Additive Manufacturing Users Group
Educating and Advancing the Uses and Applications of AM Technology
AMUG For Users, By Users

LEARN
In-depth education and training sessions by AM industry experts and OEM representatives.

NETWORK
AMUG network provides attendees access to users with 25+ years experience in the industry. Attendees network with AM-dedicated OEMs and vendors.

TRACKS INCLUDE:
— Aerospace, Space, Defense & Transportation
— Business
— Casting
— Education & Training (incl. software, materials, hands-on training)
— Scanning
— Stereolithography
— Laser Sintering
— Medical & Dental
— Metals

WHO SHOULD ATTEND
Those that have access to, use, or operate AM equipment
> Operators
> Technicians
> Managers
> Engineers
> Designers
> Educators

Register for AMUG 2017 Today!

2017 AMUG CONFERENCE
MARCH 19-23, 2017
HILTON CHICAGO
Chicago, Illinois

REGISTRATION INCLUDES
> Conference (4 days)
> AMUGexpo (2 nights)
> Keynote Presentations
> Innovators Showcase
> General Sessions
> Technical Sessions
> Workshops
> AMUG Awards Banquet
> Technical Competition
> Networking Lunches
> All Meals and Beverages

All Inclusive Registration Fee
$795 prior to 2/10/17
$895 after 2/10/17
$1195 after 3/11/17

Register at www.am-ug.com
GENERAL INFORMATION

REGISTRATION AND BADGE

PICK-UP HOURS

- Sunday, March 19: 12:00pm-5:00pm
- Monday, March 20: 7:00am - 8:00am, 10:30am-12:00pm
- Tuesday, March 21: 7:00am - 8:00am, 10:00am-10:30am

AMUGEXPO HOURS

- AMUGexpo, Student Poster Session, and Dinner
  - Sunday, March 19: 5:00pm-10:00pm
- AMUGexpo
  - Monday, March 20: 10:30am - 12:00pm
- AMUGexpo, Technical Competition, and Dinner
  - Monday, March 20: 6:00pm - 10:00pm

AWARDS BANQUET

Conference attendees have full access to all conference activities including the AMUG Tuesday night Awards Banquet. Conference attendees have the option of bringing a guest to the Awards Banquet for an additional fee, which can be purchased at the registration desk.

- Awards Dinner: Tuesday, March 21
- Board Buses: 5:15pm - 5:30pm
- Buses Leave: 5:30pm promptly

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

BUS AND SHUTTLE LOCATION

AMUG provides transportation daily between the Hilton Chicago and Palmer House Hilton and to and from the Tuesday night Awards Banquet.

TRANSPORTATION LOCATION

- HILTON CHICAGO: 8th Street North and South Lobby Level (next to AMUG registration)
- PALMER HOUSE: All pick-up and drop offs are at Wabash Street entrance in the east side of the Palmer House hotel

DINING

Your AMUG Conference attendee pass includes all meals from Sunday evening thru Thursday evening. See page 9 for location and times.

NAME BADGES

Wear your AMUG badge at all times during the conference, as it is required for entry to all sessions and evening activities. Badges are mandatory for the Tuesday night event. Badges are issued to the registered individual and may not be used by others.

BUSINESS MEETING

The AMUG Business Meeting will take place Wednesday, March 22, at 11:00am. The Business Meeting is for AMUG Conference attendees only. We need 17% of the AMUG attendees present for voting purposes. All AMUG Conference attendees are considered AMUG Members, even first time attendees. Please make sure to attend!

WI-FI

Wi-Fi is available for free throughout the conference areas and in your hotel room at Hilton Chicago and Palmer House Hilton.

SAFETY AND SECURITY

Please do not leave your belongings or conference materials unattended in session rooms. Should you have any issues during your stay, please contact Tom Sorovetz, mobile: +1 (734) 320-6310.

