



SATURDAY, MARCH 29, 2025

PRE-CONFERENCE TRAINING

12:00 PM **Certificate Course Day 1: Mastering Standards for Additive Manufacturing Operations**
Dr. Martin White, *ASTM International*
Shane Collins, *Wohlers Associates*

NOTE: This program is NOT included with AMUG Conference registration. Participation requires separate registration and is at an additional cost. For registration details, please visit https://www.amug.com/train_certify/

SUNDAY, MARCH 30, 2025

PRE-CONFERENCE TRAINING

9:00 AM **Certificate Course Day 2: Mastering Standards for Additive Manufacturing Operations**
Dr. Martin White, *ASTM International*
Shane Collins, *Wohlers Associates*

NOTE: This program is NOT included with AMUG Conference registration. Participation requires separate registration and is at an additional cost. For registration details, please visit https://www.amug.com/train_certify/

10:00 AM **AM Academy Course: Mapping AM Maturity**
Benjamin Haller, *AM Academy*

NOTE: This program is NOT included with AMUG Conference registration. Participation requires separate registration and is at an additional cost. For registration details, please visit https://www.amug.com/train_certify/

AMUG EVENING EVENTS

4:00 PM **AMUG New Member Welcome Reception**
Nick Licari, *AMUG New Member Committee Chair*

5:00 PM **AMUGexpo Open**

5:00 PM **Networking Dinner in AMUGexpo**

9:00 PM **Daily Activities Conclude**



MONDAY, MARCH 31, 2025

AMUG GENERAL SESSIONS

- 7:00 AM **Networking Breakfast**
- 8:00 AM **Welcome Address**
Shannon VanDeren, *AMUG President*
- 9:00 AM **Diamond Sponsor Insights and Highlights Leadership Panel**
Moderated by Adam Penna
- 10:00 AM **AMUGexpo Open**
- 12:00 PM **Networking Lunch in AMUGexpo**
- 1:30 PM **AMUGexpo Closed**

AMUG BREAKOUT SESSIONS

- 1:30 PM *Track: Aerospace, Transportation, and Defense*
Panel Discussion: Additive Manufacturing for Military Forward Deployment & Rapid Sustainment, moderated by Daniel Braley, *Boeing Global Services*
- 1:30 PM *Track: AM Materials*
QC Steps for Polymer Powder 3D Printing & Standardization, Hughston Young, *Endeavor 3D*
- 1:30 PM *Track: AM Metal Technologies*
Introduction to Directed Energy Deposition, Jeff Crandall, *Connecticut Center for Advanced Technologies*
- 1:30 PM *Track: AM Non-Metal Technologies*
Panel Discussion: Large Scale Additive Manufacturing: On the Path Towards Industrial Applications, moderated by Alex Roschli, *Oak Ridge National Laboratories*
- 1:30 PM *Track: Scanning and Metrology*
An Introduction to 3D Scanning and Metrology, Giles Gaskell, *Pinnacle X-ray Solutions*
- 1:30 PM *Track: Software*
Enhancing AM Workflows through Digital Integration and In-Situ Data Insights, Mike Vasquez, *3Degrees*
- 1:30 PM *Diamond Sponsor Session: GoEngineer*
Snap, Crack & Pop: Hands-on Material Testing, Tim Crennen, *GoEngineer*
- 1:30 PM *Platinum Sponsor Session: Renishaw Inc.*
Radical Defense's Journey into Metal Additive Manufacturing, John Laureto, *Renishaw Inc.*
- 2:00 PM *Track: AM Materials*
Understanding Microstructural Influence on the Thermal Distortion of Large-Format Printed Polymer Composites, Tyler Corum, *University of Tennessee, Knoxville*



