Indentation Plastometry Testing  
[Jimmy Campbell](#)<sup>1</sup>; <sup>1</sup>Plastometrex

**PM INVITED** Additively Manufactured Functionalized Titanium and Calcium Phosphate Implants  
[Susmita Bose](#)<sup>1</sup>; <sup>1</sup>Washington State University

**PM REGULAR** 4D-Printed Anisotropic Collagen Scaffolds for Ligamentous Tissue Engineering Applications  
[Nashaita "Nash" Patrawalla](#)<sup>1</sup>; <sup>1</sup>Poseidon Medical

**PM REGULAR** Optimization of Bioink Printability using Machine Learning Models  
[George Zhuo Tan](#)<sup>1</sup>; <sup>1</sup>University of Houston

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09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

## SESSION CHAIR (AM SESSION):

TBA

- AM REGULAR** Design and Additive Manufacturing of Customized Metallic Implants  
[Yang \(Tony\) Tian<sup>1</sup>](#); <sup>1</sup>Monash Centre for Additive Manufacturing
- AM REGULAR** Preliminary Evaluation of the Suitability of the PA6-Ti6Al4V Processed using Selective Laser Sintering for Medical Applications  
[Marianito Margarito<sup>1</sup>](#); <sup>1</sup>DOST - Industrial Technology Development Institute
- AM INVITED** Achieving Product-Specific Mechanical Properties in CpTi1 Medical Devices: From Powder Manufacturing to Post-Processing  
[Kaoutar Bensaid<sup>1</sup>](#); [Ryan Kircher<sup>2</sup>](#); <sup>1</sup>GE Aerospace - AP&C; <sup>2</sup>rms Company
- AM INVITED** Statistical Analysis of the Impact of Powder Reuse on the Quality of Additively Manufactured Medical Devices  
[Ari Howard<sup>1</sup>](#); <sup>1</sup>Ricoh
- AM INVITED** Evaluating Tensile and Fatigue Effects of Different HIP Cycles on DMLM Ti6Al4V Samples With and Without Introduced Porosity  
[Ryan Gruell<sup>1</sup>](#); [Trey Rodgers<sup>1</sup>](#); <sup>1</sup>Zimmer Biomet
- AM REGULAR** Adjusting the Wear Resistance of Ti6Al4V using HIP  
[James Shipley<sup>1</sup>](#); <sup>1</sup>Quintus Technologies
- AM REGULAR** Additively Manufactured Ti6Al4V with a Nanocrystalline Diamond Coating to Prevent Wear and Metal Hipersensitivity  
[Rafael Trommer<sup>1</sup>](#); <sup>1</sup>INMETRO - National Institute of Metrology, Standardization and Industrial Quality

## SESSION CHAIR (PM SESSION):

TBA

- PM INVITED** Hospital Quality Management System: Look Before You Leap  
[Gregory Voss<sup>1</sup>](#); <sup>1</sup>Veterans Health Administration
- PM INVITED** Validation of Hospital-Based 3D Printing of Titanium Implants: Lessons Learned in a First Effort  
[Sean McEligot<sup>1</sup>](#); <sup>1</sup>Mayo Clinic
- PM REGULAR** Ensuring Excellence: Qualification and Certification in MedTech and Point-of-Care Innovations  
[Gregor Reischle<sup>1</sup>](#); <sup>1</sup>Qualified AM

- PM REGULAR** The Journey to a 510 (k) Submission for a Point-of-Care Facility  
[Peter Liacouras<sup>1</sup>](#); <sup>1</sup>Walter Reed National Military Medical Center

- PM REGULAR** The Role of a Master Validation Plan in Product Realization for Point-of-Care Additive Manufacturing of Patient-Matched Implants  
[Aviktha Shivashankar Reddy<sup>1</sup>](#); <sup>1</sup>Mayo Clinic

10<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

## SESSION CHAIR (AM SESSION):

TBA

- AM REGULAR** Biomechanically Informed Virtual Surgical Planning for Craniomaxillofacial Skeletal Reconstruction  
[David Dean<sup>1</sup>](#); <sup>1</sup>Ohio State University
- AM REGULAR** Design and Additive Manufacturing of a Metacarpal External Fixation System for Low-Cost, On-Demand Medical Applications in Developing Regions  
[Leif Oliver Coronado<sup>1</sup>](#); <sup>1</sup>DOST - Metals Industry Research and Development Center (AMGen)
- AM INVITED** Bioprinted Vascularized Bone: Designing for the Future of Care  
[Beth Ripley<sup>1</sup>](#); <sup>1</sup>Veterans Health Administration
- AM INVITED** Titanium Velcro - Enabling Implant Modularity with Novel Interchangeable Components  
[Matthew Shomper<sup>1</sup>](#); <sup>1</sup>Not a Robot Engineering
- AM INVITED** Influence of the LPBF Process Chain for the Application of 316L Additively Manufactured Medical Device Components  
[Fabienne Riester<sup>1</sup>](#); <sup>1</sup>KARL STORZ
- AM INVITED** The MEWron: Reducing the Cost of Entry to Melt Electrowriting and Thin Membrane Technology  
[David Dean<sup>1</sup>](#); <sup>1</sup>Ohio State University

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# ICAM25

## INDUSTRIAL SECTOR

### SPACE

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Christo Dordlofva**  
GKN Aerospace, USA

**Shahrooz Nafisi**  
Rocket Lab, USA

**Xueyong (Kevin) Qu**  
The Aerospace Corporation, USA

**John Vickers**  
NASA, USA

**Eliana Fu**  
TRUMPF, USA

**Andrew Norman**  
European Space Agency, The Netherlands

**Maximilian Strixner**  
The Exploration Company, Germany

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Novel Delta Qualification Framework for Multi-Platform Additive Manufacturing of Aerospace Hardware  
[Thomas Pomorski<sup>1</sup>](#); [Steve Walton<sup>2</sup>](#); <sup>1</sup>Ursa Major; <sup>2</sup>Dyndrite

**AM REGULAR** Qualification of 3D-Printed Titanium Volume-Optimized Propulsion Tanks  
[Robert Fowler<sup>1</sup>](#); <sup>1</sup>Utah State University - Space Dynamics Laboratory

**AM INVITED** AIAA Structural Requirements for Verification of Additively Manufactured Spaceflight Hardware  
[Brett Soltz<sup>1</sup>](#); <sup>1</sup>The Aerospace Corporation

**AM INVITED** A Framework for Additive Manufacturing Material Readiness Levels in Aerospace Applications  
[Paul Gradl<sup>1</sup>](#); <sup>1</sup>NASA - Marshall Space Flight Center

**AM INVITED** Process Qualification, Additive Manufacturing and Post Processing of a Hydrogen Peroxide / Kerosene 6 kN Aerospike Breadboard Engine  
[Elena López<sup>1</sup>](#); <sup>1</sup>Fraunhofer IWS

**AM REGULAR** Accelerated Mechanical Testing: Investigation of NASA HR-1 using Profilometry-Based Indentation Plastometry  
[Marcus Gaiser-Porter<sup>1</sup>](#); <sup>1</sup>Plastometrex

**AM REGULAR** A Comparative Study of Stress-Strain Response from Indentation Plastometry and Standard Tensile Testing in AM Alloys  
[Mohammad Pourshams<sup>1</sup>](#); <sup>1</sup>Nikon

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Optimizing Large-Scale Powder Bed Fusion Manufacturing of Copper Alloys for Space Propulsion: Best Practice and Challenges  
[Tobias Petzinger<sup>1</sup>](#); <sup>1</sup>AMCM

**PM INVITED** Investigation of the Impact of Silicide Coating on the Fatigue Strength of Additively Manufactured C103 for Space Applications  
[Christopher Mihm<sup>1</sup>](#); <sup>1</sup>Thrustworks Additive Manufacturing

**PM INVITED** Material Characterization of Additively Manufactured C103 for Aerospace Applications  
[Lea Strauss<sup>1</sup>](#); <sup>1</sup>University of the Bundeswehr Munich

**PM REGULAR** Comparison between Defocused and Ring Beam on the Densification and Mechanical Properties of Additively Manufactured In718 Parts  
[Kenan Yetil<sup>1</sup>](#); [Timm Rohwer<sup>1</sup>](#); <sup>1</sup>Nikon SLM Solutions

**PM REGULAR** Optimizing Laser Powder Bed Fusion Processing of Russian-Grade XH-67 Alloy for Advanced Spacecraft Engine Components: Enhancing Thermal and Structural Performance  
[Ankit Sahu<sup>1</sup>](#); <sup>1</sup>Objectify Technologies

09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Efficacy of Thermal Energy Method on Laser Powder Bed Fusion Support Structure Elimination for Novel GRX-810 Alloy  
[Aaditya Pore<sup>1</sup>](#); <sup>1</sup>NASA - Marshall Space Flight Center

**AM REGULAR** RAPTURE: Enabling Single-Step Multi-Material Manufacturing with Continuous Rotary LPBF  
[Michael Tucker<sup>1</sup>](#); [Markus Bambach<sup>1</sup>](#); <sup>1</sup>ETH Zürich

**AM INVITED** Challenges and Opportunities with the Adoption of Additive Manufacturing for Space Systems  
[Vinay Goyal<sup>1</sup>](#); <sup>1</sup>The Aerospace Corporation

**AM INVITED** A Comparison of Print Material and Process Control using Wire-Laser and Wire-Arc Directed Energy Processes for High-Strength Aluminum Structures  
[Nick Bagshaw<sup>1</sup>](#); <sup>1</sup>Fortius Metals

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

**AM INVITED** **Advancements in Additive Manufacturing Capabilities for the NewATHENA Mission: Exploring Large-Scale Titanium Components using Direct Energy Deposition**  
[Mirko Riede](#)<sup>1</sup>; <sup>1</sup>Fraunhofer IWS

**AM REGULAR** **Assessing the Reusability of Refractory Metal Powder in LP-DED Processing**  
[Byoungjik Lim](#)<sup>1</sup>; <sup>1</sup>Korea Aerospace Research Institute

**AM REGULAR** **Investigation of Process By-Products when Using Different Laser Beam Shapes in L-PBF of In718**  
[Timm Rohwer](#)<sup>1</sup>; [Kenan Yetil](#)<sup>1</sup>; <sup>1</sup>Nikon SLM Solutions

**AM INVITED** **Building Blocks Toward an Orbital Factory**  
[Jacob Rome](#)<sup>1</sup>; <sup>1</sup>The Aerospace Corporation

**AM INVITED** **Novel Crush Lattice Fabrication for the Mars Sample Return Mission: Challenges, Solutions, Benefits and Future Work**  
[Justin Michaud](#)<sup>1</sup>; <sup>1</sup>REM Surface Engineering

**AM REGULAR** **DMLS Lattice Structures for CubeSat Panels: Advancing Lightweight Aerospace Design**  
[Emmanuel Arriola](#)<sup>1</sup>; <sup>1</sup>DOST - Metals Industry Research and Development Center (AMCen)

**AM REGULAR** **Sustaining the Stars: How In-Space Production Will Define the Next Era of Exploration**  
[James Regenor](#)<sup>1</sup>; <sup>1</sup>VeriTX

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**SESSION CHAIR (PM SESSION):**  
TBA

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**PM INVITED** **Development of New Advanced Alloys Designed for Additive Manufacturing**  
[Andrew Norman](#)<sup>1</sup>; <sup>1</sup>European Space Agency

**PM INVITED** **Laser Melting Deposition of Aluminium Launch Interface Rings: Design, Process Development and Optimization**  
[João Gandra](#)<sup>1</sup>; <sup>1</sup>European Space Agency

**PM INVITED** **Rapid Rocket Engine Development Enabled by Additive Manufacturing**  
[Benjamin Graybill](#)<sup>1</sup>; [Dustin Crouse](#)<sup>1</sup>; <sup>1</sup>Agile Space Industries

**PM REGULAR** **AM as Rocket Science - An AM-Built Heat Exchanger for Rocket Propulsion Applications**  
[Ian Fordyce](#)<sup>1</sup>; <sup>1</sup>Conflux Technology

**PM REGULAR** **Using ICME to Design a Novel High Strength, Printable, and Burn Resistant Nickel-Based Superalloy for Re-Usable Rocket Engines**  
[Gary Whelan](#)<sup>1</sup>; <sup>1</sup>QuesTek Innovations

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**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

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**AM REGULAR** **Development of Additive Manufacturing for the International Space Station**  
[Stewart Williams](#)<sup>1,2</sup>; <sup>1</sup>Cranfield University; <sup>2</sup>WAAM3D

**AM REGULAR** **Mass Reduction, Optimization, and Fabrication of a 3U Nanosatellite Structure through Advanced Additive Manufacturing Methods**  
[Jose Bernardo Padaca III](#)<sup>1</sup>; <sup>1</sup>DOST - Metals Industry Research and Development Center (AMCen)

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

## VALUE CHAIN

### ADVANCED TOPICS IN AM: QUALIFICATION, NEW MATERIALS, AND POST-PROCESSING

06<sup>TH</sup> OCT 2025 (MON) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Chad Beamer**  
Quintus Technologies, USA

**Nicholas Derimow**  
NIST, USA

**Elena López**  
Fraunhofer IWS, Germany

**Tiago Silva**  
INEGI - Institute of Science and  
Innovation in Mechanical and  
Industrial Engineering, Portugal

**Cory Cunningham**  
Boeing, USA

**Colton Katsarelis**  
NASA - Marshall Space  
Flight Center, USA

**Graham Matheson**  
Oerlikon AM, Germany

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** DED Hybrid for On-Demand Manufacturing  
[Kevin Stenberg](#)<sup>1</sup>; <sup>1</sup>DMG MORI

**AM REGULAR** Automated Tool Path Planning Without the  
Use of CAD/CAM for High-Throughput  
Industrial Directed Energy Deposition  
(DED) Applications  
[Jeffrey Riemann](#)<sup>1</sup>; <sup>1</sup>FormAlloy Technologies

**AM INVITED** Wire-Arc Directed Energy Deposition  
Solutions for LH2, GH2 and Physiosorbed  
Absorbed Lightweight Aluminium-Based  
Hydrogen Storage Systems with Integrated  
Thermal Management for Carbon-Free  
Mobility Applications  
[Florian Pixner](#)<sup>1</sup>; <sup>1</sup>AIT Austrian Institute of  
Technology

**AM INVITED** Accurate Prediction of Melt Pool  
Dimensions and Printability Maps:  
Combining Experimental Studies with  
Process Simulations  
[Adam Hope](#)<sup>1</sup>; <sup>1</sup>Thermo-Calc Software

**AM INVITED** Breaking the Boundaries of Additive  
Manufacturing by Additive Friction Stir  
Deposition  
[Evren Yasa](#)<sup>1</sup>; <sup>1</sup>University of Sheffield -  
Advanced Manufacturing Research Centre  
(AMRC)

**AM REGULAR** Molten Metal Deposition for High-Strength  
Aluminum Alloys: Process Feasibility &  
Oxidation Control  
[Jan De Pauw](#)<sup>1</sup>; <sup>1</sup>ValCUN

**AM REGULAR**

Evaluation of Anisotropy and Energy  
Consumption of Additive Manufacturing of  
Nanocomposite in a Vacuum Environment  
[Marianito Margarito](#)<sup>1</sup>; <sup>1</sup>DOST - Industrial  
Technology Development Institute

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Tailoring Post-Processing Treatments for  
Additive Manufacturing  
[Peeyush Nandwana](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National  
Laboratory

**PM INVITED** Post-Processing Effects on Surface  
Roughness and Mechanical Properties of  
Metal-Based Powder Bed Fusion  
Components: Unlocking the Full Potential  
of AM through HIP and Surface Finishing  
[Agustin Diaz](#)<sup>1</sup>; <sup>1</sup>REM Surface Engineering

**PM INVITED** On Reducing Variability and Improving the  
Fatigue Properties of Ti6Al4V Produced by  
Laser Powder Bed Fusion through HIP:  
Uncovering Hidden Defects  
[Dwayne Arola](#)<sup>1</sup>; <sup>1</sup>University of Washington

**PM REGULAR** An Overview of the Dimensional Accuracy  
of Additively Manufactured Parts and the  
Proposal of a New Benchmark Artifact  
[Erfan Maleki](#)<sup>1</sup>; <sup>1</sup>Auburn University - National  
Center for Additive Manufacturing Excellence

**PM REGULAR** High-Performance Laser Optimization  
Algorithm for LPBF Systems  
[Efrén Fernández García](#)<sup>1</sup>; <sup>1</sup>ArcelorMittal

**PM REGULAR** Increasing the Rate and Size of LPBF  
Production  
[Matthew Rostern-Thomson](#)<sup>1</sup>; <sup>1</sup>Rolls-Royce

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Additive Manufacturing of Oxide  
Dispersion Strengthened Stainless and  
RAFM Steels  
[Austin Whitt](#)<sup>1</sup>; <sup>1</sup>NASA - Glenn Research  
Center

**AM REGULAR** Oxidation Stabilization of Ti64 Powder AM  
Feedstocks with Atomic Layer Deposition  
(ALD) for Use in Large Format Binder Jet  
Applications  
[Christopher Gump](#)<sup>1</sup>; <sup>1</sup>Forge Nano

**AM INVITED** GRX-810 - An Oxide Dispersion  
Strengthened (ODS) AM Alloy with  
Exceptional High Temperature Creep  
Resistance  
[Jeremy Iten](#)<sup>1</sup>; <sup>1</sup>Elementum 3D

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

**AM INVITED** Unlocking Next Generation High Temperature Performance: Dispersion Strengthened Multi-Principal Alloy GRX-810  
[Jonathan Pegues<sup>1</sup>](#); <sup>1</sup>Auburn University

**AM INVITED** Hastelloy X by Powder Bed Fusion-Laser Beam: Towards Eliminating Post Processing Heat Treatments  
[Faraz Deirmina<sup>1</sup>](#); [Kamran Saeidi<sup>2</sup>](#); <sup>1</sup>Sandvik Additive Manufacturing; <sup>2</sup>Siemens Energy

**AM REGULAR** Success and Challenges with Qualifying A6061-RAM2 and A7050-RAM2 Alloys for LB-PBF Additive Manufacturing of Metal Components  
[Alec Saville<sup>1</sup>](#); <sup>1</sup>Elementum 3D

