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Front Cover: (Right) Erika Berg of Carbon - digitally printed helmet liner components and Riddell’s SpeedFlex Precision Diamond Helmet; (Left) Maddie Frank of University of Wisconsin - Cello, and (Center) Bill Braune/Met-L-Flo - Master Chief reproduction.
AMUG CONFERENCE
AMUG Conference begins Sunday at 4pm and concludes Thursday night at 10:00pm. See Agenda at a Glance page 4-5.

REGISTRATION AND BADGE PICKUP
REGISTRATION HOURS
- Sunday, May 2: 10:00am - 8:00pm
- Monday, May 3: 7:00am - 8:00pm
- Tuesday, May 4: 7:00am - 5:00pm
- Wednesday, May 5: 7:00am - 6:00pm
- Thursday, May 6: 7:00am - 11:00am

All pre-conference Training and Certification Courses require additional registration and feed. See page 10.

AMUGEXPO HOURS
AMUGEXPO AND DINNER
- Sunday, May 2: 4:00pm - 10:00pm

AMUGEXPO
- Monday, May 3: 10:00am - 1:30pm

AMUGEXPO, TECHNICAL COMPETITION, AND DINNER
- Monday, May 3: 6:00pm - 10:00pm

Diamond and Platinum booths open all week - see daily schedule for times.

AMUGexpo is part of the AMUG Conference. Separate tickets or attendance for the AMUGexpo are not available. AMUGexpo is open to all registered conference attendees.

OFF-SITE EVENT AND DINNER
Conference attendees have full access to all conference activities including the AMUG Tuesday-night Off-Site Event and Dinner (surprise location!). Conference attendees have the option of bringing a guest for an additional fee, which can be purchased at the registration desk.

- Off-Site Event and Dinner: Tuesday, May 4
  - Board Buses: 6:00pm
  - Buses Leave: 6:30pm promptly

You must wear your conference badge to board the bus. We suggest you wear closed-toe shoes and comfortable clothing appropriate for indoor and outdoor activities.

DINING
Your AMUG Conference attendee pass includes all meals from Sunday evening through Thursday evening.

BOARD OF DIRECTORS ELECTION
The AMUG Board of Directors election will take place via the AMUG mobile app or in-person ballot. Paid conference attendees are eligible to vote. Voting will take place Sunday, May 2 at 4:00pm to Monday, May 3 at 11:59pm. More information on page 7.

BUSINESS MEETING
The AMUG Business Meeting will take place Wednesday, May 5 at 11:00am. The Business Meeting is for AMUG Conference attendees only. The Board of Directors for 2020-2021 will be announced at the meeting. All AMUG Conference attendees are considered AMUG Members, even first-time attendees. Please make sure to attend!
SATURDAY, 1 MAY 2021

PRE-CONFERENCE ACTIVITY
SUPPLEMENTARY CONFERENCE TRAINING AND CERTIFICATION

NEW! ASTM
ASTM Certification Course (2 day course)
Quality Assurance for Additive Manufacturing
8:00am-5:00pm
More info on page 10

NEW! UTOOLING | SME
Additive Manufacturing – Technician Review Program (2 day course)
8:00am-5:00pm
More info on page 10

SUNDAY, 2 MAY 2021

PRE-CONFERENCE ACTIVITY
SUPPLEMENTARY CONFERENCE TRAINING AND CERTIFICATION

NEW! ASTM
ASTM Certification Course (continuation)
Quality Assurance for Additive Manufacturing
8:00am-3:00pm
More info on page 10

NEW! UTOOLING | SME
Additive Manufacturing – Technician Review Program (continuation)
8:00am-3:00pm
More info on page 10

AMUG CONFERENCE ACTIVITY BEGINS
REGISTRATION OPEN
10:00AM-8:00PM

SPEAKER CENTER AND APP DESK OPEN
10:00AM-8:00PM

CONFERENCE PROGRAM
New Member Welcome
3:00pm-4:00pm
First-time conference attendees welcome and introduction to the AMUG Conference.

AMUGexpo and Networking Dinner
EXPO OPEN
4:00pm - 10:00pm
Join us Sunday night for the AMUGexpo Opening. Enjoy a buffet dinner and beverages as you tour the AMUGexpo.

ALL EXHIBITS OPEN
<table>
<thead>
<tr>
<th>MONDAY, 3 MAY 2021</th>
<th>TUESDAY, 4 MAY 2021</th>
<th>WEDNESDAY, 5 MAY 2021</th>
<th>THURSDAY, 6 MAY 2021</th>
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<tbody>
<tr>
<td>REGISTRATION OPEN 7:00am-8:00pm</td>
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<td>BREAKFAST 7:30am-8:30am</td>
<td>BREAKFAST 7:30am-8:30am</td>
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<tr>
<td>CONFERENCE PROGRAM AMUG Opening Address Insights and Highlights AMUG Board of Directors Election Process 8:00am-9:30am</td>
<td>CONFERENCE PROGRAM DRIVING INNOVATION 2021 DINO Awards Announced 8:30am-9:00am Distinguished Innovator Operator (DINO) Presentation International Report Todd Grimm, T.A. Grimm &amp; Associates 9:00am-10:00am</td>
<td>CONFERENCE PROGRAM DRIVING INNOVATION 2019 Technical Competition Winners 8:30am-9:00am The 2019 AMUG Technical Competition Winners will provide a presentation on their winning applications</td>
<td>CONFERENCE PROGRAM AMUG Board of Directors Panel Session 8:30am-9:00am</td>
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<td>Building the Future of AM 9:30am-10:00am 2021 AMUG Scholarship Recipients Presentations from Guy Bourdeau and Randy Stevens Scholarship recipients Break 10:00am-10:30am</td>
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CONFERENCE CONCLUDES
DOWNLOAD THE EVENTSCRIBE APP

Search for "eventScribe" in the Apple App Store or Google Play Store.

INSTALL and OPEN the app then SELECT "eventScribe: AMUG 2021"

CLICK the icon to launch your app

LOGIN to the AMUG MOBILE APP

To start using the event app, select "Login" and enter your:
- Username (email address you registered with for the conference)
- Access Key (your conference registration number)

TAKE NOTES ON PRESENTATION SLIDES

Presentations supplied by the speaker will be available the day of the presentation. Note, some slides or presentations may differ from what is shown in the presentation room.

