2019 AMUG CONFERENCE

Hilton Chicago Chicago, Illinois, USA March 31 - April 4, 2019

PRELIMINARY AGENDA February 25, 2019

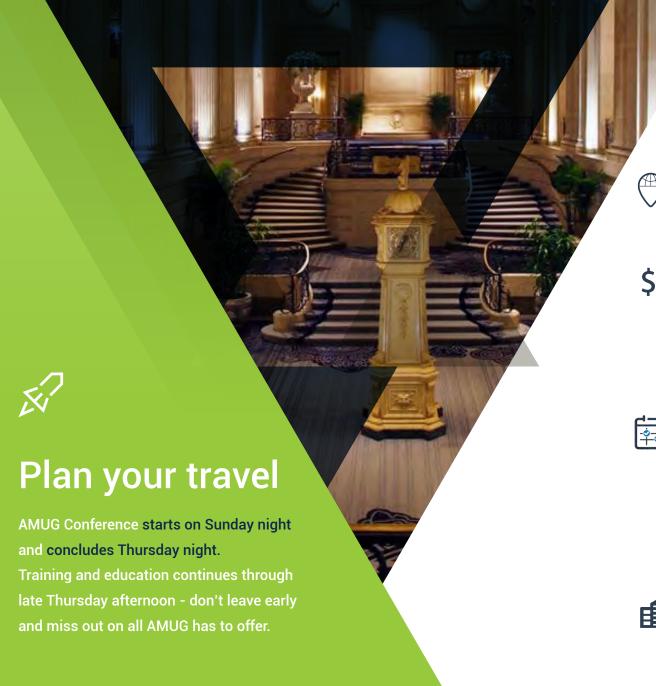








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Location

Hilton Chicago 720 South Michigan Avenue Chicago, Illinois USA 60605

Conference Fee

Attendee Fee

Attendee registration includes:

- Conference (4 days)
- AMUGexpo (2 nights)
- Keynote presentations
- General sessions
- Technical sessions

\$995 through 3/2/19 \$1495 after 3/2/19

- Workshops
- AMUG Off-site Dinner
- Technical Competition
- Networking lunches
- All meals and beverages



Conference

March 31-April 4, 2019

4 days of presentations, networking sessions, and evening activities. Conference opens Sunday night with the AMUGexpo.

AMUGexpo

March 31-April 1, 2019

Sunday and Monday only

Diamond and Platinum sponsor booths open all week, all others open Sunday and Monday only.



Hotel Rates

\$149.00USD at Hilton Chicago

(excluding tax and hotel charges)

Hotel registration is separate from AMUG registration http://www.amug.com/conference -hotels/

2019 AMUG CONFERENCE

PRFI IMINARY AGENDA AT-A-GI ANCE

SUNDAY, MARCH 31

PRE-CONFERENCE ACTIVITY

UL/SMF

Fundamentals of Additive Manufacturing Certification

8:00am-4:00pm Fundamentals of Additive Manufacturing Certification is for any business professional, engineer, or designer with a desire to learn about 3D printing and enter the Additive

Manufacturing industry.

More information on page 11

OFF SITE TOUR

Renishaw Inc, West Dundee Location

Buses depart at 10:30am Return to Hotel by 2:45pm Take a tour and meet the team at West Dundee location of Renishaw.

More information on page 11

CONFERENCE ACTIVITY BEGINS

REGISTRATION OPEN

10:00AM-8:00PM

SPEAKER CENTER AND APP DESK OPEN

10:00AM-8:00PM

CONFERENCE PROGRAM

New Member Welcome 4:00nm-4:30nm

First-time conference attendees welcome and introduction to the AMUG way.

AMUGexpo, Training Lab and Dinner

5:00pm - 10:00pm

Join us Sunday night for the AMUGexpo Opening. Enjoy a buffet dinner and beverages as you tour the AMUGexpo and Training Lab.

MONDAY, APRIL 1

REGISTRATION OPEN

7:00am-8:00pm

SPEAKER CENTER AND APP DESK OPEN

7:00am-4:30nm

BREAKFAST

7:00am-8:00am

CONFERENCE PROGRAM

AMUG Opening Address - Insights and Highlights

8:00am-8:30am

Building the Future of AM

8:30am-9:00am 2019 AMUG Scholarship recipients presentations from Guy Bourdeau and Randy Stevens Scholarship recipients

Keynote:

"Additive Manufacturing: Making Your Own Reality TODD GRIMM, T.A. Grimm & Associates 9:00am-10:00am

Break

10:00am-10:30am

AMUGexpo and Training Lab

10:00am - 12:00pm

All exhibits and Training Lab open

Networking Lunch

12:00pm-1:15pm

Sponsors and Exhibitors welcome

AMUG. Sponsor Sessions and Training Lab Sessions

1:30pm - 2:30pm

Break

2:30pm-3:00pm

AMUG, Sponsor Sessions and Training Lab Sessions

2:30pm - 5:30pm

AMUGexpo, Training Lab and Dinner

EXPO OPEN with Technical Competition

6:00pm - 10:00pm All demo spaces and exhibits open

TUESDAY, APRIL 2

REGISTRATION OPEN

7:00am-5:00pm

SPEAKER CENTER AND APP DESK OPEN

7:00am-4:00nm

BREAKFAST

7:00am-8:00am

CONFERENCE PROGRAM

International Report 8:00am-8:25am

DRIVING INNOVATION: DINO

8:30am-9:00am Distinguished INnovator Operator (DINO)

Presentation Keynote:

"Winning the Manufacturing Race" BRAD KESELOWSKI, Keselowski Advanced Manufacturing 9:00am-10:00am

Break

10:00am-10:30am

AMUG. Sponsor Sessions and Training Lab Sessions

10:30pm - 12:00pm

Networking Lunch

12:00pm-1:15pm

AMUG, Sponsor Sessions and Training Lab Sessions

1:30pm - 4:00pm

Board Buses for Off-Site Dinner

5:00pm - 5:15pm Buses leave promptly at 5:15pm Everyone must wear their AMUG badge or show their purchased ticket to board the bus. Location: Chicago Hilton, East 8th Street (next to AMUG Registration Desk)

AMUG Off-Site Dinner

5:00pm - 10:00pm

An event for all full-conference pass attendees and sponsors.