- 2:30 PM **Afternoon Break**
- 3:00 PM *Track: Aerospace, Transportation, and Defense*
- U.S. Navy Study on the Impact of Vibration on AM Part Performance**, Annie Wang, Senvol
- 3:00 PM *Track: AM Metal Technologies*
- Utilizing OPECM to Solve Metal AM Surface Roughness Challenges**, Mark Barfoot, Voxel Innovations
- 3:00 PM *Track: Education and Training*
- Panel Discussion: AM Workforce Development**, moderated by Dan Sloan, Tooling U-SME
- 3:00 PM *Track: Healthcare*
- The Use of Additive Manufacturing in the Dental Field**, Josh Williams, GPS Digital RPD
- 3:00 PM *Track: Metal Casting*
- Causes of Investment Shell Cracking Due to Thermal Expansion of Printed Patterns**, Thomas Mueller, Mueller Additive Manufacturing Solutions
- 3:00 PM *Track: Workshop*
- Hands on Scanning and Metrology Workshop**
- 3:00 PM *Sponsor Track: Axtra3D*
- Panel Discussion: What Makes Hi-Speed SLA on the Lumia X1 Unique?**, moderated by Rajeev Kulkarni, Axtra3D
- 3:30 PM *Track: Aerospace, Transportation, and Defense*
- Additive Manufacturing in Army Ground Vehicles - Air Inlet Duct Case Study**, Tad Steinberg, Siemens Energy
- 3:30 PM *Track: AM Metal Technologies*
- A New Set of Expectations: AM's Demand on Improved HIP Functionality**, Chad Beamer, Quintus Technologies LLC
- 3:30 PM *Track: Healthcare*
- Post-Processing AM Surgical Instruments to Compete with Traditional Manufacturing**, Sloan Volkman, rms Company
- 4:00 PM **Afternoon Transition**
- 4:30 PM *Track: Aerospace, Transportation, and Defense*
- The Use of Additive Manufacturing in CCA / Loyal Wingman Unmanned Systems**, Steve Fournier, General Atomics Aeronautical Systems, Inc.
- 4:30 PM *Track: AM Metal Technologies*
- Panel Discussion: AM Metal Material Suppliers**
- 4:30 PM *Track: Education and Training*
- Panel Discussion: Networking For Introverts/Beginners – Getting the Most out of AMUG**, moderated by Sarah Jordan, Skuld



4:30 PM

Track: Healthcare

Developing Alternative Designs to Evaluate Tensile and Shear Strengths of Porous Structures, Hannah Frankel, *Smith & Nephew*

4:30 PM

Track: Metal Casting

3D-Printed Ceramic Molds for Economic Supply of Low Quantity Investment Castings, Rick Pressley, *Renaissance Services, Inc*

4:30 PM

Track: Workshop

State-of-the-Art Precision Finishing Files for Additive Manufacturing: A Hands-on Workshop, Kazuki Okamoto, *Castem Technology Laboratories, Inc*

4:30 PM

Diamond Sponsor Session: SME

Additive Manufacturing Workforce Development and Education: Update from SME, Dan Sloan, *SME*

4:30 PM

Platinum Sponsor Session: One Click Metal GmbH

Metal 3D Printing: Successful Implementation in Series Production of Hand Prostheses, Michael Staiger, *One Click Metal GmbH*

5:00 PM

Track: Aerospace, Transportation, and Defense

AM as Rocket Science - An AM-built Heat Exchanger for Rocket Propulsion Applications, Ian Fordyce, *Conflux Technology*

5:00 PM

Track: Healthcare

Regulatory Affairs' Guidance for Additive Manufactured Products, Kristine Happach, *Empirical Technologies*

5:00 PM

Track: Metal Casting

Investment Casting Institute - America Makes - AM-Printed Ceramic Shells – Update, Paul Finelt, *Concurrent Resources LLC*

AMUG EVENING EVENTS

6:00 PM

AMUGexpo Open

6:00 PM

Networking Dinner in AMUGexpo

6:00 PM

2025 AMUG Technical Competition Exhibits Open

Considering an entry into the AMUG Technical Competition? Registration and submission details: <https://www.amug.com/technical-competition/>

9:00 PM

Daily Activities Conclude



TUESDAY, APRIL 1, 2025

AMUG GENERAL SESSIONS

- 7:00 AM **Networking Breakfast**
- 8:00 AM **Keynote:** Ryan Watkins, NASA
- 9:00 AM **2025 AMUG DINO Winners – Distinguished Innovator Operator Awards**
Bruce LeMaster and Shannon VanDeren, *AMUG DINO Committee Co-Chairs*
- 10:00 AM **Morning Break**
- 10:30 AM **International Report**
Stefan Ritt and Andrew Graves, *AMUG International Committee Co-Chairs*
- 11:15 AM **2025 AMUG Scholarship Winners**
Olga Ivanova and Brent Griffith, *AMUG Scholarship Committee Co-Chairs*
- 12:00 PM **Networking Lunch**