Find the presentation you need and interact with the presentation by drawing on slides or highlighting text. Use the note-taking mode to type your notes next to each slide. Access your notes and print them out by clicking the "My Notes" on the home screen or "Online Personal Summary" in the hamburger menu (≡).

No mobile device? No Problem. As long as you have an internet connection, you can take notes on presentations through your laptop via this link:
https://tinyurl.com/amug2021

AMUG MOBILE APP

AMUG full-conference attendees receive access to all contents within the app including all course materials, presentations, recording and evaluations. The Conference Proceedings will be accessible via the mobile app and AMUG website.

Exhibitors and Expo Staff receive access to non-course materials (AMUGexpo Floor plan and information, no presentation/slide access).

EVALUATIONS

Speaker and Conference evaluations are accessible through the mobile app or through the online planner.

BOARD ELECTIONS

2021 will begin the new process for AMUG Board of Directors elections. See page 7 for more information.
AMUG Board of Directors

NEW ELECTION PROCESS

AMUG Board of Directors—Nomination and Election
The AMUG Board of Directors has nine Director positions; eight elected positions and one appointed position. Four of the Directors also serve as officers of the organization.

Elections are held annually during the AMUG Conference. The election ballot consists of individuals that have submitted a self-nomination and have passed a screening by the AMUG Nominating Committee. The nomination period for the 2021 elections is now closed.

2021 Election
Below are the nine board positions. Elections will be held during the AMUG Conference on May 2 and May 3 via the AMUG Mobile App. Candidates for the Board of Directors will be presented to the AMUG membership via the AMUG website and mobile app in April. The newly elected Board of Directors will be announced May 5, 2021. More information to follow.

<table>
<thead>
<tr>
<th>OFFICER/DIRECTOR POSITIONS</th>
<th>SEAT AVAILABLE</th>
<th>TERM OF OFFICE (YEARS)</th>
<th>ELECTED OR APPOINTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>1</td>
<td>1*</td>
<td>Elected</td>
</tr>
<tr>
<td>Vice President</td>
<td>1</td>
<td>1*</td>
<td>Elected</td>
</tr>
<tr>
<td>Treasurer</td>
<td>1</td>
<td>3</td>
<td>Appointed</td>
</tr>
<tr>
<td>Secretary</td>
<td>1</td>
<td>2</td>
<td>Elected</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIRECTORS POSITIONS</th>
<th>SEAT AVAILABLE</th>
<th>TERM OF OFFICE (YEARS)</th>
<th>ELECTED OR APPOINTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, Education and Conference</td>
<td>1</td>
<td>2</td>
<td>Elected</td>
</tr>
<tr>
<td>Director, Business Development</td>
<td>1</td>
<td>2</td>
<td>Elected</td>
</tr>
<tr>
<td>Director, Membership</td>
<td>1</td>
<td>1*</td>
<td>Elected</td>
</tr>
<tr>
<td>Director, Event and Hospitality</td>
<td>1</td>
<td>1*</td>
<td>Elected</td>
</tr>
<tr>
<td>Director at Large</td>
<td>1</td>
<td>1*</td>
<td>Appointed</td>
</tr>
</tbody>
</table>

*These positions will serve through June 30, 2022. Thereafter, these positions will have 2-year terms.
NEW! ASTM Certificate Course
Quality Assurance for Additive Manufacturing

This course is aimed at individuals with existing experience in AM who wish to understand the routes to releasing products requiring quality assurance and control (such as aerospace). Note that safety aspects will not be covered (this is covered in other training courses).

Date/time: Saturday, May 1, 2021 (8:00am – 5:00pm) & Sunday, May 2 (8:00am – 3:00pm)

Cost: $649/person (when registering before April 4, 2021)
$799/person (when registering after April 4, 2021)

Register: On ASTM’s website [here]

Instructors:
Martin White, Head of Additive Manufacturing Programs – Europe Region, ASTM International
Shane Collins, VP and General Manager North America Operations, Additive Industries

As additive manufacturing continues to mature as a production manufacturing method, it becomes more important than ever to demonstrate quality assurance to create quality products.

This course will provide guidance for what is key to control quality output and demonstrate compliance to requirements. The approaches here will be based on ASTM Additive Manufacturing Standards and how they can be combined with the ‘traditional’ manufacturing toolkit, including:

• Quality Management Systems for Additive Manufacturing
  • “Make a plan, stick to the plan”
  • Facility (machine qualification, supply chain, post-processing)
  • Process
  • Materials
  • How can standards help?
• Linking Quality to Certification & Qualification
  • Fundamental requirements for regulated industries
  • Demonstration of Suitable Qualified & Experienced Personnel – People are key
  • Lean Manufacturing Methods – Driving towards ‘right first time’
  • “Haven’t we done this before?”
• Configuration Management & Change Control – What is essential?
• How can we track performance, prevent deviations, and what to do if quality deviates?
• How do we use NDT, in-process monitoring, and other AM tools?

The 2-day course will be followed by an exam that will be conducted 2 weeks after the training event, held online. After successful completion of the course and passing marks for the exam, the participants will receive the ‘ASTM AM Qualify Assurance Certificate’.

NEW! Additive Manufacturing—Technician Review Program

1 1/2 day of instruction; 1/2 day exam

The Technician certification is ideal for a candidate with a two-year associate’s degree in additive manufacturing or is currently enrolled in a college program, and/or has one or more years of working experience in a manufacturing-related field.

Successful (passing) completion of the exam yields the designation of Certified Additive Manufacturing–Technician (CAM-T). The exam will be administered on Sunday, May 2.

Date/time: Saturday, May 1 (8:00 am – 5:00 pm) & Sunday, May 2 (8:00 am – 3 pm)

Cost: $895/person

Register: Coming soon

The certification covers key roles and responsibilities for an additive manufacturing technician, the additive manufacturing process chain, design for additive manufacturing, materials and process selection, secondary processes, and key safety considerations.

The prep course is a discussion-oriented and interactive session in which participants receive comprehensive application-based knowledge of the 3D printing industry. Covering key roles and responsibilities for an AM technician, the AM process chain, design for AM, material and process selection, secondary processes, and key safety considerations, you will begin to understand how to apply AM in your organization.

The certification exam consists of 120 multiple-choice questions.