RECYCLING BADGES

AMUG recycles the name badge holders. Prior to leaving the conference, please place your name badge holder in the box provided at the registration desk.
2017 AMUG CONFERENCE EVENTS AND AGENDA AT A GLANCE

SUNDAY
MARCH 19
TOUR
Impossible Objects, LLC
12:00pm - 2:30pm
Tour departs from 8th Street North and South/Lobby Level
Register for tour with: Liz Wolf
email: lwolf@impossible-objects.com
ph: 847-400-9582 ext 5
Registration
12:00pm-5:00pm
If you arrive after registration hours you may still join the AMUGexpo
Sunday night
Location: 8th Street North and South/Lobby Level
New Member Welcome
4:00pm-4:30pm
Registration
12:00pm-5:00pm
Location: 8th Street North and South/Lobby Level
AMUGexpo and Dinner
5:00pm-10:00pm
with Student Poster Session
Location: Salon B, C, D/Lower Level

MONDAY
MARCH 20
Registration
7:00am-8:00am
Location: 8th Street North and South/Lobby Level
Breakfast
7:00am-8:00am
Location: Continental Ballroom A, B, C/Lobby Level
AMUG General Session and Keynote
8:00am-10:15am
Registration
10:15am-12:00pm
Location: 8th Street North and South/Lobby Level
Networking Lunch
12:00pm-1:15pm
Location: International Ballroom/Second Floor
AMUG and Sponsor Sessions
1:30pm-5:00pm
Location: various locations
AMUGexpo and Dinner
5:00pm-10:00pm
Location: Salon B, C, D/Lower Level

TUESDAY
MARCH 21
Registration
7:00am-8:00am
Location: 8th Street North and South/Lobby Level
Breakfast
7:00am-8:00am
Location: Continental Ballroom A, B, C/Lobby Level
AMUG General Session and Keynote
8:00am-10:00am
Break
10:00am-10:30am
Keynote Q&A
10:30am-11:00am
AMUG and Sponsor Sessions
10:30am-12:00pm
Location: various locations
Networking Lunch
12:00pm-1:15pm
Location: International Ballroom/Second Floor
AMUG and Sponsor Sessions
1:30pm-5:00pm
Location: various locations
AMUG Awards Banquet Board Buses
5:15pm-5:30pm
Buses leave promptly at 5:30pm from Hilton Chicago and Palmer House
6:30pm-10:00pm
Location: Secret location
Dress comfortably, bring a jacket and closed toe shoes.

WEDNESDAY
MARCH 22
Breakfast
7:30am-8:30am
Location: Grand Ballroom A, B, C/Lobby Level
AMUG General Session and Innovators Showcase
8:30am-10:00am
Location: International Ballroom/Second Floor
Break
10:00am-10:30am
Keynote Q&A
10:30am-11:00am
AMUG and Sponsor Sessions
10:30am-12:00pm
Location: various locations
Networking Lunch
12:00pm-1:15pm
Location: International Ballroom/Second Floor
AMUG and Sponsor Sessions
1:30pm-5:00pm
Location: various locations
Dinner in Chicago
6:00pm-10:00pm
Location: Grand Ballroom/Second Floor
Experience Chicago in the Grand Ballroom as we take your taste buds on a culinary tour of Chicago neighborhoods.

THURSDAY
MARCH 23
Breakfast
7:30am-8:30am
Location: Grand Ballroom/Second Floor
AMUG Feedback Session and Keynote
8:30am-10:00am
Location: International Ballroom/Second Floor
Break
10:00am-10:30am
Keynote Q&A
10:30am-11:00am
AMUG and Sponsor Sessions
10:30am-12:00pm
Location: various locations
Networking Lunch
12:00pm-1:15pm
Location: Grand Ballroom/Second Floor
AMUG and Sponsor Sessions
1:30pm-5:00pm
Location: various locations
Family Dinner - Closing
6:00pm-10:00pm
Location: Grand Ballroom/Second Floor
AMUG family dinner is a new experience. Join us for a family dinner as we close the 2017 conference.
Thank you to our AMUG members that contributed family recipes.

FRIDAY
MARCH 24
UL Certification Course
8:00am-12:00pm
Location: Williford A, B, C/Third Floor
For more information and registration, visit: www.am-ug.com

SHUTTLE SCHEDULE
AMUG Shuttle will be offered daily between the Hilton Chicago and Palmer House Hilton
SUNDAY, MARCH 19
12:00pm - 12:00am
MONDAY, MARCH 20 - THURSDAY MARCH 23
6:00AM-10:00AM
4:00PM-12:00AM
*Shuttle will not run after 5:30pm on Tuesday, March 21 due to Awards Dinner
Monday, March 20, 2017

8:00am-8:30am  AMUG OPENING ADDRESS  STEVE DEAK, AMUG President
International Ballroom North & South/Second Floor