AMUG BREAKOUT SESSIONS

- 1:30 PM *Track: Aerospace, Transportation, and Defense*
AM Innovation in the Rail Industry, Stephanie Brickwede, *Mobility goes Additive e.V.*
- 1:30 PM *Track: AM Materials*
Thermally Fingerprinting Metal Additive Manufacturing Powder, Scott Schiffres,
Binghamton University
- 1:30 PM *Track: AM Non-Metal Technologies*
Design of Articulating 3D Printed Multi-Material Structures for Non-Traditional Composites, Steven Guzorek, *Oak Ridge National Laboratory*
- 1:30 PM *Track: Education and Training*
Unlock Your Voice: A Guide to Mastering Public Speaking (Part I), Todd Grimm, *T.A. Grimm & Associates* and Olga Ivanova, *Mechnano*
- 1:30 PM *Track: Healthcare*
Panel Discussion: Additively Manufactured Consumer Healthcare Products-Industry Spotlight, moderated by Ryan Kircher, *rms Company*
- 1:30 PM *Track: Metal Casting*
Panel Discussion: Integrating AM and Traditional Metal Casting - Alloys, Process and Properties, moderated by Vadim Pikhovich, *MAGMA*
- 1:30 PM *Track: Workshop*
AM Fixtures Workshop
- 1:30 PM *Diamond Sponsor Session: SME*
RAPID + TCT 2026 Coming to Boston!, Angie Szerlong, *SME*



- 1:30 PM *Platinum Sponsor Session: Eplus3D Tech Inc.*
Empowering the Advancement of Automotive Industry with Eplus3D Metal AM Solutions, Caleb Cohen, *Eplus3D Tech Inc.*
- 2:00 PM *Track: Aerospace, Transportation, and Defense*
AM in Construction Vehicles, Thierry Marchione, *Caterpillar*
- 2:00 PM *Track: AM Materials*
Pushing the Boundaries of AM: Customized Alloys & Advanced Powder Testing, Burghardt Kloeden, *m4p material solutions GmbH*
- 2:30 PM **Afternoon Break**
- 3:00 PM *Track: Aerospace, Transportation, and Defense*
AM Enabled Manufacturing of High-Power Density Electric Machines, Jacob Kallivayalil, *Eaton*
- 3:00 PM *Track: AM Materials*
Implications of Feedstock on the Functional Properties of Additively Manufactured Ceramics, Russell Maier, *National Institute of Standards and Technology*
- 3:00 PM *Track: AM Non-Metal Technologies*
Designing for Success: Key Considerations in DLP-Based Additive Manufacturing of Technical Ceramics, Brian Hockett, *Sinaptic*
- 3:00 PM *Track: Scanning and Metrology*
Scanning the Unseen, Silicone Molding to Capture Internal Geometries, Sam Cheney, *Oqton*
- 3:00 PM *Track: Software*
Panel Discussion: Computational Design, moderated by Matthew Shomper, *Not a Robot Engineering*
- 3:00 PM *Track: Workshop*
Foundry in a Box, Dave Rittmeyer, *Matthews Additive Technologies*
- 3:00 PM *Diamond Sponsor Session: Go Engineer*
Born to Rock! "Powdered" by Metal. Built to Print., Tyler Reid, *GoEngineer*
- 3:00 PM *Diamond Sponsor Session: Stratasys*
Additive Journey in Automation: How Delkor Uses the Stratasys H350 in Production, Logan Karls, *Delkor Systems*
- 3:00 PM *Platinum Sponsor Session: Dyze Design*
What are the Main Obstacles to Wider Adoption of AM Technology?, Jean-Sebastien Carrier, *Dyze Design*
- 3:30 PM *Track: Aerospace, Transportation, and Defense*
TBA