**AM REGULAR** Next-Generation Niobium Alloys via Additive Manufacturing: Microstructure, Mechanical Properties, and Alloy Design  
[Shaumik Lenka<sup>1</sup>](#); [Nicholas Sim<sup>1</sup>](#); <sup>1</sup>Alloyed

**SESSION CHAIR (PM SESSION):**  
TBA

**PM INVITED** Advances in LPBF Processing and Post-Processing of High  $\gamma'$  Fraction Ni-Base Superalloys  
[Shaafi Shaikh<sup>1</sup>](#); <sup>1</sup>EOS

**PM INVITED** Examining the Sensitivity of Titanium-6 Aluminum-4 Vanadium Witness Quality Coupons to Laser Powder Bed Fusion Process Changes  
[Milad Ghayoor<sup>1</sup>](#); <sup>1</sup>Smith+Nephew

**PM INVITED** Leveraging Precipitation Hardening Aging Treatments on Thermo-Hydrogen Refined AM Ti-6Al-4V Microstructures  
[Nicholas Derimow<sup>1</sup>](#); <sup>1</sup>NIST

**PM REGULAR** Mechanism-Based Design of Patient-Specific Ti64 Implants Based on In Vivo, In Vitro and In Silico Methods  
[Frank Walther<sup>1</sup>](#); <sup>1</sup>TU Dortmund University

**PM REGULAR** Functional Graded NiTi Manufactured with Powder Bed Fusion  
[Enrico Tosoratti<sup>1</sup>](#); <sup>1</sup>inspire - Innovation Center for Additive Manufacturing Switzerland

**PM REGULAR** Keeping Pace with AM Crystallography with High-Throughput Laser Microscopy  
[Brian Hoover<sup>1</sup>](#); <sup>1</sup>Advanced Optical Technologies

**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

**SESSION CHAIR (AM SESSION):**  
TBA

**AM REGULAR** Latest Developments in HIP and High-Pressure Heat Treatment for Additive Manufacturing  
[Andrew Cassese<sup>1</sup>](#); [Chad Beamer<sup>1</sup>](#); <sup>1</sup>Quintus Technologies

**AM REGULAR** Optimizing Surface Finish in Laser Powder Bed Fusion of AISi10Mg through Process Parameter Refinement  
[Jorge Cisneros<sup>1</sup>](#); <sup>1</sup>Additive Industries

**AM INVITED** Development of Clean HIP Processing for AM  
[Chad Beamer<sup>1</sup>](#); <sup>1</sup>Quintus Technologies

**AM INVITED** Performance Evaluation of High Pressure Heat Treatment (HPHT) with Uniform Rapid Quenching (URQ®) for L-PBF F357 Aluminum  
[Shane Nicholson<sup>1</sup>](#); <sup>1</sup>Parker Aerospace

**AM INVITED** The Missing Link in LCAs - HIP Data for Sustainable AM  
[James Shipley<sup>1</sup>](#); <sup>1</sup>Quintus Technologies

**AM REGULAR** A Chemo-Cavitation Approach to Postprocessing of Laser Powder Bed Fusion Components for Improving Surface Texture and Integrity  
[Dwayne Arola<sup>1</sup>](#); <sup>1</sup>University of Washington

**AM REGULAR** Cavitation Abrasive Surface Finishing (CASF) for Smoothing and Peening the Outside Surfaces and Internal Passageways of Additive Manufactured Metal Components  
[Daniel Sanders<sup>1</sup>](#); <sup>1</sup>Sugino Machine

**SESSION CHAIR (PM SESSION):**  
TBA

**PM INVITED** Lessons Learned in Qualification of LPBF for Aviation Parts  
[Brian Baughman<sup>1</sup>](#); <sup>1</sup>Honeywell

**PM INVITED** Leveraging Large Scale Direct Energy Deposition for the Next Generation of Large Rocket Engines  
[Brandon Belardo<sup>1</sup>](#); <sup>1</sup>Aerojet Rocketdyne

**PM INVITED** Boeing Baseline Delta Qualification Program  
[Mohammadreza Nematollahi<sup>1</sup>](#); <sup>1</sup>Boeing

**PM REGULAR** Exploring Additive Manufacturing in Aerospace Deployable and Compliant Systems  
[Christine Gebara<sup>1,2</sup>](#); <sup>1</sup>NASA - Jet Propulsion Laboratory; <sup>2</sup>California Institute of Technology

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# ICAM25

**PM**  
**REGULAR** Increasing Opportunities with Large-Format Metal Additive Manufacturing  
[Kevin Yap<sup>1</sup>](#); <sup>1</sup>Bright Laser Technologies

**PM**  
**INVITED** Lessons Learned in Implementing the NASA 6030 AM Standard Qualification for Spaceflight  
[Alison Park<sup>1</sup>](#); <sup>1</sup>NASA - Langley Research Center

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**09<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

**AM**  
**REGULAR** Mapping the AP238 Extension for Powder Bed Fusion to the Dyndrite Data Model: A Framework for Standards Validation  
[Dahlon Lyles<sup>1</sup>](#); <sup>1</sup>Dyndrite

**AM**  
**REGULAR** Simulating Additive Manufacturing Material Extrusion Processes with Continuous Fiber-Reinforced Polymer Materials  
[Enrique Escobar<sup>1</sup>](#); <sup>1</sup>Ansys

**AM**  
**INVITED** Advancements in LPBF of Aluminum: A Path Toward Standardization and Adoption of Aheadd® CP1  
[Alireza Sarraf<sup>1</sup>](#); <sup>1</sup>Constellium

**AM**  
**INVITED** Integration of Metal-Coated Optical Fiber Sensors into Additive Manufactured Components  
[Graham Matheson<sup>1</sup>](#); <sup>1</sup>Oerlikon AM

**AM**  
**INVITED** Influence of Surface Finish on Ultra High Cycle Fatigue of Heat Resistant Alloys  
[Ana Reis<sup>1</sup>](#); [Tiago Silva<sup>2</sup>](#); <sup>1</sup>University of Porto; <sup>2</sup>INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering

**AM**  
**REGULAR** An Investigation on the Sustainable Fabrication of ADMUSTER® C21P via Laser Powder Bed Fusion of Metals  
[Sankaranarayanan Seetharaman<sup>1</sup>](#); <sup>1</sup>A\*STAR - Advanced Remanufacturing and Technology Centre

**AM**  
**REGULAR** Influence of Modified Heat Treatment on Microstructure and Hardness of Laser Direct Energy Deposited Inconel 718 for Turbine Blades  
[Dhananjay Madhukar Kulkarni<sup>1</sup>](#); <sup>1</sup>Birla Institute of Technology and Science, Pilani

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**SESSION CHAIR (PM SESSION):**  
TBA

**PM**  
**INVITED** Powder Cleanliness and Impact to Qualification for Aerospace Applications  
[Rodney Jones<sup>1</sup>](#); <sup>1</sup>GE Aerospace

**PM**  
**INVITED** RTX's Consolidated Approach to IQ/OQ/PQ+MQ  
[Josh Norman<sup>1</sup>](#); <sup>1</sup>Collins Aerospace

**PM**  
**INVITED** Extreme Value Statistics with Uncertainty to Assess Porosity Equivalence Across Additively Manufactured Parts  
[Sneha Prabha Narra<sup>1</sup>](#); <sup>1</sup>Carnegie Mellon University

**PM**  
**REGULAR** Technological Maturity Assessment of Additive Manufacturing Technology  
[Eberechukwu Dim<sup>1</sup>](#); <sup>1</sup>Enugu State University of Science and Technology

**PM**  
**REGULAR** Leveraging Artificial Intelligence for the Qualification of Laser Powder Bed Fusion Components using Computer Vision  
[Imdaadulah Adam<sup>1</sup>](#); <sup>1</sup>Central University of Technology, Free State

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**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

**AM**  
**REGULAR** Development of Multi-Laser Powder Bed Fusion Additive Manufacturing System Control  
[Ho Yeung<sup>1</sup>](#); <sup>1</sup>NIST

**AM**  
**REGULAR** Complex Beam Shaping for Improved Process Control in Laser Powder Bed Fusion  
[Thej Tumkur<sup>1</sup>](#); <sup>1</sup>Lawrence Livermore National Laboratory

**AM**  
**INVITED** Beam Shaping for LPBF: Bridging Cutting-Edge Research with Real World Implications  
[Ankit Saharan<sup>1</sup>](#); [Ulrich Kleinhans<sup>1</sup>](#); <sup>1</sup>EOS

**AM**  
**INVITED** Overcoming Surface Deformation Induced by Beam Shaping in Laser-Based Powder Bed Fusion of Metals: Key Parameter Contributors and Mitigation Strategies  
[Robin Prudlik<sup>1</sup>](#); <sup>1</sup>Oerlikon AM

**AM**  
**INVITED** On the Development of Novel Milling Tool Supports using Topology Optimization  
[Daniel Figueiredo<sup>1</sup>](#); <sup>1</sup>Palbit

**AM**  
**REGULAR** Approach for the Qualification of New Material Combinations for Multi-Material Laser Powder Bed Fusion  
[Kai Gödeke<sup>1</sup>](#); <sup>1</sup>Nikon SLM Solutions

**AM**  
**REGULAR** Dynamic Fluid-Assisted Continuous Multi-Material 3D Printing  
[Xiangfan Chen<sup>1</sup>](#); <sup>1</sup>Arizona State University

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# ICAM25

## VALUE CHAIN

### DESIGN

07<sup>TH</sup> OCT 2025 (TUE) – 08<sup>TH</sup> OCT 2025 (WED)

#### CO-ORGANIZERS:

**Enrique Cuan-Urquizo**  
Tecnológico de Monterrey,  
Mexico

**Bradley Rothernberg**  
nTop, USA

**Andrew Thompson**  
Northrop Grumman, USA

**David Rosen**  
A\*STAR-IHPC / SIMTech,  
Singapore

**Timothy Simpson**  
Pennsylvania State University,  
USA

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** The Next Generation of Patient-Specific Orthopedic Implants: Microstructurally Tailored Hierarchical Design & Manufacturing  
[Jacob Peloquin<sup>1</sup>](#); <sup>1</sup>North Carolina State University

**AM REGULAR** Computational and Data-Driven Design of Non-Periodic and Nature-Inspired Mechanical Metamaterials  
[Pinar Acar<sup>1</sup>](#); [Saltuk Yildiz<sup>1</sup>](#); Sheng Liu<sup>1</sup>; Zekeriya Ender Eger<sup>1</sup>; Mohamed Elleithy<sup>1</sup>; <sup>1</sup>Virginia Tech

**AM INVITED** Bridging Micro, Meso and Macro Scales to Unravel Aperiodic Cellular Behavior  
[Irving Ramírez-Chavez<sup>1</sup>](#); <sup>1</sup>Trillion Quality Systems

**AM INVITED** Design and Manufacturing of AM-Optimized Lattice Integrated Manifold (LIM)  
[Ross Brown<sup>1</sup>](#); [Tad Steinberg<sup>2</sup>](#); <sup>1</sup>Marotta Controls; <sup>2</sup>Siemens Energy

**AM INVITED** New Insights Into the Design of Architected Materials: Parametrizing the Constituent Elements of Mechanical Metamaterials via Bézier Curves  
[Enrique Cuan-Urquizo<sup>1</sup>](#); <sup>1</sup>Tecnológico de Monterrey

**AM INVITED** Bending the Rules: Exploring the Potential of Origami Structures, Compliant Mechanisms, and Generally Flexible Parts Through the Lens of Design for Additive Manufacturing  
[Nicholas Meisel<sup>1</sup>](#); <sup>1</sup>Pennsylvania State University

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Generative Design for Additive Manufacture, Balancing Part Performance and Manufacturability  
[Jonathan Hendry<sup>1</sup>](#); <sup>1</sup>Rolls-Royce

**PM INVITED** Text-to-Spaceship Vision: Accelerating Mission Development with AI  
[Ryan McClelland<sup>1</sup>](#); <sup>1</sup>NASA - Goddard Space Flight Center

**PM INVITED** Bio-Inspired Ideation to Manufacturable Design: A Nature-Inspired Early-Stage Design Framework for Multifunctional Design for Additive Manufacturing  
[Yaoyao Fiona Zhao<sup>1</sup>](#); <sup>1</sup>McGill University

**PM REGULAR** Development of a High-Precision Fluid Aperture for Oil and Gas Applications using Laser Powder Bed Fusion  
[Andrew Duggan<sup>1</sup>](#); <sup>1</sup>Baker Hughes

**PM REGULAR** Pore-Channel AM Benchmark Coupon: A Unified Artifact for Assessing Printability of Engineered Pore Networks and Internal Channels  
[Guha Manogharan<sup>1</sup>](#); <sup>1</sup>Pennsylvania State University

**PM REGULAR** Feature-Preserving Fluid Topology Optimization: A Novel Incremental Design Approach  
[Stefano Furino<sup>1</sup>](#); <sup>1</sup>ToffeeX

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Evaluating Clearance Accuracy for 3D Printed Assembly Parts  
[Nawal Aljasm<sup>1</sup>](#); <sup>1</sup>Dubai Electricity & Water Authority

**AM REGULAR** Leveraging Equivalency for Affordable Additive Manufacturing Process Qualification  
[Colin Lynch<sup>1,2</sup>](#); <sup>1</sup>TIS Consulting Group; <sup>2</sup>Arizona State University

**AM INVITED** Tailoring the Mechanical Properties of 3D Printed Food  
[Viridiana Tejada-Ortigoza<sup>1</sup>](#); <sup>1</sup>Tecnológico de Monterrey

**AM INVITED** Utilization of Powder Bed Fusion Technology to Manufacture Die Heads with Conformal Cooling Channels for Extrusion of Plant-Based Meat Analogues  
[Fred Liza<sup>1</sup>](#); [Jose Bernardo Padaca III<sup>1</sup>](#); <sup>1</sup>DOST - Metals Industry Research and Development Center (AMGen)

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# ICAM25

- |                             |  |
|-----------------------------|--|
| <b>AM</b><br><b>INVITED</b> | <b>Functional Single-Pass Thin Wall Structures</b><br><a href="#">Sammy Passell</a> <sup>1</sup> ; <sup>1</sup> AddUp  |
| <b>AM</b><br><b>REGULAR</b> | <b>DFAM Considerations Needed to Rescue the Constraints of Support-Less Printing</b><br><a href="#">Mathieu Brochu</a> <sup>1</sup> ; <sup>1</sup> McGill University |
| <b>AM</b><br><b>REGULAR</b> | <b>General Shape Memory Modeling and Simulation using Isogeometric Analysis</b><br><a href="#">David Rosen</a> <sup>1</sup> ; <sup>1</sup> A*STAR - IHPC / SIMTech   |

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## VALUE CHAIN

### DIRECTED ENERGY DEPOSITION

07<sup>TH</sup> OCT 2025 (TUE) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Frank Brückner**  
Fraunhofer IWS, Germany

**Tyson Gregory**  
Nidec Machine Tool  
America, USA

**Evan Handler**  
Naval Surface Warfare  
Center - Carderock Division /  
America Makes, USA

**Misael Pimentel**  
National Manufacturing  
Institute Scotland, United  
Kingdom

**Paul Gradl**  
NASA - Marshall Space  
Flight Center (MSFC), USA

**Jhonattan Gutjahr**  
TWI, United Kingdom

**Vittoria Laghi**  
University of Bologna, Italy

**Baily Thomas**  
Boeing, USA

**Arkadi Zikin**  
Oerlikon, Switzerland

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Inside the World's Largest Laser DED Machine: Design, Architecture, and Very-Large-Format Applications using Powder and Wire in an Argon Filled Chamber  
[Ashok Varma](#)<sup>1</sup>; <sup>1</sup>iAM3D

**PM INVITED** From Feasibility to Full-Scale: Advancing Maritime Decarbonisation through Large-Format Additive Manufacturing  
[Misael Pimentel](#)<sup>1</sup>; <sup>1</sup>National Manufacturing Institute Scotland

**PM INVITED** DED-Arc vs CNC-Milled Manufacturing to Reduce the Environmental Impact of Complex-Shaped Steel Joints  
[Vittoria Laghi](#)<sup>1</sup>; <sup>1</sup>University of Bologna

**PM REGULAR** AI-Driven Control of Contact Tip to Work Distance for Dot-by-Dot Aluminum Alloy Deposition in WAAM  
[Barbara Previtali](#)<sup>1</sup>; [Luca Tornaquindici](#)<sup>1</sup>; <sup>1</sup>Politecnico di Milano

**PM REGULAR** Advancements in Multi-Directional Functionally Graded Materials (FGMs) using Directed Energy Deposition (DED)  
[Melanie Lang](#)<sup>1</sup>; <sup>1</sup>FormAlloy Technologies

**PM REGULAR** Applying Deep Learning to Non-Destructive Evaluation Methodologies for Quality Control and Process Optimization in Wire Arc Directed Energy Deposition (WA-DED)  
[Robert Zando](#)<sup>1</sup>; <sup>1</sup>Northeastern University

**PM REGULAR**

High-Temperature Properties of CSEF Steels Produced through Wire-Arc Direct Energy Deposition  
[Yukinori Yamamoto](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Next-Generation Oil & Gas Components: Multi-Functional Bimetallic SS316L-Inconel 625 Structures by Wire-Laser DED for Superior Pitting Resistance  
[Marwan Khraisheh](#)<sup>1</sup>; <sup>1</sup>Hamad Bin Khalifa University

**AM REGULAR** Deep Cryogenic Treatment of AISI H11 Tool Steel Manufactured by Wire Laser Metal Deposition  
[Till Tetzlaff](#)<sup>1</sup>; <sup>1</sup>Bundeswehr Research Institute for Materials, Fuels and Lubricants

**AM INVITED** Scaling Up Wire Arc Additive Manufacturing (WAAM): Practical Considerations for Industrial Implementation  
[Louise Slade](#)<sup>1</sup>; <sup>1</sup>DEEP Manufacturing

**AM INVITED** Laser-Based DED and LFAM in Europe: Industrialization, Applications, and Strategic Outlook  
[Arkadi Zikin](#)<sup>1</sup>; <sup>1</sup>Oerlikon

**AM INVITED** Accelerating Fleet Readiness: Transforming Shipbuilding with Wire-Arc AM  
[Ethan Clare](#)<sup>1</sup>; <sup>1</sup>The Barnes Global Advisors

**AM INVITED** Enhancing Reliability for Laser-DED Processes  
[Johannes Finger](#)<sup>1</sup>; <sup>1</sup>Makino Asia - International Innovation Centre AM