Objectives
• Summarize the AM process chain, materials, technologies and economic drivers
• Evaluate designs for AM covering general guidelines, file formats, build factors and optimization strategies
• Evaluate differentiating factors when selecting AM materials and processes
• Describe the end to end manufacturing chain from build preparation to quality assurance
• Explain how to leverage AM to support various traditional manufacturing methods
• Describe the impact of AM on the manufacturing environment and key risk and safety considerations

Pre-Conference Training and Certification
The programs listed below are available only to AMUG Conference attendees and are NOT included with AMUG Conference registration. Participation requires separate registration and is at an additional cost.
### Saturday, May 1, 2021

<table>
<thead>
<tr>
<th>Time</th>
<th>Pre-Conference Programs</th>
<th>AMUG Programs</th>
</tr>
</thead>
<tbody>
<tr>
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<td>NEW! ASTM Certificate Course</td>
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<tr>
<td>10:00am-10:30am</td>
<td>Sunday, March 22 8:30 am – 3:00 pm</td>
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<tr>
<td>11:00am-11:30am</td>
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Registration information at: [https://www.amug.com/2021_train_certify/](https://www.amug.com/2021_train_certify/)

Registration Open Location: Lobby Level

10:00am - 8:00pm

Badge Pick-up Speaker Center Mobile App Center

New Member Welcome Location: Orange Ballroom
### AMUG Program

<table>
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<th>Room</th>
<th>Track</th>
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<td>Lake Highland</td>
<td>Lobby Level</td>
<td>Aerospace/Transportation</td>
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<tr>
<td>Lake Sheen</td>
<td>Lobby Level</td>
<td>AM Metal Technologies</td>
</tr>
<tr>
<td>Lake Nona</td>
<td>Lobby Level</td>
<td>Scanning &amp; Metrology</td>
</tr>
<tr>
<td>Lake Mizell</td>
<td>Lobby Level</td>
<td>Medical</td>
</tr>
<tr>
<td>Lake Eola</td>
<td>Lobby Level</td>
<td>AM Technologies (Non-Metal)</td>
</tr>
</tbody>
</table>

#### Breakout Sessions Begin

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00am-9:00am</td>
<td>AMUG Opening Address: Carl Dekker, AMUG President</td>
</tr>
<tr>
<td>9:00am-10:00am</td>
<td>Building the Future of AM: Scholarship Recipients Presentation</td>
</tr>
<tr>
<td>10:00am-11:00am</td>
<td>AMUG Scholarship Chair: Brett Charlton</td>
</tr>
<tr>
<td>11:00am-12:00pm</td>
<td>Divergent Adaptive Production System</td>
</tr>
<tr>
<td>12:00pm-1:00pm</td>
<td>Rapid Build Quality Inspection Method for Metal AM</td>
</tr>
<tr>
<td>1:00pm-2:00pm</td>
<td>An Introduction to Metrology and 3D Scanning</td>
</tr>
<tr>
<td>2:00pm-3:00pm</td>
<td>Adoption and Industrialization Challenges at Lockheed Martin</td>
</tr>
<tr>
<td>3:00pm-4:00pm</td>
<td>In-process Inspection and Quality Assurance</td>
</tr>
<tr>
<td>4:00pm-5:00pm</td>
<td>3D Scanning Workshop</td>
</tr>
<tr>
<td>5:00pm-6:00pm</td>
<td>Can 3D Printing Change Lives? Perspective from a Clinician and Patient</td>
</tr>
</tbody>
</table>

### Breakout Sessions

- **Session 1:** Divergent Adaptive Production System  
  - **Moderator:** Michael Kenworthy  
  - **Panelists:** Simon Pun (Divergent Technologies)

- **Session 2:** Rapid Build Quality Inspection Method for Metal AM  
  - **Moderator:** Matthew Donovan (jabil)
  - **Panelists:** Derek Ellis (Authentise), Gm雷斯 (Hexagon Metrology)

- **Session 3:** An Introduction to Metrology and 3D Scanning  
  - **Moderator:** Giles Gaskell (Hexagon Metrology)
  - **Panelists:** Derek Ellis (Authentise), Gm雷斯 (Hexagon Metrology)

- **Session 4:** Adoption and Industrialization Challenges at Lockheed Martin  
  - **Moderator:** Prabhjot Singh (Lockheed Martin Space)

- **Session 5:** In-process Inspection and Quality Assurance  
  - **Moderator:** Jordan Weston, MSOE
  - **Panelists:** Gm雷斯 (Hexagon Metrology), Lloyd Soss (Hexagon Metrology), Dan Perreault (NeoMetix Technologies)

- **Session 6:** 3D Scanning Workshop  
  - **Workshop Coordinators:** Derek Ellis, Authentise
  - **Moderator:** Gm雷斯 (Hexagon Metrology), Lloyd Soss (Hexagon Metrology), Dan Perreault (NeoMetix Technologies)

- **Session 7:** Can 3D Printing Change Lives? Perspective from a Clinician and Patient  
  - **Moderator:** Brent Wright (Digital Designer)

### Breakout Session Transition

- **Session 8:** Fast and Clear DLP 3D Printing Transforms Aligner and Retainer Business Models  
  - **Moderator:** Eric Wu (Wu Orthodontics)

- **Session 9:** Soft Touch Tooling - A Process Redefined  
  - **Moderator:** Andrew Rodenick (Estol, Inc.)

- **Session 10:** Beyond Jigs and Fixtures, Bringing Additive to the Shop Floor  
  - **Moderator:** Paul DeWys (Forerunner 3D Printing)

### 6:00pm - 10:00pm

**AMUGexpo and Technical Competition Dinner and Networking**  
- Location: Orlando Ballroom, Lower Level
## Preliminary As of March 17, 2021

**FOR USERS. BY USERS.**

### 12:00pm-1:15pm Networking Lunch | Orlando Ballroom, Lower Level

### 1:30pm-2:30pm Breakout Sessions Begin

<table>
<thead>
<tr>
<th>Room</th>
<th>Platinum Sponsor Program</th>
<th>Diamond Sponsor Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Concord</td>
<td>Platinum Sponsor: EnvisionTEC</td>
<td>Diamond Sponsor: DSM Additive Manufacturing</td>
</tr>
<tr>
<td>Lake Hart</td>
<td>Platinum Sponsor: Dinsmore &amp; Associates</td>
<td>TBA DSM Additive Technologies</td>
</tr>
<tr>
<td>Orange Ballroom A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: SLM Solutions</td>
</tr>
<tr>
<td>Orange Ballroom E-G</td>
<td>TBA</td>
<td>Diamond Sponsor: Plural Additive Manufacturing</td>
</tr>
<tr>
<td>Florida Ballroom 1-3</td>
<td>TBA</td>
<td>Diamond Sponsor: GKN Additive</td>
</tr>
<tr>
<td>Key West A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: Dyndrite Corporation</td>
</tr>
</tbody>
</table>