- 3:30 PM *Track: Materials*
Micro-Printing of Ceramic Packaging for Sensor Integration, Kayleigh Porter, *HRL Laboratories*
- 4:00 PM **Afternoon Transition**
- 4:30 PM *Track: Aerospace, Transportation, and Defense*
Panel Discussion: The Future of Transportation in Rail, Automotive, and Construction, moderated by Daniel Braley, *Boeing Global Services*
- 4:30 PM *Track: AM Metal Technologies*
Panel Discussion: Surface Finishing of AM Metal Components, moderated by Agustin Diaz, *REM Surface Engineering*
- 4:30 PM *Track: AM Non-Metal Technologies*
Engaging Users - A No-Agenda Roundtable(s) Discussion for Non-Metals Users, moderated by Maddie Frank, *Fortius Metals* and Colton Rooney, *EMI*
- 4:30 PM *Track: Education and Training*
Panel Discussion: Top Reasons Why You're Not Hitting your Photopolymer Data Sheet Properties, moderated by Vince Anewenter, *Milwaukee School of Engineering*
- 4:30 PM *Track: Software*
Using Simulation to Minimize Trial-and-Error in Binder Jet Additive Manufacturing, Andreas Vlahinos, *Advanced Engineering Solutions*
- 4:30 PM *Track: Workshop*
Repeat Session: Foundry in a Box, Dave Rittmeyer, *Matthews Additive Technologies*
- 4:30 PM *Platinum Sponsor Session: MC Machinery Systems/Mitsubishi*
Laser Wire Direct Energy Deposition 3D Printing, John Petti, *MC Machinery Systems (Mitsubishi)*

AMUG EVENING EVENTS

- 6:00 PM **AMUGexpo Open**
- 6:00 PM **Networking Dinner in AMUGexpo**
- 6:00 PM **2025 AMUG Technical Competition Exhibits Open**
- 9:00 PM **Daily Activities Conclude**



WEDNESDAY, APRIL 2, 2025

AMUG GENERAL SESSIONS

- 7:00 AM **Networking Breakfast**
- 8:00 AM **Innovators Showcase**
Todd Grimm hosts a fireside chat with our 2025 Innovators Award winner, Joe Allison, of *Gentle Giant Studios*
- 9:00 AM **2025 AMUG Business Meeting**
Shannon VanDeren, *AMUG President*
- 10:00 AM **Morning Break**

AMUG BREAKOUT SESSIONS

- 10:30 AM *Track: AM Materials*
Panel Discussion: Overcoming the Barriers to End-Use Elastomer Additive Manufacturing, moderated by Nicholas Sonnentag, *Oshkosh Corporation*
- 10:30 AM *Track: AM Metal Technologies*
Wire Arc Additive Manufacturing – From Development to Production, Tad Steinberg, *Siemens Energy*
- 10:30 AM *Track: AM Non-Metal Technologies*
The Use of Additive Manufacturing in Producing Illegal Machinegun Conversion Devices, James Vann, *Bureau of Alcohol, Tobacco, Firearms and Explosives*
- 10:30 AM *Track: Education and Training*
Unlock Your Voice: A Guide to Mastering Public Speaking (Part II), Todd Grimm, *T.A. Grimm & Associates* and Olga Ivanova, *Mechnano*
- 10:30 AM *Track: Workshop*
Live Patient Scan and Digital Manufacturing Workflow for a Prosthetic Socket
- 10:30 AM *Track: Scanning and Metrology*
Light, X-Rays, or Neutrons? Cutting-Edge Scanning Methods in Additive Manufacturing, Katie Rittenhouse, *Phoenix Neutron Imaging*
- 10:30 AM *Track: Software*
DFAM Innovation Training, Steven Szymeczek, *Education2Success*
- 10:30 AM *Platinum Sponsor Session: Endeavor 3D*
Workshop: DFAM Problem Solving for Legacy Components, Daniel Baker, *Endeavor 3D*
- 11:15 AM *Track: AM Metal Technologies*
Enhancing Process Control using Laser Beam Shaping: Insights from Numerical Modeling, Garrett Clyma, *Flow Science Inc.*
- 12:00 PM **Networking Lunch**