**AM REGULAR** Allowables Generation for Ti-6Al-4V via the L-DED Process  
[Baily Thomas](#)<sup>1</sup>; <sup>1</sup>Boeing

**AM INVITED** Accelerating DED Industrialisation through Collaborative Initiatives  
[Josh Barras](#)<sup>1</sup>; <sup>1</sup>ASTM International

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** From Waste to Value: Powder Reuse in Large-Scale Laser-DED  
[Jhonattan Gutjahr](#)<sup>1</sup>; <sup>1</sup>TWI

**PM INVITED** Towards Making Directed Energy Deposition a Decathlete  
[Jason Jones](#)<sup>1</sup>; <sup>1</sup>Hybrid Manufacturing Technologies

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# ICAM25

**PM**  
**INVITED** High-Speed Directed Energy Deposition for Aerospace: Enabling Ni- and Ti-Based Alloys for Rocket Propulsion Components  
[Simone Maffia<sup>1</sup>](#); [Tobias Stittgen<sup>1</sup>](#); <sup>1</sup>Ponticon

**PM**  
**REGULAR** Bridging the Gap between LPBF and Traditional DED using Nikon's Next Generation Scanning-Based DED  
[Brent Stucker<sup>1</sup>](#); <sup>1</sup>Nikon SLM Solutions

**PM**  
**REGULAR** Feedback-Controlled Directed Energy Deposition - Arc for Full-Scale Architectural Members: Process Adaptation and Bending Performance Validation with Focus on Aluminum Applications  
[Yuka Yamagata<sup>1</sup>](#); <sup>1</sup>Shimizu Corporation

**PM**  
**REGULAR** Innovative Solutions for Aluminum, Titanium, and Refractory Component Manufacturing via Directed Energy Deposition (DED)  
[Melanie Lang<sup>1</sup>](#); <sup>1</sup>FormAlloy Technologies

**PM**  
**REGULAR** Laser Metal Deposition with Wire (LMD-w) Process and Qualification for Primary Aerostructures  
[Leon Hill<sup>1</sup>](#); <sup>1</sup>GKN Aerospace

**PM**  
**REGULAR** Investigating the Accuracy, Repeatability, and Reproducibility of A Synchronised Multi-Robot Wire-Arc Additive Manufacturing (WAAM) System for Large Format Additive Manufacturing (LF-AM)  
[Marcus Ng<sup>1</sup>](#); <sup>1</sup>DEEP Manufacturing

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09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

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SESSION CHAIR (AM SESSION):  
TBA

**AM**  
**REGULAR** Large-Format Copper Printing and Simulation Studies using Laser Blown Powder Directed Energy Deposition (BP-DED) Technique  
[Rachel Mancuso<sup>1</sup>](#); <sup>1</sup>DM3D Technology

**AM**  
**REGULAR** Thin-Wall Internal Microchannels and Surface Enhancements for Rocket Nozzles using Laser Powder Directed Energy Deposition  
[Paul Gradl<sup>1</sup>](#); <sup>1</sup>NASA - Marshall Space Flight Center

**AM**  
**INVITED** Planning in the Embedding Space: A New Paradigm for AI-Driven Monitoring and Control in Directed Energy Deposition  
[João Sousa<sup>1</sup>](#); <sup>1</sup>University of Porto

**AM**  
**INVITED** Advances in Extreme High-Speed Laser Material Deposition (EHLA)  
[Thomas Schopphoven<sup>1</sup>](#); <sup>1</sup>Fraunhofer ILT

**AM**  
**INVITED** Laser Powder Directed Energy Deposition (LP-DED): Aerospace Manufacturing Ready  
[Tyler Blumenthal<sup>1</sup>](#); <sup>1</sup>RPM Innovations

**AM**  
**INVITED** Latest Developments in DED-Arc: Large Scale Parts for the Energy Industry  
[Filippo Gilardi<sup>1</sup>](#); Thomas Van Glabeke<sup>1</sup>; <sup>1</sup>MX3D

**AM**  
**REGULAR** Enhancing Laser-Wire DED for High-Value Component Remanufacture  
[Ryan Devine<sup>1</sup>](#); <sup>1</sup>National Manufacturing Institute Scotland

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SESSION CHAIR (PM SESSION):  
TBA

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**PM**  
**INVITED** How Process Monitoring Drives Innovation in WAAM at Guaranteed  
[Joachim Antonissen<sup>1</sup>](#); <sup>1</sup>Guaranteed

**PM**  
**INVITED** Rapid Qualification of Additively Manufactured 17-4PH Stainless Steel for Ground Vehicle Applications  
[Brandon Saathoff<sup>1</sup>](#); <sup>1</sup>Wichita State University - National Institute for Aviation Research

**PM**  
**INVITED** Process Independent Material Microstructure and Property Investigation by using Fundamental AM Parameters in Wire-DED  
[Stewart Williams<sup>1,2</sup>](#); <sup>1</sup>WAAM3D; <sup>2</sup>Cranfield University

**PM**  
**REGULAR** Are Metal LBPf Parts Overpriced? Cost Analysis of DED vs M-LBPf Parts Exceeding 300mm  
[Tyson Gregory<sup>1</sup>](#); <sup>1</sup>Nidec Machine Tool America

**PM**  
**REGULAR** Process Planning for Hybrid Manufacturing using Wire Based Directed Energy Deposition and Machining  
[Takeyuki Abe<sup>1</sup>](#); <sup>1</sup>Saitama University

**PM**  
**REGULAR** Tailoring Microstructures in WAAM Stainless Steels through Temperature-Controlled Hammer Peening  
[Shramana Ghosh<sup>1</sup>](#); <sup>1</sup>Oak Ridge National Laboratory

**PM**  
**REGULAR** Numerical Investigation of Melt-Pool Thermal Signature in Directed Energy Deposition using X-FEM Simulations  
[Zoé Jardon<sup>1</sup>](#); <sup>1</sup>Vrije Universiteit Brussel (VUB)

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# ICAM25

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10<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

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## SESSION CHAIR (AM SESSION):

TBA

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**AM**  
**REGULAR**      **Mechanical Testing of the Repair of Narrow and Wide Damage of Hot-Wire Laser DED H13 Steel using Two Print Directions**  
[Holly Martin](#)<sup>1</sup>; <sup>1</sup>Youngstown State University

**AM**  
**REGULAR**      **What Makes a “Good” Wire-DED Part?**  
[Moriah Rackliffe](#)<sup>1</sup>; <sup>1</sup>Norsk Titanium

**AM**  
**INVITED**      **Advancing Process Planning Workflow Automation for Multi-Axis Directed Energy Deposition Additive Manufacturing: Decomposition Strategies**  
[Brady Sawyer](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University - Applied Research Laboratory

**AM**  
**INVITED**      **Real-Time In Situ Monitoring and Closed-Loop Feedback Control for Wire Arc DED with ROS 2**  
[Matthew Priddy](#)<sup>1</sup>; <sup>1</sup>Mississippi State University

**AM**  
**INVITED**      **Unlocking DED Productivity through Intelligent In-Situ Monitoring and Control**  
[Sam Pratt](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

**AM**  
**INVITED**      **The Variety of the Technology Solutions and Manufacturing Efficiency Provided by xBeam 3D Metal Printing**  
[Dmytro Kovalchuk](#)<sup>1,2</sup>; <sup>1</sup>xBeam 3D; <sup>2</sup>NVO Chervona Hvilya

**AM**  
**INVITED**      **Convergent Manufacturing utilizing Directed Energy Deposition Processes for Aerospace and Naval Applications**  
[J. Logan McNeil](#)<sup>1</sup>; <sup>1</sup>EWI

**AM**  
**REGULAR**      **Path-Based Geometry Modeling Tool for Additive Applications: A G-Code Driven Advancement over Design-Based Modeling**  
[Haoliang Yu](#)<sup>1</sup>; <sup>1</sup>Ansys

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# ICAM25

## VALUE CHAIN

### ENVIRONMENTAL AND CORROSION

06<sup>TH</sup> OCT 2025 (MON)

#### CO-ORGANIZERS:

**Tony Fry**

National Physical Laboratory,  
United Kingdom

**Michael Melia**

Sandia National Laboratories,  
USA

**Nicole Tailleart**

U.S. Naval Research  
Laboratory, USA

**Robert Kelly**

University of Virginia,  
USA

**Matt Sanders**

Stress Engineering  
Services, USA

**Gary Whelan**

QuesTek Innovations,  
USA

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Hydrogen Environment-Assisted Cracking Behavior of Binder Jet Printed 17-4PH Stainless Steels in Marine Environments  
[Zachary Harris](#)<sup>1</sup>; <sup>1</sup>University of Pittsburgh

**AM REGULAR** The Influence of LPBF Processing on the Corrosion of Cu-30Ni in Simulated Seawater Environments  
[Robert Kelly](#)<sup>1</sup>; <sup>1</sup>University of Virginia

**AM INVITED** Effect of Exposure Time on the Electrochemical Corrosion Response on Wire-Arc Additively Manufactured (WAAM) Type 316LSi Stainless Steel in Simulated Seawater  
[Alan Martinez](#)<sup>1</sup>; <sup>1</sup>Stress Engineering Services

**AM INVITED** The Case for Leveraging Advanced Materials Modeling Tools in Failure Analysis  
[Theodore Zirkle](#)<sup>1</sup>; <sup>1</sup>Exponent

**AM INVITED** Using ICME to Address Microstructure-Sensitive Corrosion Fatigue  
[Gary Whelan](#)<sup>1</sup>; <sup>1</sup>QuesTek Innovations

**AM INVITED** Screening the Hydrogen Embrittlement Behavior of Several L-PBF Ni-Based Superalloys  
[Chantal Sudbrack](#)<sup>1</sup>; <sup>1</sup>National Energy Technology Laboratory

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** The Role of Additive Manufactured Materials in Environment Protection and Corrosion Resistance Based on High Temperature Behavior in Highly Oxidizing Atmospheres  
[Tomasz Dudziak](#)<sup>1</sup>; <sup>1</sup>Łukasiewicz Research Network - Krakow Institute of Technology

**PM INVITED** The Effect of Applied Stress and Build Orientation on the Stress Corrosion Cracking of Type 316LSi Stainless Steel Produced by Wire Arc Additive Manufacturing (WAAM) in Simulated Seawater using Four-Point Bend Tests  
[Kevin Renteria](#)<sup>1</sup>; <sup>1</sup>Stress Engineering Services

**PM REGULAR** Enhanced Corrosion Resistance and Adhesion Strength through Nanosecond Laser Treatment of Aluminum Alloy (AISI10Mg)  
[Jeongwoo Lee](#)<sup>1</sup>; <sup>1</sup>TRUMPF

**PM REGULAR** Corrosion Testing of Hot-Wire Laser DED H13 Steel using Two Print Orientation and Three Print Directions  
[Holly Martin](#)<sup>1</sup>; <sup>1</sup>Youngstown State University

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# ICAM25

## VALUE CHAIN

### FATIGUE AND FRACTURE

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Stefano Beretta**  
Politecnico di Milano,  
Italy

**Thomas Niendorf**  
University of Kassel, Germany

**Jutima Simsiriwong**  
University of North Florida, USA

**Zachary Whitman**  
Boeing Commercial Airplanes, USA

**Armando Coro**  
ITP Aero, Spain

**Ravi Shahani**  
Constellium, France

**Riccardo Toninato**  
Enovis, Italy

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Process-Structure-Performance in Wire-Arc Additive Manufacturing of Inconel 718  
[Ahmad Nourian](#)<sup>1</sup>; <sup>1</sup>Northeastern University

**AM REGULAR** Synergistic Effects of Surface Roughness, Porosity, and Surface Treatments on the Mechanical Performance  
[Jonathan Pegues](#)<sup>1</sup>; <sup>1</sup>Auburn University

**AM INVITED** On the Structural Integrity of Additively Manufactured Alloys with Low Coefficient of Thermal Expansion  
[Thomas Wegener](#)<sup>1</sup>; <sup>1</sup>University of Kassel

**AM INVITED** Fatigue Characterization of Plasma Atomized Titanium Ti-6Al-4V Produced by Laser Powder Bed Fusion Process  
[Mahdi Habibnejad](#)<sup>1</sup>; <sup>1</sup>GE Aerospace - AP&C

**AM INVITED** Fatigue Design Limits for AM Ti-6Al-4V using a Kitagawa Diagram Based Analysis and Specimens with Artificial Defects  
[Sushant Jha](#)<sup>1</sup>; <sup>1</sup>University of Dayton Research Institute

**AM INVITED** Accelerated Procedure for Assessing the Stress Intensity Factor Threshold of AM Parts with the Ultrasonic Fatigue Testing Machine: Feasibility and Application to the AISi10Mg Alloy  
[Andrea Tridello](#)<sup>1</sup>; <sup>1</sup>Politecnico di Torino

**AM INVITED** Exploring the Influence of Various Surface Treatments on the Surface Texture, Microstructure, and Fatigue Behavior of Nickel-Based Superalloys  
[Erfan Maleki](#)<sup>1</sup>; <sup>1</sup>Auburn University - National Center for Additive Manufacturing Excellence

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Impact of Surface and Bulk Defects on Fatigue Behaviour of Additively Manufactured Ti-6Al-4V Alloys: A Unified Design Approach  
[Enrico Salvati](#)<sup>1</sup>; <sup>1</sup>University of Udine

**PM INVITED** A Full Probabilistic Fracture Mechanics-Based Model for the Fatigue Assessment of Additively Manufactured Metallic Materials  
[Mauro Madia](#)<sup>1</sup>; <sup>1</sup>Bundesanstalt für Materialforschung und -prüfung (BAM)

**PM INVITED** Effects of Process-Induced Microstructure with Defects on Fatigue Damage Tolerance of Additively Manufactured Metals  
[Frank Walther](#)<sup>1</sup>; <sup>1</sup>TU Dortmund University

**PM REGULAR** Prediction of Fatigue Life Variability in Additively Manufactured Parts with As-Built Surface Roughness  
[Leland Shimizu](#)<sup>1</sup>; <sup>1</sup>The Aerospace Corporation

**PM REGULAR** Experimental and Probabilistic Investigation of Small Crack Growth in Additively Manufactured Materials under Multiaxial Stress States  
[Reza Molaei](#)<sup>1</sup>; <sup>1</sup>Auburn University - National Center for Additive Manufacturing Excellence

**PM REGULAR** Comprehensive Defect-Driven Evaluation of Mechanical, Thermal, and Corrosive Impacts on the Structural Integrity and Performance of Light Metal Components  
[Alexander Koch](#)<sup>1</sup>; <sup>1</sup>TU Dortmund University

09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Multiaxial Fatigue Behavior of Additively Manufactured TPMS Metallic Metamaterials: Experiments and Modeling  
[Reza Molaei](#)<sup>1</sup>; <sup>1</sup>Auburn University - National Center for Additive Manufacturing Excellence

**AM REGULAR** Accelerated Fatigue Testing of Aluminum A5083 RAM5 and Comparison Against Standard Results  
[Onome Scott-Emuakpor](#)<sup>1</sup>; <sup>1</sup>Hyphen Innovations

**AM INVITED** NIST AM Benchmarks 2025: Predicting Fatigue Performance in Rotating Bending Tests of PBF-L Ti-6Al-4V  
[Newell Moser](#)<sup>1</sup>; <sup>1</sup>NIST

**AM INVITED** On the Role of Microstructure in Fatigue and Fracture of Alloys Processed by AM  
[Thomas Niendorf](#)<sup>1</sup>; <sup>1</sup>University of Kassel

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# ICAM25

**AM INVITED** Considerations for PBF-LB/M Superalloys under Time-Dependent Loading: Influence of Build Orientation and Design on Long-Term Creep Performance  
[Karl Michael Krämer](#)<sup>1</sup>; <sup>1</sup>Technical University of Darmstadt - Additive Manufacturing Center

**AM INVITED** Fatigue Behavior of Additively Manufactured Notched Metallic Members  
[Shuai Shao](#)<sup>1</sup>; <sup>1</sup>Auburn University

**AM INVITED** Effect of Powder Reuse on the Fatigue Performance of L-PBF Manufactured Ti-6Al-4V Alloy  
[Ümit Aytar](#)<sup>1</sup>; <sup>1</sup>Turkish Aerospace

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**SESSION CHAIR (PM SESSION):**  
TBA

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**PM INVITED** Beyond Fatigue Tests: Why Statistical Fractography Provides a Faster and Deeper Characterization of the Fatigue Properties of Metallic Alloys  
[Laurent Ponson](#)<sup>1</sup>; <sup>1</sup>Tortoise

**PM INVITED** Resonance Fatigue Testing of Additively Manufactured Lattice Structures: A Novel Approach to Fatigue Endurance Assessment  
[Armando Coro](#)<sup>1</sup>; <sup>1</sup>ITP Aero

**PM INVITED** Structural Integrity of AM Parts - Overview of Current Research Activities at GE Aerospace  
[Simone Romano](#)<sup>1</sup>; <sup>1</sup>Avio Aero

**PM INVITED** Relevant Damage Mechanisms for the Use of PBF-LB Materials in Turbomachinery  
[Christoph Haberland](#)<sup>1</sup>; <sup>1</sup>Siemens Energy

**PM INVITED** Volumetric Defect Criticality in Fatigue of Laser Powder Bed Fused Ti-6Al-4V  
[Sajith Soman](#)<sup>1</sup>; <sup>1</sup>Auburn University

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**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

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**AM REGULAR** Improved Fatigue Performance for Aluminum L-PBF: Advantages of an Al-Zr-Fe Alloy  
[Stefano Beretta](#)<sup>1,2</sup>; <sup>1</sup>Politecnico di Milano; <sup>2</sup>Auburn University

**AM REGULAR** Characterization of High Power Direct Energy Deposition As-Produced Surface Fatigue Properties  
[Mela Fung](#)<sup>1</sup>; <sup>1</sup>Aerojet Rocketdyne

**AM INVITED** Towards Fatigue-Based Qualification of AM Parts via Simulation  
[Alaa Olleak](#)<sup>1</sup>; [Linqi Zhuang](#)<sup>1</sup>; <sup>1</sup>Ansys

**AM INVITED** Calibration of Anomaly Exceedance Curves for Probabilistic Damage Tolerance Analyses of Additively Manufactured AISi10Mg  
[Erin DeCarlo](#)<sup>1</sup>; <sup>1</sup>Southwest Research Institute