8:30am-9:30am  KEYNOTE ADDRESS  TODD GRIMM, T.A. Grimm & Associates
Discovery: Technologies, Opportunities and Directions
International Ballroom North & South/Second Floor

9:30am-10:00am  INSIGHTS AND HIGHLIGHTS AT AMUG  LESLIE LANGNAU, Design World WTWH Media and JAMES WOODCOCK, THE TCT Group
Leslie and James will provide a quick look at the insights and highlights of the Diamond sponsors at AMUG.
International Ballroom North & South/Second Floor

10:00am-10:15am  KEYNOTE ADDRESS  JASON LOPES, LEGACY EFFECTS: A Kyrodyne With a Twist: Virtual Tour of Legacy Effects. Jason will take us on virtual tour of Legacy Effects and their use of additive manufacturing for special effects. He will continue with video shorts on the following days and wrap up on Wednesday with a Q & A session.
International Ballroom North & South/Second Floor

10:15am-10:30am  BREAK
Salon B, C, D/Lower Level

10:30am-12:00pm  REGISTRATION AND BADGE PICK-UP
10:15am-12:00pm  BREAK
Salon B, C, D/Lower Level

12:00pm-1:15pm  NETWORKING LUNCH
Salon B, C, D/Lower Level

1:30pm-2:00pm  AEROSPACE/DEFENSE
Metal Additive Manufacturing - FAA Status
Robert Grant
Federal Aviation Administration (FAA)

SCANNING/3D PRINTING
Metal Additive Manufacturing | FAA Status
Robert Grant
Federal Aviation Administration (FAA)

WORKSHOP:  Hands-On Scanning Demos from:
- Araya, Cresafim
- GoMeasure3D
- Wenzel America (1 hr)

METALS:
The Battle Between Laser and Electron Beam Powder Bed Fusion Platforms
Scott Kraemer
PT Engineering Plastics

EDUCATION & TRAINING
3D Printing Design Variables: Managing from Materials to Testing
Mike Uozu & 3Degrees (1 hr)

US Patents and Trademarks
Dr. Christal Sheppard
United States Patent and Trademark Office

BUSINESS:
Leveraging 3D Printing: The Future is Now for Dentistry
Dr. Perry E. Jones
Virginia Commonwealth University School of Dentistry

MEDICAL & DENTAL:
Polyamide 11: The High-Performance Material of Choice for Laser Sintering Production Parts
Andrew Scott

MATERIALS:
Polyamide 11: The High-Performance Material of Choice for Laser Sintering Production Parts
Andrew Scott

ADDITIVE MANUFACTURING USERS GROUP FOR USERS, BY USERS
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Presentation Title</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>6:00pm - 10:00pm</td>
<td>Lunch -- International Ballroom No &amp; So/Second Floor</td>
<td>AMUGexpo and Technical Competition/Lower Level</td>
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<tr>
<td>12:00pm - 1:15pm</td>
<td>Room: 4C (4th Floor)</td>
<td>Demo Suite Open</td>
<td>3D Systems</td>
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<td>2:30pm-3:00pm</td>
<td>Room: D3 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>BASF</td>
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<td>3:30pm-4:00pm</td>
<td>Room: D4 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>ExOne</td>
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<td>4:00pm-5:00pm</td>
<td>Room: D2 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>EOS</td>
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<tr>
<td>5:00pm-6:00pm</td>
<td>Room: D1 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>Renishaw</td>
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<td>5:00pm-6:00pm</td>
<td>Room: D5 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>SLM Solutions</td>
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<tr>
<td>6:00pm-7:00pm</td>
<td>Room: D6 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>Stratasys</td>
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<tr>
<td>7:00pm-8:00pm</td>
<td>Room: D7 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>Divergent 3D</td>
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<td>8:00pm-9:00pm</td>
<td>Room: D8 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>GE Additive</td>
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<td>9:00pm-10:00pm</td>
<td>Room: D9 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>GE Transportation</td>
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<td>10:00pm-11:00pm</td>
<td>Room: D10 (Lower Level)</td>
<td>Demo Suite Open</td>
<td>GE Additive</td>
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**Monday, March 20, 2017**