- 1:30 PM *Track: AM Materials*
Additively-Enabled Articulating Composite Layup, Katie Copenhaver, *Oak Ridge National Laboratory*
- 1:30 PM *Track: AM Metal Technologies*
Panel Discussion: Binder-Based Metal Printing
- 1:30 PM *Track: Education and Training*
Additive Manufacturing Maturity and Implementation, Benjamin Haller, *AM Academy*
- 1:30 PM *Track: Scanning and Metrology*
Panel Discussion: What's the Present State of and Future for In-Process Monitoring?
Moderated by Giles Gaskell, *Pinnacle X-ray Solutions*
- 1:30 PM *Track: Software*
Development of 3D Printed RF Filters for Space Applications, Robert Smith, *Optisys*
- 1:30 PM *Track: Workshop*
Using Silicone Molds and Casting Combined with 3D Printing to Enhance Productivity (Part I), Troy Peterson, *BJB Enterprises, Inc.*
- 1:30 PM *Diamond Sponsor Session: SME*
What Contributes to the Success of Additive Manufacturing in Defense?, Stacey Eeman, *SME*
- 2:00 PM *Track: AM Materials*
Quasi-Static and Dynamic Crush of Electroplated Lattice Structures, Colleen Murray, *University of Maryland*
- 2:30 PM **Afternoon Break**
- 3:00 PM *Track: Aerospace, Transportation, and Defense*
Panel Discussion: The Future of AM for Spares and Repairs in the Aerospace Industry, moderated by Carl Dekker, *Met-L-Flo*
- 3:00 PM *Track: Education and Training*
Revolutionizing AM Education: Fun, Hands-On Competitions for Future-Ready Global Innovators, Brent Griffith, *Labconco Corporation*
- 3:00 PM *Track: Healthcare*
Prosthetics and Orthotics - Real World Needs for Additive Manufacturing, Chris Baschuk, *Point Designs*
- 3:00 PM *Track: Scanning and Metrology*
Using Computed Tomography for Metrology on AM, Tyler Ripperger, *Waygate Technologies*
- 3:00 PM *Track: Software*
Panel Discussion: MES – Where the AM Industry is Going, moderated by Kevin Ayers, *3D Metal Consulting*



- 3:00 PM *Track: Workshop*
Using Silicone Molds and Casting Combined with 3D Printing to Enhance Productivity (Part II), Troy Peterson, *BJB Enterprises, Inc.*
- 3:00 PM *Diamond Sponsor Session: GoEngineer*
Next-Generation Additive Manufacturing for Healthcare Applications, Richard Cromwell, *GoEngineer*
- 3:30 PM *Track: Education and Training*
Potential Inhalation Risks from Vat Photopolymerization 3D Printing in Dental Schools, Qian Zhang, *UL Research Institutes*
- 3:30 PM *Track: Healthcare*
Printing Positive Outcomes: Exploring the Potential of Digital Anatomy, R. Gabe Linke, *Children's Nebraska*

AMUG EVENING EVENTS

- 6:00 PM **AMUG Special Event and Dinner**
2025 Theme – Wild West
- 6:00 PM **Second Annual AMUGderby Race Competition**
Race and Registration Details: <https://www.amug.com/amugderby/>
- 10:00 PM **Daily Activities Conclude**



THURSDAY, APRIL 3, 2025

AMUG GENERAL SESSIONS

- 7:00 AM **Networking Breakfast**
- 8:00 AM **Keynote: Joe Scarbo, Scarbo Performance Corp.**
- 9:00 AM **2024 Advanced Finishing Winner Presentation**
“Coin-Operated Rides”
Mike Littrell, *BuildParts by CIDEAS, Inc.*
- 2024 Advanced Concepts Winner Presentation**
“Lightweight Revolution: Ventilated Multi-material Shoulder Disarticulation
Prosthesis”
Chris Baschuk, *Point Designs, LLC*
- 2024 Members Choice Winner Presentation**
“Fully AM Luminaire”
Sam Mills, *Eaton*
- 9:45 AM **2025 Technical Competition Winners Announced**
Bonnie Meyer and Corey Wardrop, *AMUG Technical Competition Committee Co-Chairs*
- 10:00 AM **Morning Break**
- 10:30 AM **Building the Future – AMUG Member Feedback Session**
Moderated by Shannon VanDeren, *AMUG President*
- 12:00 PM **Networking Lunch**