### 2:30pm-3:00pm Break | Location: Foyer, Lower Level

### 3:00pm-4:00pm Breakout Sessions Begin

<table>
<thead>
<tr>
<th>Room</th>
<th>Platinum Sponsor Program</th>
<th>Diamond Sponsor Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Concord</td>
<td>Platinum Sponsor: GKN Additive</td>
<td>Diamond Sponsor: BASF</td>
</tr>
<tr>
<td>Lake Hart</td>
<td>TBA</td>
<td>Diamond Sponsor: Formlabs</td>
</tr>
<tr>
<td>Orange Ballroom A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: Dyndrite Corporation</td>
</tr>
<tr>
<td>Orange Ballroom E-G</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
<tr>
<td>Florida Ballroom 1-3</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
<tr>
<td>Key West A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
</tbody>
</table>

### 4:00pm-4:30pm Transition

### 4:30pm-5:30pm Breakout Sessions Begin

<table>
<thead>
<tr>
<th>Room</th>
<th>Platinum Sponsor Program</th>
<th>Diamond Sponsor Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Concord</td>
<td>TBA</td>
<td>Diamond Sponsor: Essentium Materials</td>
</tr>
<tr>
<td>Lake Hart</td>
<td>TBA</td>
<td>Diamond Sponsor: DMG MORI</td>
</tr>
<tr>
<td>Orange Ballroom A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
<tr>
<td>Orange Ballroom E-G</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
<tr>
<td>Florida Ballroom 1-3</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
<tr>
<td>Key West A-C</td>
<td>TBA</td>
<td>Diamond Sponsor: CLOSED</td>
</tr>
</tbody>
</table>

### 5:30pm-6:00pm All Sessions Closed

### 6:00pm-10:00pm AMUGexpo and Technical Competition | Dinner and Networking | Orlando Ballroom, Lower Level

---

**Welcome to AMUG**

**Insights and Highlights**

**Board Elections**

8:00am-10:00am

---

**Carl Dekker, Paul Bates**

**AMUG**
## AMUG PROGRAM

### LAKE HIGHLAND - Lobby Level

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00am</td>
<td>State of Knowledge: Environmental Impacts of Metal Additive Manufacturing</td>
</tr>
<tr>
<td>11:30am</td>
<td>Stuck in the Middle: Bridging the Gap to Production</td>
</tr>
</tbody>
</table>

**Track:** Aerospace/Transportation

### LAKE SHEEN - Lobby Level

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00am</td>
<td>Inspection and Process Optimization with Industrial CT</td>
</tr>
<tr>
<td>11:00am</td>
<td>The Role of X-Ray and Computed Tomography for Additively Manufactured Parts</td>
</tr>
</tbody>
</table>

**Track:** AM Metal Technologies

### LAKE NONA - Lobby Level

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00am</td>
<td>Additive Manufacturing Applications in Composites</td>
</tr>
<tr>
<td>11:00am</td>
<td>Benefits of Continuous Fiber for the Energy Sector</td>
</tr>
</tbody>
</table>

**Track:** Scanning & Metrology

### LAKE MIZELL - Lobby Level

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00am</td>
<td>Inspection and Process Optimization with Industrial CT</td>
</tr>
<tr>
<td>11:00am</td>
<td>The Role of X-Ray and Computed Tomography for Additively Manufactured Parts</td>
</tr>
</tbody>
</table>

**Track:** Education & Training

### LAKE EOLA - Lobby Level

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00am</td>
<td>Additive Manufacturing Applications in Composites</td>
</tr>
<tr>
<td>11:00am</td>
<td>Benefits of Continuous Fiber for the Energy Sector</td>
</tr>
</tbody>
</table>

**Track:** Casting

### NETWORKING LUNCH | LOCATION: The Promenade

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00pm</td>
<td>Networking Lunch</td>
</tr>
</tbody>
</table>

### GENERAL SESSIONS AND BREAKOUTS

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30pm</td>
<td>Panel: Developing and Transitioning Best AM Practices for Technological Dominance for Our</td>
</tr>
<tr>
<td></td>
<td>Warfighters</td>
</tr>
<tr>
<td>3:00pm</td>
<td>Panel: FDA Registered versus ISO 13485 Certified and Maintaining Good Standing</td>
</tr>
</tbody>
</table>

**Track:** Medical
<table>
<thead>
<tr>
<th>ROOM</th>
<th>PLATINUM SPONSOR PROGRAM</th>
<th>DIAMOND SPONSOR PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LAKE CONCORD Lobby Level</td>
<td>ORANGE BALLROOM A-C Lower Level</td>
</tr>
<tr>
<td></td>
<td>LAKE HART Lobby Level</td>
<td>ORANGE BALLROOM E-G Lower Level</td>
</tr>
</tbody>
</table>

**Breakout Sessions Begin**

### 10:30am-11:00am
- **PLATINUM SESSIONS**
  - Platinum Sponsor: MSC Software
  - TBA: MSC Software
- **DIAMOND SPONSOR PROGRAM**
  - Diamond Speaking Session: LuxCreo
  - TBA: LuxCreo

### 11:00am-11:30am
- **DIAMOND SPONSOR PROGRAM**
  - Closed

### 11:30am-12:00pm
- **NETWORKING LUNCH | LOCATION:** The Promenade
- **PLATINUM SESSIONS**
  - Platinum Sponsor: DyeMansion
  - TBA: DyeMansion
- **DIAMOND SPONSOR PROGRAM**
  - Diamond Sponsor: ExOne
  - TBA: ExOne

### 2:30pm-3:00pm
- **BREAK | Location:** Foyer, Lower Level

### 3:00pm-4:00pm
- **PLATINUM SESSIONS**
  - Platinum Sponsor: RP America
  - TBA: RP America
- **DIAMOND SPONSOR PROGRAM**
  - Diamond Sponsor: Dyndrite Corporation
  - TBA: Dyndrite Corporation