**DIAMOND SESSIONS**

**ADDITIVE MANUFACTURING USERS GROUP FOR USERS, BY USERS**
# ADDITIVE MANUFACTURING USERS GROUP FOR USERS, BY USERS

**Tuesday, March 21, 2017**
please consult the AMUG 2017 mobile app for abstracts, and session/speaker updates

## Keynote Address
9:00am-10:00am
Leveraging Innovative Incubator to ‘Think Big...Start Small...Act Fast’
Stacey Delvecchio-Caterpillar

## Keynote Address Session (10:30am-11:00am)

<table>
<thead>
<tr>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>Platinum</td>
<td>Laser Utilizing 3D Printing to Improve Traditional Manufacturing Processes</td>
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<tr>
<td>Platinum</td>
<td>Platinum Xjet presents: NanoParticle Jetting technology— Redefining Metal AM</td>
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<tr>
<td>Platinum</td>
<td>Platinum Union Tech A Fresh Design Dimension in 3L Equipment</td>
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</tbody>
</table>

## AMUG General Session (8:00am-9:00am)
Platinum Concept Laser How to Print on Large Format Powder Bed Metal AM Machines
Jonathan Jones Volunteer Aerospace

<table>
<thead>
<tr>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>Continental A (Lobby Level)</td>
<td>How to Print on Large Format Powder Bed Metal AM Machines</td>
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<tr>
<td>Continental B (Lobby Level)</td>
<td>Platinum Xjet presents: NanoParticle Jetting technology— Redefining Metal AM</td>
</tr>
<tr>
<td>Continental C (Lobby Level)</td>
<td>Platinum Union Tech A Fresh Design Dimension in 3L Equipment</td>
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## AMUG General Session (11:30am-12:00pm)

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<tr>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>Diamond</td>
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## AMUG General Session (1:30pm-2:30pm)

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<th>Session</th>
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<td>Platinum</td>
<td>Platinum Union Tech A Fresh Design Dimension in 3L Equipment</td>
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## AMUG Awards Banquet (6:00pm-10:00pm)

- **AMUG Awards Banquet**
  - Must wear your AMUG Badge to board the bus. We suggest you wear closed-toe shoes and comfortable clothing.
  - **Location:** Palmer House 8th Street North and South Lobby Level
  - **Bus Location:** Palmer House 8th Street entrance in the east side of the Palmer House hotel

## All Sessions Close

<table>
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<th>Time</th>
<th>Description</th>
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<tbody>
<tr>
<td>5:15pm-5:30pm</td>
<td>Buses leave promptly at 5:30pm</td>
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<tr>
<td>6:00pm-10:00pm</td>
<td>AMUG Awards Banquet</td>
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</table>
## AMUG Awards Banquet

**Location:** A surprise - must wear AMUG Badge
**Bus Leaves:** Leave at 5:15-5:30

**Breakfast -- Continental A, B, C/Lobby Level**
12:00pm-1:15pm
**Registration -- 8th Street North and South/Lobby Level**
10:15am - 12:00pm

**Networking Lunch**
12:00pm-1:15pm

**Bus Location:**
- **Palmer House:** Wabash Street entrance in the east side of the Palmer House hotel
- **Hilton Chicago:** 8th Street North and South Lobby Level (next to AMUG registration)

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### Bus Location

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**Conference Key**
- Customer Only Session
- Pre-Registration Required
- Hands-On Session

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**Tuesday, March 21, 2017**

**DIAMOND SESSIONS**

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**AMUG Awards Banquet** Must wear your AMUG Badge to board the bus. We suggest you wear closed-toe shoes and comfortable clothing.
**Buses Location:** Hilton Chicago, 8th Street North and South Lobby Level (next to AMUG registration)
**Bus Location:** Palmer House, Wabash Street entrance in the east side of the Palmer House hotel

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**All Rooms Closed**

See AMUG Agenda for Diamond Sessions

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**ALL ROOMS CLOSED**

See AMUG Agenda for Diamond Sessions

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**Buses Leave Promptly at 5:30pm**

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**AMUG Awards Banquet** Must wear your AMUG Badge to board the bus. We suggest you wear closed-toe shoes and comfortable clothing.
**Buses Location:** Hilton Chicago, 8th Street North and South Lobby Level (next to AMUG registration)
**Bus Location:** Palmer House, Wabash Street entrance in the east side of the Palmer House hotel