AMUG BREAKOUT SESSIONS

- 1:30 PM *Track: Aerospace, Transportation, and Defense*
B basis Allowables Qualification for Fused Granular Fabrication Processed PEKK,
Felix Tran, *Eaton*
- 1:30 PM *Track: AM Materials*
Tailored Processing and Post-Processing Strategies to Improve Performance of
Metallic AM Parts, Jake Benzing, *National Institute of Standards and Technology*
- 1:30 PM *Track: AM Metal Technologies*
Finishing & Peening Inside of AM Holes and Passageways with Water Cavitation,
Daniel Sanders, *Sugino Machine Ltd*
- 1:30 PM *Track: Education and Training*
AM Cybersecurity Compliance Requirements... If and Why You Must Comply, Joe
Coleman, *Bluestreak Compliance*
- 1:30 PM *Track: Healthcare*
Cultivating the Next Generation of Engineers in Point-of-Care Manufacturing, Carleigh
Eagle and Jonah Boston, *Mayo Clinic*



- 1:30 PM *Track: Metal Casting*
How to Quickly Produce 3D Printing Investment Casting Patterns, John Thiell, *Beehive Industries, LLC*
- 1:30 PM *Diamond Sponsor Session: GoEngineer*
Mastering Massive Multi-Body Assemblies in a Single 3D Print, Collin Manchester, *GoEngineer*
- 2:00 PM *Track: Aerospace, Transportation, and Defense*
Additive Friction Stir Deposition (AFSD) Specs, Standards, and Allowables Generation, Daniel Braley, *Boeing Global Services*
- 2:00 PM *Track: AM Materials*
Application of Additive Manufacturing to Armament Systems, Alexandra Vest, *US Army DEVCOM AC-Benet Lab*
- 2:00 PM *Track: AM Metal Technologies*
Additive Adoption and Scaling- Value Chain Optimization, Chris Prue, *IperionX*
- 2:00 PM *Track: Education and Training*
There Are So Many Standards. Where Do I Start? Martin White, *ASTM International*
- 2:00 PM *Track: Healthcare*
Addressing Additive Manufacturing Material Biocompatibility at the Cellular Level, Kreg Zimmern, *Southwest Research Institute*
- 2:00 PM *Track: Metal Casting*
The Role of 3D Scanning and AM in Art Foundries, Erich Knoespel, *Artcast Inc*
- 2:30 PM **Afternoon Break**
- 3:00 PM *Track: Aerospace, Transportation, and Defense*
Revolutionizing Technical Data Packages with AI: A Boeing and Authentise Collaboration, Daniel Braley, *Boeing Global Services* and Andre Wegner, *Authentise*
- 3:00 PM *Track: AM Metal Technologies*
Accelerated Mechanical Testing: Highlighting Anisotropy and Inhomogeneity to Ensure AM Part Quality, Thomas Southern, *Plastometrex*
- 3:00 PM *Track: Software*
Streamlining Design for Additive Manufacturing with Automated Workflows, Wallace Scott, *Synera GmbH*
- 3:30 PM *Track: Aerospace, Transportation, and Defense*
Advanced Techniques for Printing 7075 Al as an Aerospace Industry Forging Alternative, Jacob Hansen, *Brigham Young University*
- 4:00 PM *Track: AM Metal Technologies*
Heat Treat 101 Plus “Stump the Chump”, Mark DeBruin, *Skuld LLC*



- 4:30 PM *Track: AM Metal Technologies*
Investigation of L-PBF capabilities for large critical aerospace structures in Ti-6Al-4V,
Michael Bodie, *GKN Aerospace*
- 4:30 PM *Track: Materials*
Customizing Materials for AM Polymer Use: Creation and Development, Todd Menna,
Element Materials Technology and Jill Ferguson, *Interfacial*
- 4:30 PM *Diamond Sponsor Session: SME*
Introduction to SME's Additive Manufacturing Community, Sheku Kamara, *MSOE*

AMUG EVENING EVENTS

- 6:00 PM **AMUG Family Closing Dinner**
- 10:00 PM **Daily Activities Conclude**