**AM INVITED** Damage Tolerance and Inspection Considerations for Certification of Metal AM Parts in Aviation  
[Michael Gorelik](#)<sup>1</sup>; <sup>1</sup>Federal Aviation Administration

**AM INVITED** Crack Growth and Initiation Behavior of Laser Powder Bed Fusion Ti-6Al-4V  
[Paul Wilson](#)<sup>1</sup>; <sup>1</sup>Boeing

**AM INVITED** Predicting Fatigue Performance of Strut-Based Lattices: A Cost-Effective Approach Combining Miniaturized Specimen Modeling and ASED Analysis  
[Simone Murchio](#)<sup>1</sup>; <sup>1</sup>Sapienza University of Rome

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

## VALUE CHAIN

### FEEDSTOCK CHARACTERIZATION, SPECIFICATION, AND REUSE

06<sup>TH</sup> OCT 2025 (MON) – 08<sup>TH</sup> OCT 2025 (WED)

#### CO-ORGANIZERS:

**Ronald Aman**  
Amaero, USA

**Martin Dopler**  
Metallpine, Austria

**Amir Nobari**  
Tekna, Canada

**Paul Prichard**  
Oak Ridge National  
Laboratory, USA

**Javier Arreguin**  
GE Aerospace - AP&C, Canada

**Jose Muñiz**  
Equispheres, Canada

**Roger Pelletier**  
National Research Council  
Canada, Canada

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** The Urge to Develop New Standards for Powder Feedstock in AM  
[Filip Francqui](#)<sup>1</sup>; <sup>1</sup>Granutools

**AM REGULAR** A Note on Using a Rotating Drum Powder Rheometer for Characterizing Coarse and Fine Powders of 17-4 PH Stainless-Steel Alloy  
[Vipin Tondare](#)<sup>1</sup>; <sup>1</sup>NIST

**AM INVITED** Yes, Powders Really Matter!  
[Mathieu Brochu](#)<sup>1</sup>; <sup>1</sup>McGill University

**AM INVITED** Investigating the Effect of Humidity and Electrostatic Charging on Powder Spreadability  
[Anatolie Timercan](#)<sup>1</sup>; <sup>1</sup>National Research Council Canada

**AM INVITED** Spreadability of Metal Powders: Combining Powder Characterization and DEM Simulations  
[Filip Francqui](#)<sup>1</sup>; <sup>1</sup>Granutools

**AM INVITED** Characterizing Spreading with the Powder Spreading Testbed (PST) at NIST Gaithersburg  
[Aniruddha Das](#)<sup>1</sup>; <sup>1</sup>NIST

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Powder Handling for Additive Manufacturing in Remote Environments  
[Tobias Rønneberg](#)<sup>1</sup>; <sup>1</sup>Fieldmade

**PM INVITED** Characterization and Testing of Metal Powders  
[Ross Cunningham](#)<sup>1</sup>; <sup>1</sup>NSL Analytical Services

PM

**INVITED**

Environmental, Economical and Supply Chain Sustainability of High Performance Critical Metal Powders Produced from Domestic Recycled Feedstock  
[Sunil Badwe](#)<sup>1</sup>; <sup>1</sup>Continuum Powders

PM

**REGULAR**

From Waste to Innovation: New Metal Alloys via Powder2Powder Ultrasonic Atomization  
[Tomasz Choma](#)<sup>1</sup>; <sup>1</sup>Warsaw University of Technology; <sup>1</sup>AMAZEMET

PM

**REGULAR**

Evaluation of the Reusability of CoCrMo Powder in Laser Powder Bed Fusion Process  
[Milad Ghayoor](#)<sup>1</sup>; <sup>1</sup>Smith+Nephew

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Investigation of the Effect of Oxygen Homogeneity on the Processability of Ti64 - Impact of Addition of Out of Spec Powders  
[Mahdi Habibnejad](#)<sup>1</sup>; <sup>1</sup>GE Aerospace - AP&C

**AM REGULAR** The Influence of Powder Particle Size Distributions on Surface Quality, Printing Quality, and Mechanical Properties of Hastelloy X Produced by Laser Powder Bed Fusion  
[Alber Sadek](#)<sup>1</sup>; <sup>1</sup>EWI

**AM INVITED** Investigations into the Effects of Powder Age and Mixing on the Performance of LPBF Ti6Al4V Medical Devices  
[Ryan Kircher](#)<sup>1</sup>; <sup>1</sup>rms Company

**AM INVITED** Indefinite Use: Reconditioning of AISi10Mg via Lot Blending  
[Shawn Leonard](#)<sup>1</sup>; [Brant Stoner](#)<sup>1</sup>; <sup>1</sup>Northrop Grumman Mission Systems

**AM INVITED** Investigating the Effects of Powder Reuse on Ti-6Al-4V in Laser Powder Bed Fusion  
[Sankaranarayanan Seetharaman](#)<sup>1</sup>; <sup>1</sup>A\*STAR - Advanced Remanufacturing and Technology Centre

**AM INVITED** Developing Faster Methods for Testing Multi-Element Composition of Feedstock Powder  
[Ellen Williams](#)<sup>1</sup>; <sup>1</sup>Exum Instruments

AM

**INVITED**

Quality Assurance of Metal Powder Additive Manufactured Parts through Probabilistic Knowledge Graphical Models  
[Zhaohui Geng](#)<sup>1</sup>; [Jianzhi \(James\) Li](#)<sup>2</sup>; <sup>1</sup>Ohio University; <sup>2</sup>University of Texas Rio Grande Valley

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Updated as of 07<sup>th</sup> August 2025

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# ICAM25

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## SESSION CHAIR (PM SESSION):

TBA

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|-----------------------|--|
| <b>PM<br/>INVITED</b> | <b>The Effect of Nitrogen Content in Titanium Powder on AM Properties</b><br><a href="#">Eric Bono</a> <sup>1</sup> ; <sup>1</sup> Amaero Advanced Materials & Manufacturing   |
| <b>PM<br/>INVITED</b> | <b>Mechanical Properties of Ti-6Al-4V LPBF Parts: The Role of Defects in Thin Sections</b><br><a href="#">Javier Arreguin</a> <sup>1</sup> ; <sup>1</sup> GE Aerospace - AP&C  |
| <b>PM<br/>INVITED</b> | <b>Breaking Barriers in Laser-Powder Bed Fusion: Non-Explosible AISi10Mg Powder for Safer Additive Manufacturing</b><br><a href="#">Andrei-Alexandru Popa</a> <sup>1</sup> ; <sup>1</sup> University of Southern Denmark |
| <b>PM<br/>REGULAR</b> | <b>Time Scales in Gas Atomization Processes</b><br><a href="#">Martin Dopler</a> <sup>1</sup> ; <sup>1</sup> Metalpine   |
| <b>PM<br/>REGULAR</b> | <b>Thermally Fingerprinting Metal Additive Manufacturing Powder</b><br><a href="#">Scott Schiffres</a> <sup>1</sup> ; <sup>1</sup> Binghamton University   |
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**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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## SESSION CHAIR (PM SESSION):

TBA

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|-----------------------|---|
| <b>PM<br/>INVITED</b> | <b>Accelerated Alloy Design and Adaptation for Additive Manufacturing</b><br><a href="#">Sila Atabay</a> <sup>1</sup> ; <sup>1</sup> Lawrence Livermore National Laboratory             |
| <b>PM<br/>INVITED</b> | <b>Copper Alloys for Additive Manufacturing Applications</b><br><a href="#">Martin Dopler</a> <sup>1</sup> ; <sup>1</sup> Metalpine   |
| <b>PM<br/>INVITED</b> | <b>Use of Red and Green Laser for the Powder Bed Fusion Of CuCrZr Alloy</b><br><a href="#">Elisa Padovano</a> <sup>1</sup> ; <sup>1</sup> Politecnico di Torino                         |
| <b>PM<br/>INVITED</b> | <b>Mechanical and Functional Properties of "Reactive" Laser Powder Bed Fusion of Borated Aluminum Alloy 6061</b><br><a href="#">Jason Ting</a> <sup>1</sup> ; <sup>1</sup> Elementum 3D |

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## VALUE CHAIN

### IN-SITU MONITORING AND IN-PROCESS CONTROL

06<sup>TH</sup> OCT 2025 (MON) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Bianca Maria Colosimo**  
Politecnico di Milano, Italy

**Brian Fisher**  
RTX Technology Research Center, USA

**Thomas Jones**  
Rolls-Royce Submarines, United Kingdom

**Luke Scime**  
Oak Ridge National Laboratory, USA

**Alaa Elwany**  
Texas A&M University, USA

**Michael Heiden**  
Sandia National Laboratories, USA

**Andrey Molotnikov**  
RMIT University - RMIT Centre for Additive Manufacturing / Additive Assurance, Australia

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Multimodal Sensor Fusion for Real-Time Standoff Height Monitoring in LP-DED System

[Vladimir Orlyanchik](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**AM REGULAR** Comparative Study of Machine Learning Techniques for Eddy Current Testing Applied for Defect Detection in Powder Bed Fusion Laser Beam for Metals (PBF-LB/M)

[Enrico Tosoratti](#)<sup>1</sup>; [Daniel Werner](#)<sup>1</sup>; <sup>1</sup>inspire - Innovation Center for Additive Manufacturing Switzerland

**AM INVITED** In-Situ, Layer-by-Layer, LPBF Monitoring with High Resolution Eddy Current Arrays

[Andrew Washabaugh](#)<sup>1</sup>; <sup>1</sup>JENTEK Sensors

**AM INVITED** Don't Gamble on Your Build - LPBF In-Process Monitoring for Large-Format Machines

[Philip Sperling](#)<sup>1</sup>; <sup>1</sup>Interspectral

**AM INVITED** Validation of Thermal Models through In-Situ Monitoring and Surrogate Modeling for Laser-Wire DED

[Jack Canaday](#)<sup>1</sup>; <sup>1</sup>Naval Surface Warfare Center - Carderock Division

**AM REGULAR** In-Situ Melt Pool Characterization via Thermal Imaging for Defect Detection in Directed Energy Deposition using Vision Transformers

[James Craig](#)<sup>1</sup>; <sup>1</sup>Stratonic

**AM REGULAR** Integrated Process Monitoring to Enhance Beam Shaping for High-Speed DED

[Alex Kingsbury](#)<sup>1</sup>; <sup>1</sup>nLIGHT

**AM REGULAR**

Smart In-Situ Quality Monitoring of LPBF-Manufactured Ti6Al4V via Eddy Current Sensing and Machine Learning  
[Haifa Sallem](#)<sup>1</sup>; <sup>1</sup>University of Applied Sciences and Arts Western Switzerland

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** A Comparison of Detection Capability of Meltpool and Thermal Imaging Based In-Process Monitoring Systems for True LPBF Failure Modes

[Thomas Jones](#)<sup>1</sup>; <sup>1</sup>Rolls-Royce Submarines

**PM INVITED** Detection Technology for Microscopic Inner Defects by Light Emission Monitoring in PBF-AM

[Ryuichi Narita](#)<sup>1</sup>; <sup>1</sup>Mitsubishi Heavy Industries

**PM INVITED** Electron Optical Imaging: A Versatile Process Monitoring Tool in Electron Powder Bed Fusion

[Carolyn Körner](#)<sup>1</sup>; <sup>1</sup>Friedrich-Alexander University of Erlangen-Nuremberg

**PM REGULAR** Calibration of Down Beam Melt Pool Monitoring Sensors

[Rachel Emerick](#)<sup>1</sup>; [Jake Raplee](#)<sup>1</sup>; <sup>1</sup>GE Aerospace

**PM REGULAR** Optimizing Data Quality of Spatially Reconstructed On-Axis Pyrometry Data Acquired During Laser-Powder Bed Fusion

[Graham Spicer](#)<sup>1</sup>; <sup>1</sup>Johns Hopkins University - Applied Physics Laboratory

**PM REGULAR** In-Situ High Resolution Imaging for Geometric Quality Control in LPBF AM

[Ziyad Smoqi](#)<sup>1</sup>; <sup>1</sup>GE Aerospace

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Application of Eddy Current Sensors to In Situ Monitoring of LPBF Process

[Bernard Revaz](#)<sup>1</sup>; <sup>1</sup>AMiquam

**AM REGULAR** Porosity-ScanNet: A New Deep-Learning Method for Detecting Contamination-Induced Porosity in LPBF via In-Situ Monitoring and High-Resolution Scanning

[Matteo Bugatti](#)<sup>1</sup>; <sup>1</sup>Politecnico di Milano

**AM INVITED** Porosity Detection in Laser Powder Bed Fusion using High Resolution Long-Exposure In-Process Monitoring Technique

[Andrey Molotnikov](#)<sup>1,2</sup>; <sup>1</sup>RMIT University - RMIT Centre for Additive Manufacturing; <sup>2</sup>Additive Assurance

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# ICAM25

**AM**  
**INVITED**      **Multisensor Fusion for Robust Defect and Anomaly Detection in LPBF**  
[Thomas Spears](#)<sup>1</sup>; <sup>1</sup>Addiguru

**AM**  
**INVITED**      **Leveraging Multimodal On-Machine Inspection for Identifying Anomalies in Laser Powder Bed Fusion Process**  
[Sanam Gorgannejad](#)<sup>1</sup>; <sup>1</sup>Lawrence Livermore National Laboratory

**AM**  
**INVITED**      **From Signal to Strength: Investigating ISPM for Mechanical Property Prediction**  
[Yash Parikh](#)<sup>1</sup>; <sup>1</sup>EOS

**AM**  
**REGULAR**      **Sensor Optimization and Signal Prediction via Process Monitoring Simulation Tool for Laser Metal Powder Bed Fusion Additive Manufacturing**  
[Jared Blecher](#)<sup>1</sup>; <sup>1</sup>ASTRO America

**AM**  
**INVITED**      **Using Swelling for In Situ Flaw Detection in Laser Powder Bed Fusion Additive Manufacturing**  
[Christine Cummings](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

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**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (PM SESSION):**  
TBA

**PM**  
**INVITED**      **Lessons Learned: Seven Years of Real-Time Powder Bed Imaging, Data Processing, and Camera Calibration**  
[Luke Scime](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**PM**  
**INVITED**      **Laser Powder Bed Fusion Sensor-to-Quality Framework: A Demonstration of Sensors, Software Tools, and Analytics for Achieving Data-Driven Parameter Development and Process Drift Detection at Scale**  
[Solomon Duning](#)<sup>1</sup>; <sup>1</sup>University of Dayton Research Institute

**PM**  
**INVITED**      **Blowin' In The Wind: How Shield Gas Flow, Scan Path and Plume Interaction Influence Energy Delivery in Laser Powder Bed Fusion**  
[Paul Hooper](#)<sup>1</sup>; <sup>1</sup>Imperial College London

**PM**  
**INVITED**      **Process Mapping of Melt Pool Plume Behavior in Laser Powder Bed Fusion**  
[Jack Beuth](#)<sup>1</sup>; <sup>1</sup>Carnegie Mellon University

**PM**  
**REGULAR**      **Practical High-Speed Spatter Tracking for Material Properties Prediction in LPBF**  
[John Middendorf](#)<sup>1</sup>; <sup>1</sup>Ohio State University

**PM**  
**REGULAR**      **Benchmarking Experiments for Spatter Detection and Modeling**  
[Jordan Weaver](#)<sup>1</sup>; <sup>1</sup>NIST

**PM**  
**REGULAR**      **In Situ Measurement of Spatter Formation in L-PBF**  
[Niall O'Dowd](#)<sup>1</sup>; <sup>1</sup>Phase3D

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**09<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

**AM**  
**REGULAR**      **In Situ Process Monitoring for Defect Control in Metal Additive Manufacturing**  
[Manyalibo Matthews](#)<sup>1</sup>; <sup>1</sup>Lawrence Livermore National Laboratory

**AM**  
**REGULAR**      **A Novel In-Situ Monitoring Approach for Metal AM: Correlating Process Phenomena with Part Quality via a Synchronized Dual Monitoring System**  
[Behrang Poorganji](#)<sup>1</sup>; <sup>1</sup>Nikon AM

**AM**  
**INVITED**      **Scanit: A Novel Solution to Unlock In-Situ Qualification in Laser Powder Bed Fusion**  
[Matteo Bugatti](#)<sup>1</sup>; <sup>1</sup>Politecnico di Milano

**AM**  
**INVITED**      **Development and Use of Lightweight Multi-Modal Process Monitoring in LPBF**  
[Ben Brown](#)<sup>1</sup>; <sup>1</sup>Kansas City National Security Campus

**AM**  
**INVITED**      **In Situ Monitoring at Multiple Scales: Role of Powder Particle Velocity and Shield Gas Flow in Laser Powder Blown Directed Energy Deposition**  
[Samantha Webster](#)<sup>1</sup>; <sup>1</sup>Colorado School of Mines

**AM**  
**INVITED**      **RAMPSeg: A Robust Calibration-Free Image Segmentation Method for Reliable Melt Pool Analysis in Laser Powder Bed Fusion**  
[Mohammed Shafae](#)<sup>1</sup>; [Nazmul Hasan](#)<sup>1</sup>; <sup>1</sup>University of Arizona

**AM**  
**REGULAR**      **The Case for Data: Utilizing In-Situ and Post-Build Data for Defect Reduction, Repeatability, and Qualification**  
[Jeffrey Riemann](#)<sup>1</sup>; <sup>1</sup>FormAlloy Technologies

**AM**  
**REGULAR**      **Real-Time Monitoring for Additive Manufacturing: How Build Monitoring Allows to Ensure Quality, Cut Costs, and Save Time**  
[Hubert Kerschbaum](#)<sup>1</sup>; <sup>1</sup>Oqton

**SESSION CHAIR (PM SESSION):**  
TBA

**PM**  
**INVITED**      **Redefining Aerospace L-PBF with In-Situ Monitoring - Driving Quality & Cost Efficiency**  
[Sebastian Rott](#)<sup>1</sup>; <sup>1</sup>GKN Aerospace