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**All Sessions Close**

See AMUG Agenda for Diamond Sessions
Wednesday, March 22, 2017
please consult the AMUG 2017 mobile app for abstracts, and session/speaker updates

8:30am-9:00am  GLOBAL INSIGHTS ON AM  GRAHAM TROMANS and STEFAN RITT
ADDITIVE MANUFACTURING USERS GROUP FOR USERS, BY USERS
International Ballroom North & South/Second Floor

9:00am-10:00am  INNOVATORS SHOWCASE WITH CARL DECKARD, INVENTOR OF SELECTIVE LASER SINTERING
International Ballroom North & South/Second Floor

10:00am-10:30am  BREAK
Continent A & B, C/Lobby Level

10:30am-11:00am  KEYNOTE Q&A: JASON LOPES Legacy Effects
Continent A & B, C/Lobby Level

11:00am-12:00pm  AMUG BUSINESS MEETING
Continent A & B, C/Lobby Level

12:00pm-1:15pm  NETWORKING LUNCH
International Ballroom North & South/Second Floor
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Thursday, March 23, 2017
please consult the AMUG 2017 mobile app for abstracts, and session/speaker updates

8:30am-9:00am AMUG FEEDBACK SESSION
International Ballroom North & South/Second Floor

9:00am-10:00am KEYNOTE ADDRESS: DR. PETER LIACOURAS, PH. D. Walter Reed National Military Medical Center 3D Printing in Military Medicine: Transforming the Care of Our Servicemembers
International Ballroom North & South/Second Floor

10:00am-10:30am BREAK
Grand Ballroom/Second Floor

10:30am-11:00am AEROSPACE/DEFENSE Aerospace Additive Manufacturing in the DOD Supply Chain, Challenges & Opportunities Douglas Greenwood, PE MIL-IITI PdR Ped Neatness Center East Kyle Nolck, PE DLA

EDUCATION & TRAINING Blunting the Learning Curve: ASTM Standards Update and Discussion Carl DeWitt, MET L-FLX

METALS Introduction to Design for Metal AM Sponser Wright /RPI

WEBEX Sessions:

Platinum Xact XJet presents: NanoParticle Jetting Technology: Redefining Metal AM Dear Donato, Xjet

Platinum 3D Platform Fused Filament Masters for Castings and Molds Mark Hruban 3D Platform

Platinum Formlabs How 3D Printing creates opportunities for Healthcare David Lukatis Formlabs

EDUCATION & TRAINING Workshop: How Simulation Helps you Build Metal Parts Successfully Brett Slusker JDAM Tim Gannet University of Louisville (go mini)

MATERIALS Panel Discussion: Material Overview and Panel Discussion with OEMS MODERATOR: Richard Smerek

11:00am-11:30am AEROSPACE/DEFENSE Beyond Earth - Using Additive Manufacturing to Take us to New Worlds Mike Curtis-Rouse Airforce Research Laboratory

EDUCATION & TRAINING Post Processing – The Untold Story Regarding Industrial Resin Based 3D Printing Edwaed T. Grudam ProtocAM (9 hr)

METALS How to Develop a Pedigreed Material Property and Process Parameter Dataset Annie Wang Senvol

WEBEX Sessions:

Platinum CATI Leveraging 3D Technology in the Product Development Lifecycle - Part 3: 3D Printing Injecion Molds Derek Ellis, Bob Benedita CATI

Platinum Postworks New Plastic Laser Sintering Materials for Innovative Applications Luca Vener (Postwork)

Platinum Union Tech Innovating Business Model Concepts for Additive Manufacturing Grant Kast richter

EDUCATION & TRAINING What Will be the Impact of Fast Build Prototolyper Printers on Secondary Processing (and vice versa)? Sean Wise Reprapform

12:00pm-12:15pm Networking Lunch Location: Grand Ballroom/Second Floor

12:15pm-12:45pm AEROSPACE/DEFENSE Production with Metal AM: Learning the Hard Way Richard J. Marino Additive Manufacturing

EDUCATION & TRAINING Panel Discussion Post Processing (AM Metals and Nonmetals)

MODERATOR: Jordan Weston Milwaukee School of Engineering

PANEL: Steve Aluli (5i Air Finishing), Laurent Cataldo Micro Laser Finishing Andrew Allbrook (AT 3-D SQUARE), Andrew Graves (Gomel), Shannon Morgan (GoEngineer), Daniel Hutchinson (PostProcess Technologies)