### 4:00pm
- **ALL SESSIONS CLOSED**

### 6:00pm-6:15pm
- Board Buses for Off-Site Dinner and Networking Event

### 7:00pm-10:00pm
- AMUG Off-Site Dinner and Networking Event
**Wednesday, May 5, 2021**

**DIAMOND & PLATINUM**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30am-8:30am</td>
<td>BREAKFAST</td>
<td>Foyer, Lower Level</td>
</tr>
<tr>
<td>8:30am-9:00am</td>
<td>DRIVING INNOVATION</td>
<td>PRESENTATION BY 2019 TECHNICAL COMPETITION WINNERS</td>
</tr>
<tr>
<td>9:00am-10:00am</td>
<td>DRIVING INNOVATION</td>
<td>INNOVATOR SHOWCASE WITH DR. HANS LANGER</td>
</tr>
<tr>
<td>10:00am-10:30am</td>
<td>BREAK</td>
<td>Foyer, Lower Level</td>
</tr>
<tr>
<td>10:30am-11:00am</td>
<td>DRIVING INNOVATION</td>
<td>2021 TECHNICAL COMPETITION WINNERS ANNOUNCED</td>
</tr>
<tr>
<td>11:00am-12:00pm</td>
<td>AMUG Business Meeting - 2021-2022/2023 AMUG Board of Directors Announced</td>
<td>Orange Ballroom, Lower Level</td>
</tr>
<tr>
<td>12:00pm-1:15pm</td>
<td>NETWORKING LUNCH</td>
<td>The Promenade</td>
</tr>
</tbody>
</table>

**DIAMOND AND PLATINUM BOOTH AREA CLOSED**

**1:30pm-2:30pm**

- **ROUNDTABLE PANEL**
  - Current Status, Myths, and Challenges of Directed Energy Deposition Processes
  - **MODERATOR:** Adam Penna, All Digital AM
  - **PANELIST:** Carl Johnson, Additive Manufacturing, Norsk Titanium
  - **PANELIST:** Mike Vasquez, PhD, 3Degrees Consulting
  - **PANELIST:** Lucas Brewer, Additive Manufacturing, Optomec

- **AM for the BioPharma Industry**
  - **MODERATOR:** Steven Kjar
  - **PANELIST:** Thermo Fisher

- **Simulation Tools for Additive Manufacturing**
  - **MODERATOR:** Tim Gornet, University of Louisville
  - **PANELIST:** TBA

- **Flame Retardant Materials Panel Discussion**
  - **MODERATOR:** Fred Arasan, UL
  - **PANELIST:** Tryggve Rogers, Danfoss
  - **PANELIST:** Nirali Surati, DSM

- **Lightweighting an Aircraft Casting: A Case Study**
  - **MODERATOR:** Thomas Mueller
  - **PANELIST:** Mueller Additive Manufacturing Solutions

- **Design for 3D Printing Tips, Tricks and Techniques**
  - **MODERATOR:** Mike Vasquez, 3Degrees Consulting
  - **PANELIST:** TBA

- **Using Ceramic 3D Printing with Investment Casting**
  - **MODERATOR:** Peter Lorenz, Signicast

- **3D Printing Workflow and MES Panel**
  - **MODERATOR:** TBA
  - **PANELIST:** TBA

- **PART 1 - Hands-On Silicone Mold-making and Urethane Casting**
  - **MODERATOR:** William Molitor
  - **PANELIST:** WMFP Group, Inc.

- **Infrastructure Scale Additive Manufacturing: Contemporary Concepts and Challenges in 3D Printing**
  - **MODERATOR:** Brian Post
  - **PANELIST:** Oak Ridge National Laboratory

**2:30pm-3:00pm**

- **BREAK | Location:** Foyer, Lower Level

**3:00pm-4:00pm**

- **Optimizing Refractory Metals for Additive Manufacturing**
  - **MODERATOR:** Faith Gehlken, H.C. Starck Solutions
  - **PANELIST:** Carsten Wende, Vertex Manufacturing
  - **PANELIST:** Shane Collins, Additive Industries
  - **PANELIST:** Scott Volk, KMW
  - **PANELIST:** Paul Bates, ASTM

- **Choosing to Print with Metal**
  - **MODERATOR:** Shannon Van Deren, Laystal Manufacturing and Consulting
  - **PANELIST:** Tim Wardens, Vertex Manufacturing
  - **PANELIST:** Shane Collins, Additive Industries
  - **PANELIST:** Scott Volk, KMW
  - **PANELIST:** Paul Bates, ASTM

- **Practical Approaches to IoT and Additive Manufacturing**
  - **MODERATOR:** Mike Vasquez, 3Degrees Consulting
  - **PANELIST:** TBA

- **Design for 3D Printing**
  - **MODERATOR:** Mark Abshire
  - **PANELIST:** TBA

- **Using Ceramic 3D Printing with Investment Casting**
  - **MODERATOR:** Peter Lorenz, Signicast

**4:00pm-4:30pm**

- **ROUNDTABLE PANEL**
  - **3D Printing Workflow and MES Panel**
  - **MODERATOR:** TBA
  - **PANELIST:** TBA

- **PART 1 - Hands-On Silicone Mold-making and Urethane Casting**
  - **MODERATOR:** William Molitor
  - **PANELIST:** WMFP Group, Inc.