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# ICAM25

<b>PM</b> <b>INVITED</b>	<b>In-Situ Process Monitoring (ISPM): A Breakthrough in Aerospace AM</b> <a href="#">Fernando Lartategui Atela</a> <sup>1</sup> ; <sup>1</sup> ITP Aero
<b>PM</b> <b>INVITED</b>	<b>Inspecting the Uninspectable: AI-Powered Quality Assurance for Complex AM Parts</b> <a href="#">Sebastian Larsen</a> <sup>1</sup> ; <sup>1</sup> Nexus Additive
<b>PM</b> <b>REGULAR</b>	<b>Part Agnostic Machine Learning Melt Pool Emission Model Based Statistical Process Control of LPBF AM</b> <a href="#">Rachel Emerick</a> <sup>1</sup> ; <a href="#">Scott Gold</a> <sup>1</sup> ; <sup>1</sup> GE Aerospace
<b>PM</b> <b>REGULAR</b>	<b>Combining Machine Learning with Physics-Based Models for Enhanced Feedforward Control of Melt pool Area in LPBF</b> <a href="#">Chinedum Okwudire</a> <sup>1</sup> ; <sup>1</sup> University of Michigan
<b>PM</b> <b>REGULAR</b>	<b>Toward Memory Efficient, High-Speed, In-Process Monitoring of Electron Beam Additive Manufacturing using High Dynamic Range, Neuromorphic Event Based Imagers</b> <a href="#">David Mascarenas</a> <sup>1</sup> ; <sup>1</sup> Los Alamos National Laboratory
<b>PM</b> <b>REGULAR</b>	<b>Improving Multimaterial Laser Powder Bed Fusion Additive Manufacturing via In-Situ Monitoring</b> <a href="#">Stefania Cacace</a> <sup>1</sup> ; <sup>1</sup> Politecnico di Milano

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**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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## SESSION CHAIR (AM SESSION):

TBA

<b>AM</b> <b>REGULAR</b>	<b>ASME's Initiatives Standardizing Advanced Manufacturing Methodologies and Practices</b> <a href="#">Justin Cassamassino</a> <sup>1</sup> ; <sup>1</sup> ASME
<b>AM</b> <b>REGULAR</b>	<b>Model Predictive Control for Additive Manufacturing Based on Advanced Process Monitoring</b> <a href="#">Yan Lu</a> <sup>1</sup> ; <sup>1</sup> NIST
<b>AM</b> <b>INVITED</b>	<b>Demonstration of COTS L-PBF Feedback Loop Controls</b> <a href="#">James Eliou</a> <sup>1</sup> ; <sup>1</sup> Naval Nuclear Laboratory
<b>AM</b> <b>INVITED</b>	<b>Multi-Scale Feedback Control Strategies for Thermal Stabilization in Laser Powder Bed Fusion of 316L</b> <a href="#">Markus Bambach</a> <sup>1</sup> ; <a href="#">Michael Tucker</a> <sup>1</sup> ; <sup>1</sup> ETH Zürich
<b>AM</b> <b>INVITED</b>	<b>A Real-Time Simulation Twin for Model Reference Adaptive Control in Directed Energy Deposition</b> <a href="#">James Haley</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National Laboratory

<b>AM</b> <b>INVITED</b>	<b>Towards Real-Time Control of Complex Metal AM Processes</b> <a href="#">Steven Storck</a> <sup>1</sup> ; <sup>1</sup> Johns Hopkins University - Applied Physics Laboratory
<b>AM</b> <b>INVITED</b>	<b>Producing High-Quality Structure-Critical Parts using the Laser Powder Bed Fusion Process, High-Resolution Melt Pool Monitoring Anywhere on the Build Platform, and Near-Real Time Process Control</b> <a href="#">Anil Chaudhary</a> <sup>1</sup> ; <sup>1</sup> Applied Optimization

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# ICAM25

## VALUE CHAIN

### MICROSTRUCTURAL AND MECHANICAL BEHAVIOR

06<sup>TH</sup> OCT 2025 (MON) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Allison Beese**  
Pennsylvania State  
University, USA

**Jim Dobbs**  
Boeing, USA

**Jonathan Pegues**  
Auburn University, USA

**Calvin Stewart**  
Ohio State University, USA

**Jimmy Campbell**  
Plastometrex,  
United Kingdom

**Nik Hrabe**  
NIST, USA

**Swee Leong Sing**  
National University of  
Singapore, Singapore

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Optimizing Thermal Management in LPBF with Ti-6Al-4V: Impact of Heat Accumulation on Microstructure within the Global Temperature Field Range  
[Johannes Rottler](#)<sup>1</sup>; <sup>1</sup>University of the Bundeswehr Munich

**AM REGULAR** Mechanical and Surface Properties of Ti-6Al-4V Manufactured via Accelerated L-PBF: Effect of Layer Thickness and Process Energy  
[Alexander Sviridov](#)<sup>1</sup>; <sup>1</sup>Brandenburg University of Technology Cottbus-Senftenberg

**AM INVITED** Unveiling 3D Sub-Grain Residual Stresses in As-Built Additively Manufactured Steel using Scanning 3DXRD  
[Jerard Gordon](#)<sup>1</sup>; <sup>1</sup>University of Michigan

**AM INVITED** Ultraviolet Digital Image Correlation (UV-DIC) for Non-Contact Strain Measurement at Extreme Temperatures, Magnifications, and Standoff Distances  
[Ryan Berke](#)<sup>1</sup>; <sup>1</sup>Utah State University

**AM INVITED** Utilising Electron Back Scattered Diffraction for Grain Size Measurement of Additively Manufactured Materials - Results of Intercomparison Exercise  
[Tony Fry](#)<sup>1</sup>; <sup>1</sup>National Physical Laboratory

**AM REGULAR** Impact-Resistant Sandwich Panels with 3D Printed Auxetic Chiral Cores  
[Seyed Hamid Reza Sanei](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**AM REGULAR** On the Mechanical Properties of Additively Manufactured Gyroids  
[Philip Bean](#)<sup>1</sup>; <sup>1</sup>University of Maine - Advanced Structures and Composites Center

AM

**REGULAR**

Design and Mechanical Behavior  
Optimization of Auxetic Metamaterials using Machine Learning-Guided Stress Prediction and Control  
[Yaoyao Fiona Zhao](#)<sup>1</sup>; <sup>1</sup>McGill University

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Creating “Plug and Play” Approach for Metal Additive Manufacturing  
[Swee Leong Sing](#)<sup>1</sup>; <sup>1</sup>National University of Singapore

**PM INVITED** Science-Informed Materials Discovery via Computational Materials Engineering: Multi-Scale Multi-Physics Modelling  
[Chinnapat Panwisawas](#)<sup>1</sup>; <sup>1</sup>Queen Mary University of London

**PM INVITED** Prediction of Fracture in Complex Additively Manufactured Alloys  
[Allison Beese](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**PM REGULAR** Fast-Tracking LPBF Qualification: Reducing Time and Cost with In-Situ and PIP Methods  
[Yash Parikh](#)<sup>1</sup>; <sup>1</sup>EOS

**PM REGULAR** Designing Microstructure, Not Just Parts: A Software-Driven Approach to Microstructure Control and Validation  
[Benjamin Robinson](#)<sup>1</sup>; <sup>1</sup>Dyndrite

**PM REGULAR** Voxel-Scale Process Control for Microstructural and Thermomechanical Tailoring of NiTi and NiTiHf Shape Memory Alloys via Laser Powder Bed Fusion  
[Abdelrahman Elsayed](#)<sup>1</sup>; <sup>1</sup>Texas A&M University

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Part Temperature Effects on Porosity and Microstructure during Laser Powder Bed Fusion Additive Manufacturing of Alloy 718  
[Sneha Prabha Narra](#)<sup>1</sup>; <sup>1</sup>Carnegie Mellon University

**AM REGULAR** Understanding Deformation Mechanisms in Wire Arc Additively Manufactured Nickel Aluminum Bronze  
[Ariel Leonard](#)<sup>1</sup>; <sup>1</sup>Ohio State University

**AM INVITED** Microstructural Modification in Titanium Wire-Feed Additive Manufacturing  
[Andrew Baker](#)<sup>1</sup>; <sup>1</sup>Boeing

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

**AM**  
**INVITED** **Wire-Based Direct Energy Deposition: Bridging the Gap between Process and Performance in Structural Alloys**  
[Hannah Sims](#)<sup>1</sup>; <sup>1</sup>Sandia National Laboratories

**AM**  
**INVITED** **Creep Behavior of Laser Powder Bed Fusion Haynes 282 Alloy and Integrity of its Welds for Concentrated Solar Power Systems**  
[Nadia Kouraytem](#)<sup>1</sup>; <sup>1</sup>Utah State University

**AM**  
**REGULAR** **Processing-Structure-Properties Relationships of Solid Solution Strengthened Ni-Based Superalloys Fabricated via Laser Powder Bed Fusion**  
[Amanda Heimbrook](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**AM**  
**REGULAR** **Exploring High Temperature Functionally Graded Alloys for Site-Specific Property Response**  
[Soumya Nag](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**AM**  
**REGULAR** **Structural Analysis and Mechanical Characterization of CuSn10 and CuAl10 Alloys Fabricated by Selective Laser Melting**  
[Ramin Rahmani](#)<sup>1</sup>; <sup>1</sup>Centro de Interface Tecnológico Industrial (CiTin); Instituto Politécnico de Viana do Castelo (IPVC)

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**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (PM SESSION):**  
TBA

**PM**  
**INVITED** **Microstructure and Mechanical Control of Metal AM for Critical Applications**  
[Nik Hrabe](#)<sup>1</sup>; <sup>1</sup>NIST

**PM**  
**INVITED** **Enhanced Strength and Ductility of Metamaterials Additively Manufactured through Laser Sheet Fusion**  
[Chang Quan \(CQ\) Lai](#)<sup>1</sup>; <sup>1</sup>Nanyang Technological University

**PM**  
**INVITED** **Profilometry-Based Indentation Plastometry: A Game Changer for Mechanical Evaluation**  
[Sabina Kumar](#)<sup>1</sup>; <sup>1</sup>Eaton

**PM**  
**REGULAR** **Comparison of Uncertainties in Tensile Properties of Additively Manufactured Ti64 using Profilometry-Based Indentation Plastometry (PIP) and Tensile Testing**  
[Tony Fry](#)<sup>1</sup>; <sup>1</sup>National Physical Laboratory

**PM**  
**REGULAR** **Overcoming Challenges in Load Bearing Area Determination for As-Deposited Additive Manufactured Parts**  
[Jan Džugan](#)<sup>1</sup>; <sup>1</sup>COMTES FHT

**PM**  
**REGULAR** **Mechanical Properties of Sub-Sized Specimens Excised from Part Geometries**  
[Nathan Bryant](#)<sup>1</sup>; <sup>1</sup>University of Dayton Research Institute

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**09<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

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**SESSION CHAIR (AM SESSION):**  
TBA

**AM**  
**REGULAR** **Iron-Based Alloys: A Promising Alternative for Biodegradable Medical Devices**  
[Jan Džugan](#)<sup>1</sup>; <sup>1</sup>COMTES FHT

**AM**  
**REGULAR** **Microstructural Modification of LPBF-Processed High Manganese Steel by Laser Parameter Alternation**  
[Daniel Koutný](#)<sup>1</sup>; <sup>1</sup>Brno University of Technology

**AM**  
**INVITED** **Experimental Investigation of Material Properties Affecting Fatigue Behavior of a Ti Gr.5 Alloys Produced by Additive Manufacturing L-PBF and EB-PBF Processes Techniques**  
[Riccardo Toninato](#)<sup>1</sup>; <sup>1</sup>Enovis

**AM**  
**INVITED** **Microstructural Engineering and Crack Mitigation in Electron Beam Powder Bed Fusion of Pure Tungsten**  
[Kenta Yamanaka](#)<sup>1</sup>; <sup>1</sup>Tohoku University

**AM**  
**INVITED** **Investigating the Sensitivity of Microstructure and Mechanical Properties to LPBF Process Parameters for Thin-Walled Alloy 316 Components**  
[Matthew Rowson](#)<sup>1</sup>; <sup>1</sup>Rolls-Royce

**AM**  
**REGULAR** **Effect of Wall Thickness on the Mechanical Properties and Strengthening Mechanisms of 17-4 PH Stainless Steel Fabricated by Laser Powder Bed Fusion**  
[Chuankai Song](#)<sup>1</sup>; <sup>1</sup>Oregon Institute of Technology - Oregon Manufacturing Innovation Center

**AM**  
**REGULAR** **Characterizing Additively Manufactured Thin-Walled Structures for Critical Aerospace Components**  
[Colton Katsarelis](#)<sup>1</sup>; <sup>1</sup>NASA - Marshall Space Flight Center

**AM**  
**REGULAR** **Evaluation of the Mechanical Behavior of GRCop42, Produced by PBF-LB Technology, at Low Temperatures for High-Demanding Basic Physics Research Applications**  
[Daniele Cortis](#)<sup>1</sup>; [Donato Orlandi](#)<sup>1</sup>; <sup>1</sup>INFN - Gran Sasso National Laboratory

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

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## SESSION CHAIR (PM SESSION):

TBA

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- |                       |  |
|-----------------------|--|
| <b>PM<br/>INVITED</b> | <b>Mechanical and Microstructural Evolution Across Lengths Scales during Additive Manufacturing</b><br><a href="#">Danielle Cote</a> <sup>1</sup> ; <sup>1</sup> Worcester Polytechnic Institute   |
| <b>PM<br/>INVITED</b> | <b>Exploiting Rapid Solidification to Realize Aluminum Alloys with Exceptional Mechanical Properties and Extended Thermal Stability</b><br><a href="#">S. Mohadeseh Taheri-Mousavi</a> <sup>1</sup> ; <sup>1</sup> Carnegie Mellon University  |
| <b>PM<br/>INVITED</b> | <b>The Ultra-High Temperature Stability and Properties of GRX-810</b><br><a href="#">Timothy Smith</a> <sup>1</sup> ; <sup>1</sup> NASA - Glenn Research Center  |
| <b>PM<br/>REGULAR</b> | <b>Tensile Strength and Compressive Strength of Oxide Dispersion Strengthened Ni-Co-Cr GRX-810 Alloy Cellular Octet Lattice Structures Manufactured with Laser Powder Bed Fusion</b><br><a href="#">Hallie Collopy</a> <sup>1</sup> ; <sup>1</sup> NASA - Marshall Space Flight Center |
| <b>PM<br/>REGULAR</b> | <b>Evaluation of Thermal Conductivity of GRCop42, Produced by PBF-LB Technology, at Low Temperatures for High-Demanding Basic Physics Research Applications</b><br><a href="#">Daniele Cortis</a> <sup>1</sup> ; <sup>1</sup> INFN - Gran Sasso National Laboratory                    |

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10<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

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## SESSION CHAIR (AM SESSION):

TBA

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|-----------------------|--|
| <b>AM<br/>REGULAR</b> | <b>Advanced Manufacturing of Corrosion-Resistant High Entropy Alloy for Nuclear Application</b><br><a href="#">Priyanshi Agrawal</a> <sup>1</sup> ; <sup>1</sup> Idaho National Laboratory   |
| <b>AM<br/>REGULAR</b> | <b>Process Optimization and Microstructural Evolution in Friction Surface Layer Deposited Triple-Phase Al<sub>10</sub>Cr<sub>12</sub>Fe<sub>35</sub>Mn<sub>23</sub>Ni<sub>20</sub> High Entropy Alloy</b><br><a href="#">Mohan Sai Kiran Kumar Yadav Nartu</a> <sup>1</sup> ; <sup>1</sup> Pacific Northwest National Laboratory |
| <b>AM<br/>INVITED</b> | <b>SmartScan: Accelerated In-Situ Microstructural Control in L-PBF via Optimized Dual-Laser Toolpaths</b><br><a href="#">Chinedum Okwudire</a> <sup>1</sup> ; <sup>1</sup> University of Michigan  |
| <b>AM<br/>INVITED</b> | <b>Breaking the 15-45µm Habit: Choosing Powder PSD Based on Applications</b><br><a href="#">Yevgeni Brif</a> <sup>1</sup> ; <sup>1</sup> GE Aerospace - AP&C   |

AM

INVITED

**Heat Treat Response of a Gamma Prime Strengthened Ni-Based Superalloy Manufactured via Laser Powder Bed Fusion**

[Matias Garcia Avila](#)<sup>1</sup>; <sup>1</sup>ATI

AM

REGULAR

**Impact of Heat Treatment on the Mechanical Properties and Microstructure of Wire DED Cu-30Ni**

[Debjit Misra](#)<sup>1</sup>; <sup>1</sup>University of Pittsburgh

AM

REGULAR

**Influence of Interpass Temperature on the Dynamic Tensile Deformation Behaviour of 316L Produced by Wire Arc Additive Manufacturing**

[Stefan Böhm](#)<sup>1</sup>; <sup>1</sup>University of Kassel

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# ICAM25

## VALUE CHAIN

### NON-DESTRUCTIVE EVALUATION AND INSPECTION

06<sup>TH</sup> OCT 2025 (MON) – 07<sup>TH</sup> OCT 2025 (TUE)

#### CO-ORGANIZERS:

**Elliott Cramer**

NASA - Langley Research Center, USA

**Frank Herold**

VisiConsult, Germany

**Philip Riegler**

Norsk Titanium, USA

**Ben Dutton**

Manufacturing Technology Centre, United Kingdom

**Patrick Howard**

GE Aerospace, USA

**Tyler Ripperger**

Waygate Technologies, USA

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Towards Fully Automated Quality-Assured Metal Additive Manufacturing

[Rastislav Zimmermann<sup>1</sup>](#); <sup>1</sup>University of Strathclyde

**AM REGULAR** With Great AI Power Comes Great Responsibility...and the Need for Trust

[Justin Olsen<sup>1</sup>](#); <sup>1</sup>Nikon Metrology

**AM INVITED** Compliant in Situ Inspection of LPBF Parts using Eddy Currents

[Bernard Revaz<sup>1</sup>](#); <sup>1</sup>AMiquam

**AM INVITED** Monitoring of X-Ray CT System Performance with Respect to Additive Manufacturing

[Holger Roth<sup>1</sup>](#); <sup>1</sup>Baker Hughes Digital Solutions

**AM INVITED** Statistical Methods for Industrial X-Ray Computed Tomography Process Control

[Don Roth<sup>1</sup>](#); <sup>1</sup>Wohlers Associates

**AM INVITED** Confidence in Quality Testing Components Utilizing Computed Tomography

[Ben Connors<sup>1</sup>](#); [Justin Olsen<sup>1</sup>](#); <sup>1</sup>Nikon Metrology