METALS DED of Inconel 718 and the Impact of Powder Quality Aaron Luland Build Machines, Inc

WEBEX Sessions:

Platinum Concept Laser Quality Assurance: Is Data From In-situ Monitoring Similar to a CT Scan? Paolo Eraldi CATI

Platinum Autodesk Machine, Material, and Software Strategies for Additive Manufacturing Duane Scott Autodesk

Platinum BigRep Room Temperature Printing for Industrial Parts Daniel Busing NOWatschBigRep GmbH

EDUCATION & TRAINING What Will Be the Impact of Fast Build Prototolyper Printers on Secondary Processing (and vice versa)? Sean Wise Reprapform

12:45pm-1:15pm AEROSPACE/DEFENSE Predictive Simulation to Accelerate the Adoption of Additive Manufacturing in Aerospace Applications Chris Rodenborn JDAM

EDUCATION & TRAINING Panel Discussion Post Processing Panel (AM Metals and Nonmetals)

PANEL: Steve Aluli (5i Air Finishing), Laurent Cataldo Micro Laser Finishing Andrew Allbrook (AT 3-D SQUARE), Andrew Graves (Gomel), Shannon Morgan (GoEngineer), Daniel Hutchinson (PostProcess Technologies)

METALS Michelin Success: Extended Performances of Tires Thanks to Metal AM Maro Averianov Michelin Additive Solutions AddiSolv

WEBEX Sessions:

Platinum Arcam Important Considerations for Selecting Powder for Additive Manufacturing Fredric Monson AFTEC

Platinum Autodesk Autoform Your AM Workflow and Save Data Preparation Time Dave Pham Moleygine

Platinum EnvisionTEC How to Predict the Future of Bioprinting Materials Northwestern University Shub Lab

EDUCATION & TRAINING What Will be the Impact of Fast Build Prototolyper Printers on Secondary Processing (and vice versa)? Sean Wise Reprapform

1:15pm-1:45pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory

EDUCATION & TRAINING Panel Discussion The Changing Landscape of Additive Manufacturing

PANEL DISCUSSION: Women in AM and the Changing Landscape

PANELIST: Melissa Lust Gristmont I, J. Laura Beaulac

METALS Optimizing, Testing and Fabricating a Low Pressure Turbine BRacket by Additive Manufacturing Doug Hedges Senvol

WEBEX Sessions:

Platinum 3D Printing: The Impact of Post-Processing on Performance Patrick Mears patrol’s

Platinum PostProcess Tech Automation of Post-Processing Through Energy Optimization Daniel Hutchinson Postprocess Technologies

Platinum Ultimaker Desktop 3D Printing: Hills the Enterprise for Prototyping, Tooling, Production John Duchtenhous JADD, Inc John Kwakol Ultimaker

EDUCATION & TRAINING What Will be the Impact of Fast Build Prototolyper Printers on Secondary Processing (and vice versa)? Sean Wise Reprapform


PANEL: Michael Bondenburg, J. CD, J. Luke Beaulac

METALS Advancements in Metal Additive Manufacturing in Germany – Costs and Lead Times Albert Kasse F&T AG

WEBEX Sessions:

Materials Block Copolymers for 3D Printing William Wing Schmidt

EDUCATION & TRAINING Panel Discussion The Opportunity with Direct Digital Manufacturing R. Dept Stumpf Fatform

1:45pm-2:15pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory

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EDUCATION & TRAINING The Opportunity with Direct Digital Manufacturing R. Dept Stumpf Fatform

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WEBEX Sessions:

Materials Big, Fast Low Cost Models Using PMMA Aaron Howard (Voxeljet

EDUCATION & TRAINING Panel Discussion The Direct Casting of Monumental Sculpture Bob Apps Form3 Foundry

CASTING Simulation Driven Castings: Bringing Manufacturing Feasibility Early in the Design Cycle Brian Rurijg Sigmorphon sandwiching

3:15pm-3:45pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory


PANEL: Michael Bondenburg, J. CD, J. Luke Beaulac

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3:45pm-4:15pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory


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4:15pm-4:45pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory


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4:45pm-5:15pm AEROSPACE/DEFENSE Additive Manufacturing R&D at AFRL Jennifer Chase Fielding, PhD Air Force Research Laboratory


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