- **Infrastructure Scale Additive Manufacturing: Contemporary Concepts and Challenges in 3D Printing**
  - **MODERATOR:** Brian Post
  - **PANELIST:** Oak Ridge National Laboratory

**5:30pm-6:00pm**

- **AMUG Dinner and Networking | Location:** The Promenade

**ALL SESSIONS CLOSED**
**INNOVATOR SHOWCASE**  
9:00am-10:00am

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am-10:00am</td>
<td>INNOVATOR SHOWCASE</td>
<td></td>
</tr>
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</table>
**Thursday, May 6, 2021**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30am-8:30am</td>
<td>BREAKFAST</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>8:30am-9:00am</td>
<td>AMUG BOARD PANEL DISCUSSION</td>
<td>Orange Ballroom, Lower Level</td>
</tr>
<tr>
<td>9:00am-10:00am</td>
<td>KEYNOTE ADDRESS: Jonathan Morris, MD Mayo Clinic</td>
<td>Orange Ballroom, Lower Level</td>
</tr>
<tr>
<td>10:00am-10:30am</td>
<td>BREAK</td>
<td>Foyer, Lower Level</td>
</tr>
</tbody>
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### BREAKOUT SESSIONS BEGIN

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30am-11:00am</td>
<td>Applying Industrial Metal PBF Process Chain to a Function-Driven, Complex Designs</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>11:00am-11:30am</td>
<td>Characterization of Ceramic Powders to Improve Performance in Powder-Bed Additive Manufacturing</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>11:30am-12:00pm</td>
<td>Particle and Chemical Emissions from Desktop 3D printers with Different Technologies</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>12:00pm-1:15pm</td>
<td>NETWORKING LUNCH</td>
<td>Location: AMUGexpo area, Orlando Ballroom, Lower Level</td>
</tr>
</tbody>
</table>

### AMUG PROGRAM

<table>
<thead>
<tr>
<th>Track</th>
<th>Room</th>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace/Transportation</td>
<td>LAKE HIGHLAND</td>
<td>10:30am-11:00am</td>
<td>Future and Potential Uses of Additive Manufacturing Using Laser Metal Deposition in Automotive</td>
<td>Lobby Level</td>
</tr>
<tr>
<td></td>
<td>LAKE SHEEN</td>
<td>11:00am-11:30am</td>
<td>Panel</td>
<td>Lobby Level</td>
</tr>
<tr>
<td></td>
<td>LAKE NONA</td>
<td>11:30am-12:00pm</td>
<td>Regulatory Panel</td>
<td>Lobby Level</td>
</tr>
<tr>
<td></td>
<td>LAKE MIZELL</td>
<td>1:30pm-2:30pm</td>
<td>The Art of Finishing 3D Printed Parts</td>
<td>Lobby Level</td>
</tr>
<tr>
<td></td>
<td>LAKE EOLA</td>
<td>2:00pm-2:30pm</td>
<td>TBA</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Medical</td>
<td></td>
<td>1:30pm-2:30pm</td>
<td>Panel</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td>2:30pm-3:00pm</td>
<td>Break</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Education &amp; Training</td>
<td></td>
<td>3:00pm-4:00pm</td>
<td>Accelerating True Innovation in Automotive and Motorsport Using 3D Printing and Advanced Composite Materials</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>AM Technologies (Non-Metal)</td>
<td></td>
<td>4:00pm-4:30pm</td>
<td>AM Metals Safety Let's All Go Home in One Piece Every Night</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Casting</td>
<td></td>
<td>4:30pm-5:30pm</td>
<td>Prototype Aircraft Structure at the Extreme Limits of Design</td>
<td>Lobby Level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5:30pm-6:00pm</td>
<td>Family Dinner and Closing</td>
<td>Lobby Level</td>
</tr>
</tbody>
</table>

**REGISTRATION and BADGE PICK-UP**

- Hours Open: 7:00am - 11:00am
- Location: Lobby Level

**REGISTRATION - SPEAKER CENTER - MOBILE APP DESK**

- Hours Open: 7:00am - 2:00pm
- Location: Lobby Level

**GENERAL SESSIONS AND BREAKOUTS OPEN TO ALL CONFERENCE ATTENDEES**

- Speakers, Dates and Times subject to change without notice.
- Updates made through mobile app.

**REGISTRATION - SPEAKER CENTER - MOBILE APP DESK**

- Location: Lobby Level

**REGISTRATION and BADGE PICK-UP**

- Location: Lobby Level

**NETWORKING LUNCH**

- Location: Lower Level

**IN DIAMOND & PLATINUM BOOTHS AREA CLOSED AT 1:30PM**

**WORKSHOP**

- Location: Lobby Level

**SESSIONS CLOSED**

- Location: Lobby Level
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>PLATINUM SPONSOR PROGRAM</th>
<th>DIAMOND SPONSOR PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30am-11:00am</td>
<td>LAKE CONCORD</td>
<td>Platinum Sponsor: TBA</td>
<td>Platinum Sponsor: TBA</td>
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<tr>
<td></td>
<td>Lobby Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LAKE HART</td>
<td>TBA</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Lobby Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ORANGE BALLROOM A-C</td>
<td>Diamond Speaking Session</td>
<td>Diamond Speaking Session</td>
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<td>Lower Level</td>
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<td>ORANGE BALLROOM E-G</td>
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<td>1:30pm-2:30pm</td>
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<td>4:00pm-4:30pm</td>
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<td>4:30pm-5:30pm</td>
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**KEYNOTE SPEAKER**
9:00am-10:00am
Jonathan Morris, M.D.
Co-Director, 3D Printing/Anatomic Modeling Laboratory
Mayo Clinic
AMUG EXPO HOURS

AMUG Preparations

- We have arranged for one way entrance and exits. Please pay attention to the signs.
- Sponsors and Exhibitors may limit the amount of individuals they would like in their booth at one time. Look for each booth social distancing requirements and respect the sponsor and exhibitors request.
- Sponsors and Exhibitors are responsible for cleaning high touch points within their assigned booth space.
- Sponsors and exhibitors are responsible for adhering to their corporate guidelines. AMUG will not monitor or enforce corporate guidelines of participants.
- Please respect the sponsor and exhibitors request within their booth.

For more information regarding AMUG Preparations for the AMUG Conference, download the AMUG Preparations Guide on the AMUG website at www.amug.com

AMUG EXPO HOURS

SPONSORS AND EXHIBITORS

Sunday, May 2, 2021
4:00 pm - 10:00 pm
Monday, May 3, 2021
10:00 am - 1:30 pm
Monday, May 3, 2021
6:00 pm - 10:00 pm
Exhibitors and Gold sponsors move out on Monday night. Make sure to plan your time at the conference to see them all!