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** NDE of Polymeric Additively Manufactured Parts

[Wilson Vesga<sup>1</sup>](#); <sup>1</sup>Manufacturing Technology Centre

**PM INVITED** Defect Densities in Additively Manufactured Alloys Determined with Nonlinear Reverberation Spectroscopy

[Ward Johnson<sup>1</sup>](#); <sup>1</sup>NIST

PM

**INVITED**

Representative Quality Indicators (RQIs) in Large Scale AM Components: Flaw Generation Mechanisms and Detection using Nonlinear Resonance

[Julian Wright<sup>1</sup>](#); [James Watts<sup>1</sup>](#); <sup>1</sup>Theta Technologies; <sup>2</sup>Aerojet Rocketdyne

PM

**INVITED**

Ex-Situ Inspection of LPBF to Assess Fatigue and Damage Tolerance

[Mark Shaw<sup>1</sup>](#); <sup>1</sup>Wichita State University - National Institute for Aviation Research

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Combined Use of Neutron Beam-Based Non-Destructive Investigation Techniques for Characterization of Components Produced by PBF-LB Technology

[Donato Orlandi<sup>1</sup>](#); <sup>1</sup>INFN - Gran Sasso National Laboratory

**AM REGULAR** Rapid High-Throughput Time-Resolved 3D Flaw Characterization of LPBF 316H Parts Printed with Hybrid Printing Parameters

[Rahul Franklin<sup>1</sup>](#); <sup>1</sup>Oak Ridge National Laboratory

**AM INVITED** Applied NDE 4.0 Principles to the Characterization of PBF-LB Component Volumes

[Lloyd Schaefer<sup>1</sup>](#); <sup>1</sup>General Atomics - Aeronautical Systems

**AM INVITED** US Navy Maritime Industrial Base Nondestructive Testing for LPBF and DED

[Rick Russell<sup>1</sup>](#); <sup>1</sup>The Barnes Global Advisors

**AM INVITED** Inline Nondestructive Evaluation and Process Control during Metal Directed Energy Deposition 3D Printing

[Hoon Sohn<sup>1</sup>](#); <sup>1</sup>Korea Advanced Institute of Science and Technology

**AM INVITED** Non-Contact Imaging of Subsurface Defects for In-Situ Monitoring of Additive Manufacturing Process

[Takahiro Hayashi<sup>1</sup>](#); <sup>1</sup>Osaka University

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Model-Assisted Probability of Detection (MAPOD) Evaluation with Reduced Empirical Testing for NDE Reliability Assessment

[John Aldrin<sup>1</sup>](#); <sup>1</sup>Computational Tools

**PM INVITED** Model Assisted POD Study utilizing High Energy CT (9MeV) and Simulation Tool aRTist

[Taeho Ju<sup>1</sup>](#); <sup>1</sup>Blue Origin

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# ICAM25

**PM**  
**INVITED** **Simurgh: AI-Powered Fast and Accurate X-Ray CT Reconstruction for High-Throughput Inspection of Complex Additive Manufacturing Parts**  
[Amir Ziabari](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**PM**  
**REGULAR** **Surface Roughness Analysis for AM Lattice Structures: A Novel Methodology and Practical Insights**  
[Armando Coro](#)<sup>1</sup>; <sup>1</sup>ITP Aero

**PM**  
**INVITED** **Quantitative Assessment of Impacts to XCT-Based AM Porosity Characterization**  
[Daniel Sparkman](#)<sup>1</sup>; <sup>1</sup>Air Force Research Laboratory

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# ICAM25

## VALUE CHAIN

### SINTER-BASED TECHNOLOGIES

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Animesh Bose**  
Shaping Innovations, USA

**Amy Elliott**  
Oak Ridge National  
Laboratory, USA

**Benoit Verquin**  
Cetim - French Technical  
Center for Mechanical  
Industries, France

**Efrain Carreño-Morelli**  
University of Applied Sciences  
and Arts Western Switzerland,  
Switzerland

**Simon Höges**  
GKN Additive, Germany

**Thomas Weißgärber**  
Fraunhofer IFAM, Germany

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

SESSION CHAIR (AM SESSION):  
TBA

**AM REGULAR** The Three-Dimensional Distribution of Liquid Eutectic Phase in Non-Pressure-Sintered Al-Dy<sub>2</sub>O<sub>3</sub> and its Mechanical Properties  
[Yuji Shigeta](#)<sup>1</sup>; <sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST)

**AM REGULAR** Full-Scale Simulation of Debinding in Metal Binder Jetting: Addressing Multi-Physics Challenges for Improved Manufacturing Efficiency for Binder Jetting Processing  
[Yan Liu](#)<sup>1</sup>; <sup>1</sup>Simtec Soft

**AM INVITED** Sinter-Based Additive Manufacturing - Challenges in De-Binding and Sintering of Printed Parts  
[Thomas Weißgärber](#)<sup>1</sup>; <sup>1</sup>Fraunhofer IFAM

**AM INVITED** Optimization of De-Binding and Sintering Process for NiTi-X (Hf, Cu) Shape Memory Alloys in Binder Jetting Process  
[Mohammad Elahinia](#)<sup>1</sup>; <sup>1</sup>University of Toledo

**AM INVITED** Sintering of Cold Spray Additive Manufacturing Products  
[Animesh Bose](#)<sup>1</sup>; <sup>1</sup>Shaping Innovations

**AM INVITED** Metal Binder Jetting MythBusters  
[Rohit Reddy](#)<sup>1</sup>; <sup>1</sup>Endeavor 3D

SESSION CHAIR (PM SESSION):  
TBA

**PM INVITED** Binder Jet Metal Printing in Mass Production - Advances and Challenges  
[Mukund Nagaraj](#)<sup>1</sup>; <sup>1</sup>INDO-MIM

**PM INVITED** Aluminum 7075 in Binder Jet Additive Manufacturing: Early Insights  
[Nick Murphy](#)<sup>1</sup>; <sup>1</sup>Kymera International

**PM INVITED** Advancing Aluminum Binder Jetting Technology: Materials, Processes, and Applications in Thermal Management Systems  
[Shinichiro Sato](#)<sup>1</sup>; <sup>1</sup>Ricoh

**PM REGULAR** Drastic Sinterability Improvement of Al Alloy Powder with Minimal Amounts of Rare Earth Elements for Applying the BJT Process  
[Yusuke Hirayama](#)<sup>1</sup>; <sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST)

**PM REGULAR** High-Volume Production Case Studies in Metal Binder Jetting  
[Mattia Forgiarini](#)<sup>1</sup>; <sup>1</sup>Azoth

**PM INVITED** Induced Porosity During Binderjetting and Case Studies of Overcoming Pore-Grain Boundary Separation During Sintering  
[Pavan Suri](#)<sup>1</sup>; <sup>1</sup>HP

09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

SESSION CHAIR (AM SESSION):  
TBA

**AM REGULAR** Production of WC-10Co FSW Tool using Fused Filament Fabrication  
[Julian David Rubiano Buitrago](#)<sup>1</sup>; <sup>1</sup>National University of Colombia

**AM REGULAR** Design of a Multimaterials Dispenser Prototype for Binder Jet 3D Printing Targeting Eddy-Current-Reduced Magnetic Ceramic Components  
[Tej Nath Lamichhane](#)<sup>1</sup>; <sup>1</sup>University of Central Oklahoma

**AM INVITED** Advancements in Multi-Material Additive Manufacturing and Spark Plasma Sintering: A Collaborative Approach to High-Performance Component Fabrication  
[Christopher Melnyk](#)<sup>1</sup>; <sup>1</sup>California Nanotechnologies

**AM INVITED** Design and Process Insights from Multi-Component Embedding in Binder Jet AM  
[Amy Elliott](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**AM INVITED** Solvent on Granules 3D Printing of Shape Memory Alloys  
[Efrain Carreño-Morelli](#)<sup>1</sup>; <sup>1</sup>University of Applied Sciences and Arts Western Switzerland

**AM REGULAR** Functional Binders for Bind Jet Additive Manufacturing  
[Dustin Gilmer](#)<sup>1</sup>; <sup>1</sup>University of Tennessee Space Institute

**AM REGULAR** Inconel 718 Superalloy Production by MoldJet® Technology  
[Ben Arnold](#)<sup>1</sup>; <sup>1</sup>Tritone Technologies

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# ICAM25

AM  
INVITED

**Sinter-Based Additive Manufacturing of 316L Stainless Steel: Tailoring Microstructures and Properties**  
[Mahmood Shirooyeh](#)<sup>1</sup>; <sup>1</sup>3DEO

SESSION CHAIR (PM SESSION):  
TBA

- |               |  |
|---------------|--|
| PM<br>INVITED | <b>Sinter-Based Titanium Manufacturing for Medical Applications: A Comparative Study of MIM, LMM, and CMF with an Emphasis on Microstructural Refinement</b><br><a href="#">Tim Marter</a> <sup>1</sup> ; <sup>1</sup> Element22 |
| PM<br>INVITED | <b>Material Development as Enabler for the Lithography-Based Metal Manufacturing Process</b><br><a href="#">György Harakály</a> <sup>1</sup> ; <sup>1</sup> Incus  |
| PM<br>INVITED | <b>Lithography-Based Metal Manufacturing for Medical Applications</b><br><a href="#">Mattia Forgiarini</a> <sup>1</sup> ; <sup>1</sup> Azoth   |
| PM<br>REGULAR | <b>Evaluation and Benchmarking of Cold Metal Fusion</b><br><a href="#">Sabina Kumar</a> <sup>1</sup> ; <sup>1</sup> Eaton  |
| PM<br>INVITED | <b>ColdMetalFusion – Achieving Smooth Surfaces Efficiently with Green Part Processing</b><br><a href="#">Marcel Strobel</a> <sup>1</sup> ; <sup>1</sup> Headmade Materials   |

10<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

SESSION CHAIR (AM SESSION):  
TBA

- |               |  |
|---------------|--|
| AM<br>REGULAR | <b>In-Situ Measurement of Powder Bed Density for Process Monitoring</b><br><a href="#">Nathan Crane</a> <sup>1</sup> ; <sup>1</sup> Brigham Young University   |
| AM<br>REGULAR | <b>Real-Time Anomaly Detection and Process Control for Binder Jet Printing</b><br><a href="#">Luke Scime</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National Laboratory   |
| AM<br>INVITED | <b>Performance Optimization of Copper Thermal Management Devices</b><br><a href="#">Simon Höges</a> <sup>1</sup> ; <sup>1</sup> GKN Additive   |
| AM<br>INVITED | <b>Development of an Industrial Application Made by Metal Binder Jetting: Schneider Electric Power Filter</b><br><a href="#">Thomas Rivoire</a> <sup>1</sup> ; <a href="#">Guillaume Fribourg</a> <sup>1</sup> ; <sup>1</sup> Schneider Electric |
| AM<br>INVITED | <b>Processing of P91 Heat Resistant Steel by Binder Jetting Technology for Energy Applications</b><br><a href="#">Iñigo Agote</a> <sup>1</sup> ; <sup>1</sup> TECNALIA Research & Innovation   |
| AM<br>INVITED | <b>Sinter-Based Additive Manufacturing of High Nitrogen Stainless Steels</b><br><a href="#">Iñigo Iturriza</a> <sup>1</sup> ; <sup>1</sup> Ceit Technology Center  |

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# ICAM25

## VALUE CHAIN

### SUSTAINABILITY AND ECONOMICS

09<sup>TH</sup> OCT 2025 (THU) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Angeline Goh**  
Shell, The Netherlands

**Marius Lakomic**  
EOS, Germany

**Taisia (Asya) Lou**  
Boeing, USA

**Sherri Monroe**  
Additive Manufacturer Green  
Trade Association, USA

**Behrang Poorganji**  
Nikon AM Synergy, USA

09<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Recent Advances in Laser Technology  
Improve Reproducibility for Large-Format,  
Multi-Aperture Powder Bed Fusion  
[Robert Martinsen<sup>1</sup>](#); <sup>1</sup>nLIGHT

**AM REGULAR** Powder and Process Optimization for  
Sustainable Additive Manufacturing  
(POSAM)  
[Brian Fisher<sup>1</sup>](#); <sup>1</sup>RTX Technology Research  
Center

**AM INVITED** The Impact of Digital Manufacturing  
Passport for Meeting Sustainability Targets  
and Driving Supply Chain Efficiencies in  
Energy Industry  
[Faisal Iqbal<sup>1</sup>](#); [Angeline Goh<sup>2</sup>](#); <sup>1</sup>Baker Hughes;  
<sup>2</sup>Shell

**AM INVITED** Reduction of Total Cost of Ownership  
(TCO) through Optimized AM Systems and  
Processes  
[Marius Lakomic<sup>1</sup>](#); <sup>1</sup>EOS

**AM INVITED** Environmental Tradeoffs of Additive  
Manufacturing with Waste Plastics  
[Carolyn Seepersad<sup>1</sup>](#); <sup>1</sup>Georgia Institute of  
Technology

**AM REGULAR** Can Additive Manufacturing Help  
Sustainability without Damaging  
Profitability?  
[Mark Rushton<sup>1</sup>](#); <sup>1</sup>aPriori Technologies

**AM INVITED** Additive Manufacturing in Colombia:  
Present and Future  
[Gersson Torres<sup>1</sup>](#); <sup>1</sup>ICONTEC

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Transforming the Supply Chain with AM  
and Digital Inventories  
[Brede Lærum<sup>1</sup>](#); <sup>1</sup>Equinor

**PM INVITED** AME Enabling Complex Geometries,  
Embedding 3D-Printed Components  
[Peter Johnsamson<sup>1</sup>](#); <sup>1</sup>Nano Dimension

**PM INVITED** Floating Ball Valve Size 2", Class 150,  
Material ASTM-F3055, Produced by AM &  
Certified According to European Pressure  
Equipment Directive (PED 2014/68/EU)  
[Oscar Barcella<sup>1</sup>](#); [Massimiliano Salogni<sup>2</sup>](#); <sup>1</sup>BFE  
- Bonney Forge; <sup>2</sup>Fluorten

**PM REGULAR** Bonding Mechanisms and Performance of  
Recycled, Contaminated Multi-Alloy  
Aluminum Chips in the Production of Semi-  
Finished Products  
[Alexander Koch<sup>1</sup>](#); <sup>1</sup>TU Dortmund University

**PM REGULAR** Toward a Circular Path in Metal Additive  
Manufacturing: Electrochemical and  
Microstructural Assessment of Recycled  
Bound Metal Deposition SS316L with  
Ceramic Support Inclusions  
[Marwan Khraisheh<sup>1</sup>](#); <sup>1</sup>Hamad Bin Khalifa  
University

**PM REGULAR** Additive Manufacturing, Bridge Production  
& Custom Manufacturing  
[Daniel Baker<sup>1</sup>](#); <sup>1</sup>Endeavor 3D

10<sup>TH</sup> OCTOBER 2025

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#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** The Innovation of Additive Manufacturing  
Polymer Materials  
[Daniel Baker<sup>1</sup>](#); <sup>1</sup>Endeavor 3D

**AM REGULAR** Synchronous Production in Metal Additive  
Manufacturing  
[Maciej 'Matt' Tusz<sup>1</sup>](#); <sup>1</sup>Magnitude Innovations

**AM INVITED** Scaling Circular Manufacturing in Metal  
AM: From Carbon Validation to Real-World  
Impact  
[Donald Magnuson<sup>1</sup>](#); <sup>1</sup>Continuum Powders

**AM INVITED** Powder Innovation Transforming Copper  
LBPF Economics  
[Ben Arnold<sup>1</sup>](#); <sup>1</sup>Metal Powder Works

**AM INVITED** An Alternative Qualification Testing of an  
AMSL 3 Component Based on ASME B16.9  
[Bård Angell Bergh<sup>1</sup>](#); <sup>1</sup>IK Topside

**AM INVITED** Economic Benefits of Cold Spray Additive  
for Large Metal Parts  
[Pierre Devaux<sup>1</sup>](#); <sup>1</sup>SPEE3D

**AM REGULAR** Welding Automation: Streamlining  
Repetitive Tasks to Value Skilled Welders  
[Tilo Greenbaum<sup>1</sup>](#); <sup>1</sup>DMG MORI

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## NON-METALLIC MATERIALS

### CERAMICS AND ELECTRONICS

07<sup>TH</sup> OCT 2025 (TUE)

#### CO-ORGANIZERS:

**Shawn Allan**  
Lithoz, USA

**Brandon Cox**  
Honeywell, USA

**Samuel Gatley**  
New Jersey Institute of  
Technology, USA

**Matthew Krohn**  
Pennsylvania State University,  
USA

**Russell Maier**  
NIST, USA

**Ye Wang**  
TE Connectivity, USA

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM**  
**REGULAR** **Flexible Electronics at NJII**  
[Justin Reig](#)<sup>1</sup>; <sup>1</sup>New Jersey Innovation Institute  
- COMET

**AM**  
**REGULAR** **Optimizing Design Requirements for  
Flexible Hybrid Electronics through  
Predictive Modeling**  
[Jayden Johnson](#)<sup>1</sup>; <sup>1</sup>New Jersey Innovation  
Institute - COMET

**AM**  
**INVITED** **Concurrent Design and Process Planning  
for the Hybrid Additive Manufacturing of  
Three-Dimensional Structural Electronics**  
[Guha Manogharan](#)<sup>1</sup>; [Ashish Jacob](#)<sup>1</sup>;  
<sup>1</sup>Pennsylvania State University

**AM**  
**INVITED** **The Additive Manufacturing of Mesoscale  
Functional Materials**  
[Joseph Mantele](#)<sup>1</sup>; <sup>1</sup>RTX Technology  
Research Center

**AM**  
**INVITED** **Additive Manufacturing of Nano and  
Microelectronics for Chiplets and 3D  
Heterogenous Integration**  
[Ahmed Busnaina](#)<sup>1,2</sup>; <sup>1</sup>Northeastern University;  
<sup>2</sup>Nano OPS

**AM**  
**INVITED** **LEO Manufacturing of 3D Printed Metallic  
Composite Nanomaterials for Advanced  
Electronics**  
[Timothy Hall](#)<sup>1</sup>; <sup>1</sup>Faraday Technology

**AM**  
**INVITED** **High-Precision 3D Printing for the Next  
Generation of Electronic Components**  
[Jake Collins](#)<sup>1</sup>; <sup>1</sup>Boston Micro Fabrication

**AM**  
**REGULAR** **Additive Manufactured Electronics  
Standards Development**  
[Isaiah Colón](#)<sup>1</sup>; <sup>1</sup>New Jersey Innovation  
Institute

#### SESSION CHAIR (PM SESSION):

TBA

**PM**  
**INVITED** **Transforming Marine Biomass into  
Functional 3D Printed Ceramics: Energy-  
Efficient Sintering and CFD-Guided  
Designs for Ecosystem Restoration**  
[Vasily Korshikov](#)<sup>1</sup>; <sup>1</sup>Thrasos 3D

**PM**  
**INVITED** **Selective Metallization of 3D Printed  
Ceramic Parts**  
[Analisa Russo](#)<sup>1</sup>; <sup>1</sup>Nano Dimension

**PM**  
**INVITED** **NIST AM Bench: Cure Depth Studies on  
Narrow and Wide Bandwidth Light Engines  
of Varied Resin Absorber Compositions**  
[Callie Higgins](#)<sup>1</sup>; <sup>1</sup>NIST

**PM**  
**REGULAR** **The Processes of Additively Manufactured  
Alumina Ceramics for Propulsion  
Applications**  
[Jenna Saylor](#)<sup>1</sup>; <sup>1</sup>NASA - Marshall Space Flight  
Center

**PM**  
**REGULAR** **Miniaturizing Insulator Design with  
Additive Manufacturing of Ceramics**  
[Analisa Russo](#)<sup>1</sup>; <sup>1</sup>Nano Dimension

**PM**  
**REGULAR** **Additive Manufacturing of  
Crystallographically Textured Ceramics: A  
Pathway to Advanced Piezoelectric  
Devices**  
[Christopher Eadie](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State  
University

**PM**  
**REGULAR** **Optimization of Ceramic Vat  
Photopolymerization by Controlling Resin  
Rheology**  
[Samuel Hales](#)<sup>1</sup>; <sup>1</sup>NIST

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

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# ICAM25

## NON-METALLIC MATERIALS

### POLYMERS

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

<b>Mohammad Amjadi</b> Arkansas Tech University, USA	<b>Thomas Fabian</b> Blue Sky Polymer Consulting, USA
<b>Jessica Hemond</b> TE Connectivity, USA	<b>Callie Higgins</b> NIST, USA
<b>Phillip Nagel</b> 3D Systems, USA	<b>Karl Nelson</b> Stratasys, USAs

08<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

<b>AM REGULAR</b>	<b>Low-Cost Circular Economy for Recycled Waste Plastic Blends without Separation and their Use in 3D Printing of New Recycled Parts for Industrial Applications</b> <a href="#">Ramona Fayazfar</a> <sup>1</sup> ; <a href="#">Mihaela Mihai</a> <sup>2</sup> ; <sup>1</sup> Ontario Tech University; <sup>2</sup> National Research Council Canada
<b>AM REGULAR</b>	<b>Advances in the Development of a Circular Economy for Thermoplastic Composites Used in Large Format Additive Manufacturing</b> <a href="#">Edward Cant</a> <sup>1</sup> ; <sup>1</sup> University of Birmingham
<b>AM INVITED</b>	<b>Using SAF Powder Bed Fusion to Advance Sustainable Manufacturing</b> <a href="#">Alec Logeman</a> <sup>1</sup> ; <sup>1</sup> Stratasys
<b>AM INVITED</b>	<b>Fatigue Performance of AM Polymer Composites: Role of Processing-Induced Defects</b> <a href="#">Mohammad Amjadi</a> <sup>1</sup> ; <sup>1</sup> Arkansas Tech University
<b>AM INVITED</b>	<b>Evaluating Hardness in 3D-Printed Polymer Composites for Sheet Metal Forming Dies</b> <a href="#">Jonathan Seppala</a> <sup>1</sup> ; <sup>1</sup> NIST
<b>AM INVITED</b>	<b>Impact of Filament / Feedstock Dimensional Control and Fill Density on Tensile Properties of Additive FFF ULTEM9085</b> <a href="#">Aaron Gregg</a> <sup>1</sup> ; <sup>1</sup> Stratasys
<b>AM INVITED</b>	<b>Enhancing 3D Printing with Orgasol® PA12 Powders: Superior Recyclability and Surface Aesthetics</b> <a href="#">Krysten Minnici</a> <sup>1</sup> ; <sup>1</sup> Arkema

**AM  
REGULAR**

**Enhancing the Processability of Cryogenically Milled PA12 Powders for Cost-Effective PBF-LB**  
[Matteo Turani](#)<sup>1</sup>; [Daniel Werner](#)<sup>1</sup>; <sup>1</sup>inspire - Innovation Center for Additive Manufacturing Switzerland

#### SESSION CHAIR (PM SESSION):

TBA

<b>PM INVITED</b>	<b>Damage Tolerance and Nondestructive Evaluation Methodology for Polymeric Structural Materials</b> <a href="#">Baxter Barnes</a> <sup>1</sup> ; <sup>1</sup> NASA - Marshall Space Flight Center
<b>PM INVITED</b>	<b>Material Extrusion Additive Manufacturing at the Large Scale- Adaptations for Mechanical Testing Standards</b> <a href="#">Audrey Laffely</a> <sup>1</sup> ; <a href="#">Susan MacKay</a> <sup>1</sup> ; <sup>1</sup> University of Maine - Advanced Structures and Composites Center
<b>PM INVITED</b>	<b>High-Speed Powder Bed Fusion Process for Polymers Using a High-Energy Near-Infrared Laser</b> <a href="#">Yuki Yamauchi</a> <sup>1</sup> ; <sup>1</sup> Tokyo Metropolitan Industrial Technology Research Institute
<b>PM REGULAR</b>	<b>Enhancing the Processability of Biodegradable Polyhydroxyalkanoates for Additive Manufacturing</b> <a href="#">Edward Cant</a> <sup>1</sup> ; <sup>1</sup> University of Birmingham
<b>PM REGULAR</b>	<b>Stepping Away from PA12 - Alternative Materials for Selective Laser Sintering of Plastics</b> <a href="#">Daniel Werner</a> <sup>1</sup> ; <sup>1</sup> inspire - Innovation Center for Additive Manufacturing Switzerland
<b>PM REGULAR</b>	<b>Sustainable 3D Foam Printing of PET and PLA using CO<sub>2</sub>-Induced Crystallization Without Chemical Additives</b> <a href="#">Lorenzo Lombardi</a> <sup>1</sup> ; <sup>1</sup> University of Naples Federico II
<b>PM REGULAR</b>	<b>Foam Additive Manufacturing: Tailored Foam Structures Produced via Material Extrusion</b> <a href="#">Andrea Lorenzo Henri Sergio Detry</a> <sup>1</sup> ; <sup>1</sup> University of Milan

09<sup>TH</sup> OCTOBER 2025  
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#### SESSION CHAIR (AM SESSION):

TBA

<b>AM REGULAR</b>	<b>Thermal Management to Control Warpage of Large Scale Additive Manufacturing</b> <a href="#">James Gayton</a> <sup>1</sup> ; <a href="#">Gabriel Fein</a> <sup>1</sup> ; University of Maine - Advanced Structures and Composites Center
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# ICAM25

**AM REGULAR** Thermal Properties and Printing Parameters in Additive Manufacturing: A Data Mining-Driven Dataset  
[Toni Beth Lopez](#)<sup>1</sup>; <sup>1</sup>DOST - Metals Industry Research and Development Center (AMCen)

**AM INVITED** Accelerating Qualification of Additive Manufacturing for Flight Production  
[Charles Evans](#)<sup>1</sup>; <sup>1</sup>Stratasys

**AM INVITED** Additively Manufactured Polymer Wind Tunnel Models for High-Speed Aerospace Research  
[Bryce Laycock](#)<sup>1</sup>; <sup>1</sup>University of Dayton Research Institute

**AM INVITED** Polymer Replacement Parts in the Aviation Aftermarket  
[Scott Sevcik](#)<sup>1</sup>; <sup>1</sup>Wohlers Associates

**AM INVITED** Advances in Polymer Composite Additive Manufacturing: Materials, Processes, and Performance  
[Hilmar Koerner](#)<sup>1</sup>; <sup>1</sup>Air Force Research Laboratory

**AM REGULAR** In-Situ and Ex-Situ Repair of 3D Printed Continuous Fiber Composites: Method and Performance  
[Kaveh Rashvand](#)<sup>1</sup>; <sup>1</sup>Technical University of Denmark

**SESSION CHAIR (PM SESSION):**  
TBA

**PM INVITED** Ceramic Additive Manufacturing Standards Development At NIST: Progress in Rheological Standards Development of Dense Suspensions  
[Russell Maier](#)<sup>1</sup>; <sup>1</sup>NIST

**PM INVITED** Ensuring Safety Throughout the Entire AM Ecosystem  
[Amanda Griffin](#)<sup>1</sup>; <sup>1</sup>UL Solutions

**PM INVITED** 3D Printed (FSD) Biomimetic Trabecular PEEK Spinal Implants: Insights on Biomechanics and Osseointegration  
[Erik Erbe](#)<sup>1</sup>; <sup>1</sup>Curiteva

**PM REGULAR** Fabrication of Bioinspired Cylindrical Architectures with Enhanced Mechanical Performance using Additive Manufacturing  
[Fariborz Tavangarian](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**PM REGULAR** Emissivity Measurement of Fiber Reinforced Polymer Systems for Large Scale Additive Manufacturing Process Monitoring  
[James Gayton](#)<sup>1</sup>; <sup>1</sup>University of Maine - Advanced Structures and Composites Center

**PM REGULAR** Core & Sheath Multiplexing Extrusion System Development for Unique Multi-Material Capability for Polymer Additive Manufacturing  
[Halil Tekinalp](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**PM REGULAR** Integrating the Self-Reinforcing Effect of Polyethylene into the Additive Manufacturing Process  
[Maximilian Krönert](#)<sup>1,2</sup>; <sup>1</sup>Bundeswehr Research Institute for Materials, Fuels and Lubricants; <sup>2</sup>University of the Bundeswehr Munich

**10<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

**SESSION CHAIR (AM SESSION):**  
TBA

**AM REGULAR** CT-Assisted Crack Evaluation of 3D-Printed Spicule-Inspired Structures with Enhanced Mechanical Toughness  
[Fariborz Tavangarian](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**AM REGULAR** An Efficient Material Testing Process for Polymer-Extrusion LFAM Simulations  
[Harsh Baid](#)<sup>1</sup>; <sup>1</sup>AlphaSTAR

**AM INVITED** Challenges and Solutions in Standardizing Material Testing for 3D Printed Photopolymers in Precision Applications  
[Jonathan Andersson](#)<sup>1</sup>; <sup>1</sup>Arkema

**AM INVITED** Distortion Prediction of Digital Light Processing Vat Photopolymerization Components using a Multiphysics Modelling Framework  
[David Rosen](#)<sup>1</sup>; <sup>1</sup>A\*STAR - IHPC / SIMTech

**AM INVITED** Characterizing the Effect Temperatures Over the Glass Transition and Melting Points on Dynamic Powder Flow of AM Polymers  
[Nicholas Monroe](#)<sup>1</sup>; <sup>1</sup>Micromeritics

**AM INVITED** Viscogels: Photopolymers with Molded Plastic Properties  
[Robert Young](#)<sup>1</sup>; <sup>1</sup>Supernova

**AM INVITED** Cyclic Olefin Resins for Additive Manufacturing  
[Raymond Weitekamp](#)<sup>1</sup>; <sup>1</sup>polySpectra

**AM REGULAR** Evaluating Impact of Raster Angle and Interlayer Arrangement on Tensile Properties of PLA TPU Multi Material Parts with FFF Industrial 3D Printer  
[Shailendra Kumar](#)<sup>1</sup>; <sup>1</sup>Sardar Vallabhbhai National Institute of Technology, Surat

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# ICAM25

## INDUSTRY 4.0

### ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, AND BIG DATA ANALYTICS

08<sup>TH</sup> OCT 2025 (WED) – 10<sup>TH</sup> OCT 2025 (FRI)

#### CO-ORGANIZERS:

**Peter Coutts**  
Pennsylvania State University,  
USA

**Sanam Gorgannejad**  
Lawrence Livermore National  
Laboratory, USA

**Jia (Peter) Liu**  
Auburn University, USA

**Simon McCaldin**  
Authentise, United Kingdom

**Omar Fergani**  
1000 Kelvin, Germany

**Paul Guerrier**  
Moog, USA

**Yan Lu**  
NIST, USA

**Zackary Snow**  
Oak Ridge National  
Laboratory, USA

08<sup>TH</sup> OCTOBER 2025

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SESSION CHAIR (AM SESSION):  
TBA

**AM REGULAR** Multi-Scale Process-Structure-Performance Framework in Selective Laser Melting of AlSi10Mg: A Data-Driven Approach  
[Lizi Cheng](#)<sup>1</sup>; <sup>1</sup>University of Manchester

**AM REGULAR** Localized Inherent Strain Prediction in LPBF using Machine Learning and Moving Heat Source Simulations  
[Clancy Umphrey](#)<sup>1</sup>; <sup>1</sup>Ansys

**AM INVITED** Accelerating Modeling of Laser Energy Deposition, Microstructure Evolution and Part Distortion with Deep Neural Networks and Reduced Order Modeling  
[Saad Khairallah](#)<sup>1</sup>; <sup>1</sup>Lawrence Livermore National Laboratory

**AM INVITED** Innovate Physics-Informed Machine Learning to Improve Fatigue Performance Prediction of Laser Powder Bed Fusion  
[Jia \(Peter\) Liu](#)<sup>1</sup>; <sup>1</sup>Auburn University

**AM INVITED** Material Transferability for On-Machine Monitoring during Laser Powder Bed Fusion  
[Nicholas Calta](#)<sup>1</sup>; <sup>1</sup>Lawrence Livermore National Laboratory

**AM REGULAR** In-Situ Monitoring of Large Scale Additive Manufacturing for On-Earth and In-Space Applications  
[Fabio Caltanissetta](#)<sup>1</sup>; <sup>1</sup>Caracol

**AM REGULAR** AI-Driven Optimization of Dimensional Accuracy and Mechanical Performance in Additive Manufacturing of Precision Gears for Sensor and Counter Applications  
[Leif Oliver Coronado](#)<sup>1</sup>; <sup>1</sup>DOST - Metals Industry Research and Development Center (AMCen)

SESSION CHAIR (PM SESSION):  
TBA

**PM INVITED** A Metamodel for Computation to Enable Findable, Accessible, Interoperable, and Reusable Digital Twin  
[Shengyen Li](#)<sup>1</sup>; <sup>1</sup>NIST

**PM INVITED** Digital Twins for Born Qualified, First-time-Right Additive Manufacturing - A Physics and Data Integrated Approach for Design Optimization, Process Monitoring and Control in Laser Powder Bed Fusion  
[Pralhada Rao](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

**PM INVITED** AM Data Integration for Commercial MES  
[Benjamin Standfield](#)<sup>1</sup>; <sup>1</sup>Commonwealth Center for Advanced Manufacturing (CCAM)

**PM REGULAR** CAMSPEC: The Digital Twin's Manufacturing Memory  
[Harry Lucas](#)<sup>1</sup>; <sup>1</sup>Phasio

**PM REGULAR** AI/ML-Powered Enhancement of Additive Manufacturing Processes and Security: Real-World Perspective from an MES Solution Provider  
[Simon McCaldin](#)<sup>1</sup>; <sup>1</sup>Authentise

**PM REGULAR** From Data to Decisions: Leveraging Real-Time Performance Monitoring to Drive Smart Manufacturing  
[Kathryn Sherman](#)<sup>1</sup>; <sup>1</sup>TEEPTRAK

09<sup>TH</sup> OCTOBER 2025

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SESSION CHAIR (AM SESSION):  
TBA

**AM REGULAR** Advancing In-Situ Flaw Detection in Laser Powder Bed Fusion: A Multi-Sensor Fusion and Explainable AI Approach  
[Sarah Malik](#)<sup>1</sup>; <sup>1</sup>Johns Hopkins University - Applied Physics Laboratory

**AM REGULAR** Applying Machine Learning to the Melt Pool Spatter Problem in Additive Manufacturing  
[Jack Beuth](#)<sup>1</sup>; <sup>1</sup>Carnegie Mellon University

**AM INVITED** Multi-Sensor Data Integration for AI-Driven Analysis in Additive Manufacturing  
[Shuchi Khurana](#)<sup>1</sup>; <sup>1</sup>Addiguru

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# ICAM25

<b>AM INVITED</b>	<b>Leveraging Machine Learning to Uncover Correlations between Process Monitoring Data and Resulting Performance in Metal Additively Manufactured Parts Produced via Powder Bed Fusion</b> <a href="#">Jayme Keist</a> <sup>1</sup> ; <sup>1</sup> Pennsylvania State University - Applied Research Laboratory
<b>AM INVITED</b>	<b>The Next Step of Process Monitoring for Additive Manufacturing: In Situ Non-Destructive Evaluation using Machine Learning</b> <a href="#">Zackary Snow</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National Laboratory
<b>AM REGULAR</b>	<b>Adapting Vision-Language Models for Multi-Modal In-Process Monitoring in Laser Powder Bed Fusion</b> <a href="#">Anthony Garland</a> <sup>1</sup> ; <sup>1</sup> Sandia National Laboratories
<b>AM REGULAR</b>	<b>Machine Learning and AI Methods for DED-Arc Applications - Added Value for Process Monitoring and Closed Loop Control</b> <a href="#">Thomas Grünberger</a> <sup>1</sup> ; <sup>1</sup> AIT Austrian Institute of Technology

## SESSION CHAIR (PM SESSION):

TBA

<b>PM INVITED</b>	<b>AI-Based Approaches Towards Structural Materials Qualification</b> <a href="#">Patxi Fernandez-Zelaia</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National Laboratory
<b>PM INVITED</b>	<b>Leveraging Transfer Learning for Resource-Efficient Additive Manufacturing</b> <a href="#">Bianca Maria Colosimo</a> <sup>1</sup> ; <sup>1</sup> Politecnico di Milano
<b>PM REGULAR</b>	<b>Knowledge Transfer Across Heterogenous Additive Manufacturing Domain with Separable Interpolating Neural Network</b> <a href="#">Sourav Saha</a> <sup>1</sup> ; <sup>1</sup> Virginia Tech
<b>PM REGULAR</b>	<b>Qualification of a Large-Scale 3D Printing Process with Thermal Imaging: A Parametric Approach</b> <a href="#">Kris Villez</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National Laboratory
<b>PM REGULAR</b>	<b>AI-Enhanced Open-Source Metrology for Automatically Measuring Diverse Geometries in Additive Manufacturing</b> <a href="#">Davis McGregor</a> <sup>1</sup> ; <sup>1</sup> University of Maryland