DIAMOND AND PLATINUM SPONSORS ONLY

Diamond and Platinum booths area open

Tuesday, May 4
10:30 am - 12:00 pm
1:30 pm - 4:00 pm
Wednesday, May 5
1:30 pm - 5:30 pm
Thursday, May 6
12:00 - 1:30 pm (lunch)

AMUGEDEXPO HOURS

COMPANY | BOOTH
---|---
3D Ceram Sinto Inc | 37
3 Degrees | 70
6K Additive | 24
Adaptive Corporation | 29
ADDMAN Engineering | 65
AddUp Inc | P24
ASTM International Additive Manufacturing Center of Excellence | 42
Authentise Inc | 32
BASF 3D Printing Solutions | D8
Bel Air Finishing Supply | 48
BRAYN CONSULTING LLC | 67
CBG Biotech | 10
CIDEAS Inc. | 55
Coreline Soft | 11
Dinsmore Inc. | P38
DMG MORI USA | D11
DSM | D12
DyeMansion | P7
Dyndrite Corporation | D15
Elementum 3D | 23
EnvisionTEC | P18
Essentium, Inc. | D10
ExOne | D14
Fabrisonic LLC | 50
Farsoon Technologies | 7
FormAlloy Technologies, Inc. | 78
Formlabs | D17
GE Additive | D13
GKN Forecast 3D Additive Manufacturing | P31
H.C. Stark Solutions | 64
Herding Filtration LLC | 33
HK Technologies, Inc. | 15
Hoganas | 8
HP 3D Printing | P12
IC3D Printers | 73
Impac Systems Engineering | 68
INTAMSYS | 5
Keynote Photonics | 74
kittyhawk | 20
LINK3D, Inc. | 54
Lithoz America, LLC | 12
LuxCreo | D16
Markforged | P19
Massivit 3D | 16
Materialise | 56
M.E.T-L-FLO Inc | 75
MSC Software | P25
Nikon Metrology | 26
nScrypt, Inc. | 35
Photocentric | 30
Pivot AM Service | 28
Plural Additive Manufacturing | P37
polySpectra | 19
Pressure Technology, Inc. | 27
Ramco Equipment | 9
Rapid Prototyping Services | 6
Renishaw Inc | P6
RePliForm | 1
Rosler Metal Finishing | P20
RP America | P13
Sciaky, Inc. | 2
Sigma Labs Inc. | 18
SLM Solutions NA, Inc. | D7
Solar Atmospheres | 21
Surface Engineering | 36
Tech Met, Inc | 53
Tethon 3D | 25
Thermoset Solutions | 22
AMUG
- AMUGexpo
  - Orlando Ballroom, Lower Level
- AMUG General Session
  - Orange Ballroom, Lower Level
- Breakfast
  - Foyer and The Promenade, Lower Level
- Lunch
  - AMUGexpo and The Promenade
- Dinner
  - AMUGexpo and The Promenade

DIAMOND SPEAKING SESSIONS
- Diamond Speaking Session - D1
  - Orange Ballroom A-C, Lower Level
- Diamond Speaking Session - D2
  - Orange Ballroom D, Lower Level
- Diamond Speaking Session - D3
  - Orange Ballroom E-G, Lower Level

DIAMOND TRAINING SESSIONS
- Diamond Speaking Session - D4
  - Florida Ballroom 1-3, Lower Level
- Diamond Speaking Session - D5
  - Florida Ballroom 5-7, Lower Level
- Diamond Speaking Session - D6
  - Key West A-C, Lower Level

SUPPORT TEAM
- Red Oak Expo Truck Center
  - Load-in Access from Destination Parkway
- Media Center
  - Lobby Level
- AV Center - Lobby Level
  - Key West D, Lower Level

NEW MEMBER MEET-UP
- Lower Level
The AMUG organization has been building the user group for 32 years. As an all-volunteer organization, the AMUG Board works with individuals globally to increase awareness and build a strong additive manufacturing community. If you are interested in joining the expanding AMUG team, contact our Nominating Committee at nomcom@amug.com.
AMUG TEAM

AMUG relies on the support of volunteers, and active participation in committees is one way to contribute. Below are the committees and the members that make them work.

**CONFERENCE COMMITTEES**

**AGENDA & PROGRAM**
- **Co-Chairperson:** Gary Rabinovitz, Reebok
  - Elizabeth Goode, GoodeInk
- **Members:**
  - Andrew Allshorn, AT 3D-SQUARED LTD
  - Jamie Cone, BD
  - Jordan Weston, MSOE
- **Contact:** Agenda@amug.com

**DINO SELECTION**
- **Chairperson:** Gary Rabinovitz, Reebok
- **Members:**
  - Todd Grimm, T.A. Grimm & Associates
  - Kim Killoran, Stratasys
  - Jason Lopes, Carbon
  - Larry Monahan, BD
  - Stefan Ritt, SPEE3D
  - Shannon Van Deren, Layered Manufacturing
- **Contact:** DINO@amug.com

**EVENT & HOSPITALITY**
- **Chairperson:** Thomas Sorovetz, FCA US LLC
- **Members:**
  - Claire Belson, Emerson
  - Abbey Delaney, BigRep
- **Contact:** Events@amug.com

**EXPO (AMUGexpo)**
- **Chairperson:** Mark Wynn, Yazaki North America
- **Members:**
  - Andrew Allshorn, AT 3D-SQUARED LTD
  - Jamie Cone, BD
  - Matt Mitchell, Yazaki North America
  - Thomas Murphy, Shapeways
- **Contact:** Expo@amug.com

**RECOGNITION**
- **Chairperson:** Mark Barfoot, EWI
- **Contact:** Awards@amug.com

**REGISTRATION**
- **Chairperson:** Kevin Zaras, DSM Additive Manufacturing
- **Members:**
  - Vince Anewenter, MSOE
  - Leslie Frost, GE Additive
- **Contact:** Registrar@amug.com

**SCHOLARSHIP**
- **Chairperson:** Brett Charlton, BD
- **Members:**
  - Claire Belson, Emerson Automation Solutions
  - Maddie Frank, University of Wisconsin – Milwaukee
  - Clay Guillory, Titan Robotics
  - Jim Harrison, Cimquest
  - Zac Holcomb, additive America
  - Sheku Kamara, MSOE
  - Rajeev Kulkarni, 3D Systems
  - Bob Markley, 3rd Dimension Industrial 3D Printing
  - Thomas Murphy, Shapeways
- **Contact:** Scholarship@amug.com

**SPONSOR & EXHIBITOR**
- **Chairperson:** Jamie Cone, BD
- **Members:**
  - Andrew Allshorn, AT 3D-SQUARED LTD
- **Contact:** VicePresident@amug.com