10<sup>TH</sup> OCTOBER 2025

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## SESSION CHAIR (AM SESSION):

TBA

<b>AM REGULAR</b>	<b>Build Set Up Data Exchange for Additive Manufacturing: Dyndrite API Python Libraries for CDEF-Compliant Build Management</b> <a href="#">Brandon Cowart</a> <sup>1</sup> ; <sup>1</sup> Dyndrite
<b>AM REGULAR</b>	<b>3MF as a Data Standard: Enabling Interoperability, Efficiency, and Innovation in Additive Manufacturing</b> <a href="#">Duann Scott</a> <sup>1</sup> ; <sup>1</sup> 3MF Consortium
<b>AM INVITED</b>	<b>Digital Manufacturing: The Joining 4.0 Innovation Centre</b> <a href="#">Darren Williams</a> <sup>1</sup> ; <sup>1</sup> Lancaster University
<b>AM INVITED</b>	<b>Domain-Adaptive Generative Modeling for Multi-Modal Additive Manufacturing</b> <a href="#">Hyunwoong Ko</a> <sup>1</sup> ; <sup>1</sup> Arizona State University
<b>AM INVITED</b>	<b>AI to Make Printing Large Parts Easy</b> <a href="#">Guy Brown</a> <sup>1</sup> ; <sup>1</sup> Aibuild
<b>AM REGULAR</b>	<b>Building an Integrated Digital Thread using Knowledge Graphs and Generative AI to Accelerate Engineering and Design Outcomes</b> <a href="#">Vedanth Srinivasan</a> <sup>1</sup> ; <sup>1</sup> Amazon Web Services
<b>AM REGULAR</b>	<b>Implementing Generative AI to Evaluate Suitability of Parts for Additive Manufacturing (AM)</b> <a href="#">Mariam Alnaqbi</a> <sup>1</sup> ; <sup>1</sup> Dubai Electricity & Water Authority

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# ICAM 2025 TENTATIVE PROGRAM AGENDA

Updated as of 07<sup>th</sup> August 2025

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# ICAM25

## INDUSTRY 4.0

### MODELING, SIMULATION, AND DIGITAL TWINS

06<sup>TH</sup> OCT 2025 (MON) – 08<sup>TH</sup> OCT 2025 (WED)

#### CO-ORGANIZERS:

**Takashi Maeshima**  
Toyota Central R&D Labs, Japan

**Christopher Robinson**  
Ansys, USA

**James Sobotka**  
Southwest Research Institute, USA

**Wei Xiong**  
University of Pittsburgh, USA

**Nicholas Mulé**  
Boeing, USA

**Shuai Shao**  
Auburn University,  
USA

**Guglielmo Vastola**  
A\*STAR - IHPC,  
Singapore

06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Predicting Spatial Porosity Variation in Batch Metal Binder Jetting via In-Situ Stereovision Data Modeling  
[An-Tsun Wei](#)<sup>1</sup>; <sup>1</sup>HP

**AM REGULAR** Development of a Polymer AM Heuristic Model from In-Situ Data to Predict Thermal History throughout Printed Parts  
[Callie Zawaski](#)<sup>1</sup>; <sup>1</sup>Pennsylvania State University

**AM INVITED** Open Vector Format - A Lean, Multidimensional Production Data Pipeline for Industrial Additive Manufacturing  
[Johannes Henrich Schleifenbaum](#)<sup>1</sup>; <sup>1</sup>RWTH Aachen University - Aachen Center for Additive Manufacturing / Digital Additive Production

**AM INVITED** Role of Metal Plasticity at High Temperatures on Distortion Prediction for Powder Bed Additive Manufacturing  
[Wei Zhang](#)<sup>1</sup>; <sup>1</sup>Ohio State University

**AM INVITED** Numerical Simulation Approaches for Powder Bed Fusion of Metals And Alloys  
[Matthias Markl](#)<sup>1</sup>; <sup>1</sup>Friedrich-Alexander University of Erlangen-Nuremberg

**AM REGULAR** Comparative Evaluation of Thermal Simulation Methods for LPBF  
[Ehsan Malekipour](#)<sup>1</sup>; <sup>1</sup>Rowan University

**AM REGULAR** Thermal Simulation of Coaxial Wire-Based Laser Material Deposition with Enhanced Thermal Modeling for Process Optimization  
[Thomas Schopphoven](#)<sup>1</sup>; <sup>1</sup>Fraunhofer ILT

**AM REGULAR** Advanced 3D CFD Modeling of Full-Cycle Hot Isostatic Pressing Processes  
[Yan Liu](#)<sup>1</sup>; <sup>1</sup>Simtec Soft

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Reliability-Based Damage Tolerance Analysis with Non-Destructive Evaluation Records  
[Xueyong \(Kevin\) Qu](#)<sup>1</sup>; [Leland Shimizu](#)<sup>1</sup>; <sup>1</sup>The Aerospace Corporation

**PM INVITED** Modeling Enhancements for Practical EBM Simulation  
[Christopher Robinson](#)<sup>1</sup>; <sup>1</sup>Ansys

**PM INVITED** Using Machine Learning Models to Improve Printability of Large LPBF Components  
[Timo Heitmann](#)<sup>1</sup>; [Enrique Escobar](#)<sup>2</sup>; <sup>1</sup>Siemens Energy; <sup>2</sup>Ansys

**PM REGULAR** Improving Part Accuracy with AI in Additive Manufacturing  
[James Page](#)<sup>1</sup>; <sup>1</sup>Stratasys

**PM REGULAR** Application of Three Dimensional Plasticity Modelling to Predict and Improve the Fatigue Behaviour of Additive Manufacturing Lattice Structures  
[Joseba Gallastegui](#)<sup>1</sup>; <sup>1</sup>ITP Aero

**PM REGULAR** Scanning Strategy-Induced Shifts in LPBF Process Windows: A Multi-Track Printability Map Approach  
[Alaa Olleak](#)<sup>1</sup>; <sup>1</sup>Ansys

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** Twin4Twin - When Digital Twin Decide on Part Quality  
[Sébastien Lani](#)<sup>1</sup>; <sup>1</sup>Switzerland Innovation Park Biel/Bienne

**AM REGULAR** Digital Twin Application Towards In-Situ Quality Assurance at High Volume Production for LPBF AM  
[Anjali Singhal](#)<sup>1</sup>; <sup>1</sup>GE Aerospace

**AM INVITED** Model-Based Qualification of Metal 3D Printed Components  
[Guglielmo Vastola](#)<sup>1</sup>; <sup>1</sup>A\*STAR - Institute of High Performance Computing

**AM INVITED** One Part and Life - OPAL: A Framework for Digital Twin Based Fatigue Life Prediction for Metal AM  
[James Sobotka](#)<sup>1</sup>; <sup>1</sup>Southwest Research Institute

**AM INVITED** Physics-Informed Surrogate Models for Efficient, Multi-Scale Digital Twins  
[Eric Clough](#)<sup>1</sup>; <sup>1</sup>HRL Laboratories

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# ICAM25

**AM REGULAR** Rapid, Autonomous and Shape-Agnostic Physics-Guided Thermal History Control to Improve Part Quality in Laser Powder Bed Fusion Additive Manufacturing  
[Prahallada Rao](#)<sup>1</sup>; <sup>1</sup>Virginia Tech

**AM REGULAR** Laser DED Manufacturing Digital Thread for Component Build or Repair  
[Jacob Hay](#)<sup>1</sup>; <sup>1</sup>EWI

**AM REGULAR** Revolutionizing Product Design-Make-Use: Integrating Sensor Data and Digital Twin Technology  
[Brian Jeong](#)<sup>1</sup>; <sup>1</sup>Autodesk

**AM REGULAR** Thermal Cross-Over Between Artifacts Due to Small Gap in LPBF Builds  
[Shuchi Khurana](#)<sup>1</sup>; <sup>1</sup>Addiguru

**SESSION CHAIR (PM SESSION):**  
TBA

**PM INVITED** Providing a Rigorous Benchmark Measurement Foundation for Modeling-Informed Qualification and Certification of Metal AM Components  
[Lyle Levine](#)<sup>1</sup>; <sup>1</sup>NIST

**PM INVITED** Digital Twin Science for Understanding Solidification under Super-Thermal Field in Metal Powder Bed Fusion Additive Manufacturing  
[Yuichiro Koizumi](#)<sup>1</sup>; <sup>1</sup>Osaka University

**PM INVITED** Assembling the Building Blocks of Simulation-Based Digital Twins in an Additive Manufacturing Digital Factory  
[Gerald \(Gerry\) Knapp](#)<sup>1</sup>; <sup>1</sup>Oak Ridge National Laboratory

**PM REGULAR** Accelerating Decision-Making for Additive Manufacturing with Reusable Digital Twin Services  
[Lisha White](#)<sup>1</sup>; <sup>1</sup>NIST

**PM REGULAR** Calibration of the Inherent Strain Simulation for Predicting Deformation in Laser Powder Bed Fusion: Considerations and Practical Approaches  
[Hengfeng Gu](#)<sup>1</sup>; <sup>1</sup>Ansys

**PM REGULAR** Modeling of Temperature, Residual Stress, and Distortion during Collaborative Robot-Assisted Wire-Arc Deposition  
[Tuhin Mukherjee](#)<sup>1</sup>; <sup>1</sup>Iowa State University

**PM REGULAR** Enhancing Robotic Arm Operations with a Reinforcement Learning-Based Digital Twin Framework  
[Osama Aljarrah](#)<sup>1</sup>; <sup>1</sup>Kettering University

**08<sup>TH</sup> OCTOBER 2025**

**< VENUE: TBA >**

**SESSION CHAIR (AM SESSION):**  
TBA

**AM REGULAR** Simulation of Feedforward-Controlled Melt Pool Dynamics in Multi-Track LPBF  
[Ehsan Malekipour](#)<sup>1</sup>; <sup>1</sup>Rowan University

**AM REGULAR** Melt Pool Behavior Modeling in LPBF using Finite Element Analysis  
[Antonios Kontsos](#)<sup>1</sup>; <sup>1</sup>Rowan University

**AM INVITED** Modeling and Simulation for Material Property Control in Metal Additive Manufacturing  
[Manyalibo Matthews](#)<sup>1</sup>; <sup>1</sup>Lawrence Livermore National Laboratory

**AM INVITED** High-Fidelity Modeling of Multi-Material Additive Manufacturing  
[Wentao Yan](#)<sup>1</sup>; <sup>1</sup>National University of Singapore

**AM INVITED** Accelerating Process Development with Simulation Automation and High Performance Computing  
[Allyce Jackman](#)<sup>1</sup>; <sup>1</sup>Flow Science

**AM INVITED** The Prediction Framework Combining CFD and FEM for Thermal Analysis of Part-Scale Fabrication using Laser Powder Bed Fusion  
[Takashi Maeshima](#)<sup>1</sup>; <sup>1</sup>Toyota Central R&D Labs

**AM REGULAR** Predictive Simulation in Laser Welding: Enhancing Weld Reliability and Mechanical Performance  
[Satish Kumar Meenakshisundaram](#)<sup>1</sup>; <sup>1</sup>Ansys

**AM REGULAR** Compressive Behaviour of Mechanically Compatible Lattice Structures Cancellous Bone Fabricated by Fused Filament Fabrication of Z-ABS Material  
[Outtas Toufik](#)<sup>1</sup>; <sup>1</sup>University of Batna 2

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# ICAM25

## INDUSTRY 4.0

### ROBOTICS AND AUTOMATION

06<sup>TH</sup> OCT 2025 (MON)

#### CO-ORGANIZERS:

**Eugene Demaitre**  
The Robot Report, USA

**Michael Haas**  
FerRobotics, USA

**Azadeh Haghighi**  
University of Illinois Chicago, USA

**Kenneth Kimble**  
NIST, USA

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06<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

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#### SESSION CHAIR (AM SESSION):

TBA

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|-----------------------|---|
| <b>AM<br/>REGULAR</b> | <b>Understanding the Smart Factory<br/>Production Robotics Maturity Model</b><br><a href="#">Tyler Bouchard</a> <sup>1</sup> ; <sup>1</sup> Flexxbotics   |
| <b>AM<br/>REGULAR</b> | <b>Sensor-Driven Fusion Towards Automated<br/>Multi-Pass Robotic Arc Welding</b><br><a href="#">Charalampos Loukas</a> <sup>1</sup> ; <sup>1</sup> University of<br>Strathclyde   |
| <b>AM<br/>INVITED</b> | <b>Multi Agent Robotics in Manufacturing</b><br><a href="#">Andrzej Nycz</a> <sup>1</sup> ; <sup>1</sup> Oak Ridge National<br>Laboratory   |
| <b>AM<br/>INVITED</b> | <b>A Recipe for First Time Quality -<br/>Leveraging Scan-to-Path &amp; AI/ML in a<br/>Metrology Driven Closed-Loop Robotic<br/>Process for High Mix / High Variation Parts</b><br><a href="#">Jake Cipriano</a> <sup>1</sup> ; <sup>1</sup> Manufacturing Automation<br>Systems |
| <b>AM<br/>INVITED</b> | <b>The Finish Is What Matters: Get ROI in<br/>Record Time with a Fast and Precise<br/>Material Removal and Finishing Process</b><br><a href="#">Michael Haas</a> <sup>1</sup> ; <sup>1</sup> FerRobotics  |
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#### SESSION CHAIR (PM SESSION):

TBA

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- |                       |   |
|-----------------------|---|
| <b>PM<br/>INVITED</b> | <b>Constrained Motion Planning for Reduced<br/>Jerk in Robotic Additive Manufacturing<br/>Systems</b><br><a href="#">Farhad Imani</a> <sup>1</sup> ; <sup>1</sup> University of Connecticut   |
| <b>PM<br/>REGULAR</b> | <b>Bridging the Gap in Robotic Surface<br/>Processing: Overcoming High Variability<br/>and Programming Complexity</b><br><a href="#">Daryl Lim</a> <sup>1</sup> ; <sup>1</sup> Augmentus  |
| <b>PM<br/>REGULAR</b> | <b>Design, Kinematics, and Workspace<br/>Analysis of a Swiveling Wire Robot for<br/>Material Extrusion Based Additive<br/>Manufacturing</b><br><a href="#">Yash Gopal Mittal</a> <sup>1</sup> ; <sup>1</sup> Indian Institute of<br>Technology Bombay |

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# ICAM25

## INDUSTRY 4.0

### SECURITY ASPECTS

07<sup>TH</sup> OCT 2025 (TUE)

#### CO-ORGANIZERS:

**Chris Adkins**  
Materialise, USA

**Thomas Chittum**  
SoundThinking, USA

**William Ryan**  
Department of Justice (ATF),  
USA

**Narasimha Annapareddy**  
Texas A&M University, USA

**Darrick Kristich**  
Sedara, USA

**Mark Yampolskiy**  
Auburn University, USA

07<sup>TH</sup> OCTOBER 2025

< VENUE: TBA >

#### SESSION CHAIR (AM SESSION):

TBA

**AM REGULAR** SSTP - Secure Streaming Transfer Protocol  
[Barrett Veldsman](#)<sup>1</sup>; <sup>1</sup>DEFEND3D

**AM REGULAR** A New Benchmark for Product Verification and Traceability within the Evolving Additive Manufacturing Landscape  
[Shawn Zindroski](#)<sup>1</sup>; [Thomas "Trey" Cauley III](#)<sup>2</sup>;  
<sup>1</sup>SNL Creative; <sup>2</sup>Iridia

**AM INVITED** How to Optimize Overall Equipment Efficiency (OEE) for Additive Manufacturing (AM) in a Connected and Threatened World  
[Victor Gerdes](#)<sup>1</sup>; [Shlomi Marco](#)<sup>2</sup>; <sup>1</sup>Stratasys;  
<sup>2</sup>RubyComm

**AM INVITED** Standardizing Trust: Identify3D Digital Manufacturing Asset Control for Distributed Additive Manufacturing  
[Kyle Adriany](#)<sup>1,2</sup>; <sup>1</sup>Materialise; <sup>2</sup>Identify3D

**AM INVITED** Securing the Digital Thread: Meeting Customer Expectations and Regulatory Demands in Additive Manufacturing  
[Chris Adkins](#)<sup>1</sup>; <sup>1</sup>Materialise

**AM INVITED** Securing Process Design Information: Privacy-Preserving Melt Pool Data Acquisition and Sharing for Metal Additive Manufacturing  
[Md Habibor Rahman](#)<sup>1</sup>; [Mohammed Shafae](#)<sup>2</sup>;  
<sup>1</sup>University of Massachusetts Dartmouth;  
<sup>2</sup>University of Arizona

**AM INVITED** Quantum Threats to Manufacturing: Protecting Your IP Before It's Too Late  
[James Regenor](#)<sup>1</sup>; <sup>1</sup>VeriTX

#### SESSION CHAIR (PM SESSION):

TBA

**PM INVITED** Between Crime & Compliance: The Law of Making Firearms  
[Thomas Chittum](#)<sup>1</sup>; <sup>1</sup>Chittum Law

**PM INVITED** Preventing 3D-Printing of Machine Gun Conversion Devices  
[Solomon Diamond](#)<sup>1</sup>; <sup>1</sup>Dartmouth College

**PM INVITED** InspectAI: Non-Destructive Testing in the Era of Additive Manufacturing and Machine Learning  
[Nikhil Gupta](#)<sup>1</sup>; <sup>1</sup>New York University

**PM INVITED** Nadcap Developments in Counterfeit Mitigation  
[Richard Freeman](#)<sup>1</sup>; <sup>1</sup>Performance Review Institute

**PM INVITED** Revolutionizing Spare Parts Manufacturing with Secure Remote 3D Printing  
[Terrence McGowan](#)<sup>1</sup>; <sup>1</sup>Assembrix

**PM INVITED** Cybersecurity Compliance in the Age of Industry 4.0: Turning Risk into Resilience  
[Jeff Roberts](#)<sup>1</sup>; <sup>1</sup>principia/RAID Digital Security

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