**TECHNICAL COMPETITION**
- **Chairperson:** Bonnie Meyer
- **Members:**
  - Bruce Bradshaw, 6K Additive
  - Jay Dinsmore, Dinsmore, Inc.
  - Youping Gou, Castheon
  - Ed Graham, ProtoCAM
  - Evan Kirby, Materialise
  - Larry Monahan, BD
- **Contact:** TechComp@amug.com

**TRACK LEADER**
- **Chairperson:** Jordan Weston, MSOE
- **Members:**
  - Ted Anderson, GE Additive
  - Giles Gaskell, Hexagon Manufacturing Intelligence
  - Edward Graham, ProtoCAM
  - Paul Hsuan, Christie Digital
  - Colton Rooney, EMI Corporation
  - Nate Schumacher, Midwest Prototyping
  - Tom Sorovetz, FCA US
  - Shannon VanDeren, Layered Mfg. & Consulting
- **Contact:** TrackLeader@amug.com

**OPERATIONS COMMITTEES**

**EXECUTIVE**
- **Chairperson:** Carl Dekker, Met-L-Flo
- **Members:**
  - Vince Anewenter, MSOE
  - Gary Rabinovitz, Reebok
  - Thomas Sorovetz, FCA US
- **Contact:** President@amug.com

**FINANCE**
- **Chairperson:** Brett Charlton, BD
- **Members:**
  - Carl Dekker, Met-L-Flo
  - David Leigh, EOS North America
  - Gary Rabinovitz, Reebok
- **Contact:** Treasurer@amug.com

**GOVERNANCE**
- **Chairperson:** Leslie Frost, GE Additive Manufacturing
- **Members:**
  - Vince Anewenter, MSOE
  - Carl Dekker, Met-L-Flo
- **Contact:** Secretary@amug.com

**INTERNATIONAL**
- **Chairperson:** Stefan Ritt, SPEE3D
- **Members:**
  - Andrew Allshorn, AT 3D-SQUARED LTD
  - Graham Tromans, GP Tromans Associates
  - Nora Cibula, GE Additive
  - Dror Danai, XJet
- **Contact:** International@amug.com

**MARKETING**
- **Chairperson:** Kim Killoran, Stratasys
- **Members:**
  - Todd Grimm, T.A. Grimm & Associates
  - Kristen Eisminger, EOS
  - Danny Ley, CATI
  - Tuan TranPham
- **Contact:** Marketing@amug.com

**MEMBERSHIP**
- **Chairperson:** Andrew Allshorn, AT 3D-SQUARED LTD
- **Members:**
  - Andrew Graves, DSM Additive Manufacturing
  - Jennifer Johns, Bristol University
  - Derek Ellis, Authenticise
  - Tryggve Rogers, Danfoss
  - Nate Schumacher, Midwest Prototyping
- **Contact:** Membership@amug.com

**NEW MEMBER**
- **Chairperson:** Derek Ellis
- **Members:**
  - Matthew Gray, Boeing
  - Jim Harrison, AM Expert
  - Nick Licari, CATI
  - Dana McCallum, Carbon
- **Contact:** NewMember@amug.com

**NOMINATING**
- **Chairperson:** Paul Bates, UL
- **Members:**
  - Mark Abshire, CATI
  - Tim Gornet, University of Louisville
  - David Leigh, EOS North America
  - Steve McDonald, L3 ISR Systems
  - Harold Sears, Ford Motor Co.
- **Contact:** NomCom@amug.com

**PARTNERSHIP**
- **Chairperson:** Gary Rabinovitz, Reebok
- **Members:**
  - Todd Grimm, T.A. Grimm & Associates
  - Elizabeth Goode, GoodeInk
- **Contact:** Partners@amug.com

**RECOGNITION**
- **Chairperson:** Mark Barfoot, EWI
- **Contact:** Awards@amug.com

**REGISTRATION**
- **Chairperson:** Kevin Zaras, DSM Additive Manufacturing
- **Members:**
  - Vince Anewenter, MSOE
  - Leslie Frost, GE Additive
- **Contact:** Registrar@amug.com

**SCHOLARSHIP**
- **Chairperson:** Brett Charlton, BD
- **Members:**
  - Claire Belson, Emerson Automation Solutions
  - Maddie Frank, University of Wisconsin – Milwaukee
  - Clay Guillory, Titan Robotics
  - Jim Harrison, Cimquest
  - Zac Holcomb, additive America
  - Sheku Kamara, MSOE
  - Rajeev Kulkarni, 3D Systems
  - Bob Markley, 3rd Dimension Industrial 3D Printing
  - Thomas Murphy, Shapeways
- **Contact:** Scholarship@amug.com

**SPONSOR & EXHIBITOR**
- **Chairperson:** Jamie Cone, BD
- **Members:**
  - Andrew Allshorn, AT 3D-SQUARED LTD
- **Contact:** VicePresident@amug.com

**TECHNICAL COMPETITION**
- **Chairperson:** Bonnie Meyer
- **Members:**
  - Bruce Bradshaw, 6K Additive
  - Jay Dinsmore, Dinsmore, Inc.
  - Youping Gou, Castheon
  - Ed Graham, ProtoCAM
  - Evan Kirby, Materialise
  - Larry Monahan, BD
- **Contact:** TechComp@amug.com

**TRACK LEADER**
- **Chairperson:** Jordan Weston, MSOE
- **Members:**
  - Ted Anderson, GE Additive
  - Giles Gaskell, Hexagon Manufacturing Intelligence
  - Edward Graham, ProtoCAM
  - Paul Hsuan, Christie Digital
  - Colton Rooney, EMI Corporation
  - Nate Schumacher, Midwest Prototyping
  - Tom Sorovetz, FCA US
  - Shannon VanDeren, Layered Mfg. & Consulting
- **Contact:** TrackLeader@amug.com

**VOLUNTEER**
- **Chairperson:** Leslie Frost, GE Additive
- **Members:**
  - Kevin Ayers, Danfoss
  - Gary Rabinovitz, Reebok
  - Renee Bourdeau
- **Contact:** Volunteer@amug.com
2021 AMUG CONFERENCE

DIAMOND SPONSORS

BASF
DMG MORI
DSM
Dyndrite
ESSENTIUM
ExOne
formlabs
GE Additive
LuxCreo
SLM Solutions