Transportation provided. Additional dinner tickets are available for purchase.

WEDNESDAY, APRIL 3

REGISTRATION OPEN

7:00am-6:00pm

SPEAKER CENTER AND APP DESK OPEN

7:00am-4:00nm

BREAKFAST

7:30am-8:30am

CONFERENCE PROGRAM DRIVING INNOVATION:

2018 Technical Competition Winners

8:30am-9:00am

The 2018 AMUG Technical Competition Winners will provide a presentation on their winning applications

DRIVING INNOVATION:

Innovators Showcase

Professor Gideon Levy 9:00am-10:00am

Break

10:00am-10:30am

DRIVING INNOVATION:

2019 Technical Competition Winners Announced

10:30am-11:00am

AMUG Business Meeting

11:00am-12:00pm

Open to all full-conference pass attendees. New Board elections.

Networking Lunch

12:00pm-1:15pm

AMUG, Sponsor Sessions and Training Lab Sessions

1:30pm - 2:30pm

Break

2:30pm-3:00pm

AMUG, Sponsor Sessions and Training Lab Sessions

3:00pm - 5:30pm

Dinner - Taste of Chicago

6:00pm-10:00pm

An event for all full conference pass attendees and sponsors. Experience the local flavors as we take your taste buds on a culinary tour of Chicago. Enjoy a night of great food, games, and more.

TBA: Special sponsors events during dinner. More information soon!

THURSDAY, APRIL 4

REGISTRATION OPEN

7:00am-11:00am

SPEAKER CENTER AND APP DESK OPEN

7:00am-2:00pm

BREAKFAST

7:30am-8:30am

CONFERENCE PROGRAM

AMUG Closing and Feedback

8:30am-9:00am

Keynote:

"The Art and Science behind LAIKA's Oscar™ Award Winning 3D Printing Process" BRIAN MCLEAN, LAIKA 9:00am-10:00am

Break

10:00am-10:30am

AMUG, Sponsor Sessions and Training Lab Sessions

10:30pm - 12:00pm

Networking Lunch

12:00pm-1:15pm

AMUG. Sponsor Sessions and Training Lab

1:30pm - 2:30pm

Break

2:30pm-3:00pm

AMUG, Sponsor Sessions and Training Lab

3:00pm - 5:30pm

Family Dinner & Closing

6:00pm-10:00pm

An event for all full-conference pass attendees and sponsors.

AMUG Family Dinner is the official closing event at the AMUG Conference. Attendees and sponsors are encouraged to submit their family or favorite recipes for consideration. Submit your family recipe to eventmanager@ amug.com by February 28.

Along with a family dinner there will be music and activities for everyone to participate.

CONFERENCE CONCLUDES

5

WHO ARE WE

WHAT AMUG MEANS



AMUG Mission

Additive Manufacturing Users Group (AMUG) educates and advances the uses and applications of additive manufacturing technologies. The cornerstone of AMUG is the annual Education & Training Conference. AMUG members meet annually to share information, tips and tricks on additive manufacturing processes, applications, materials, ancillary equipment, and industry trends.

Experience

To call the AMUG event a conference is an understatement. It is a unique gathering of AM users, of all levels, that assemble and band together to provide and share valuable insights and experiences to help one another.



Experience

"For users, by users" is both AMUG's philosophy and its guiding principle. Every presentation, workshop, sponsor and exhibitor passes through one simple filter: does it provide value to AM users? That is the crux of "For Users." We then turn to users to provide the content and count on them to make the conference valuable, memorable and unique. That is the "By Users" component.

AMUG creates the sharing environment; users create the experience.







y E. Bourdeau Scholarship Recipient Victoria Sears University of Michigan





2019 Scholarship Recipients

For Additive Manufacturing & 3D Printing Education and Professional Development at the AMUG Conference

In the honor and memory of two long-time and avid supporters of AMUG, two scholarships have been established.

GUY E. BOURDEAU SCHOLARSHIP - FOR STUDENTS

Victoria Sears is pursuing a master's degree in bioengineering at the University of Michigan (UM).

RANDY STEVENS SCHOLARSHIP - FOR TEACHERS/ PROFESSORS

Wenchao Zhou, Ph.D., is an assistant professor in the Department of Engineering at the University of Arkansas (U of A)



The AMUG Technical Competition provides a forum for users of additive manufacturing technologies to display their unique applications as well as their finishing capabilities.

The Advanced Concepts category aims to recognize individuals and their companies for exemplary work with additive manufacturing technologies. Entries in this category will "push the envelope" for a particular technology or a combination of technologies. Unique applications, processes, and/or utilization are desired in this category.

The Advanced Finishing category has been created to recognize the efforts of those whom we often overlook when evaluating a model. The designers and engineers may hatch a concept, but it is often the parts finishers, model makers, painters and others that bring AM parts to life.

Users may submit their entries in the Advanced Concepts category or the Advanced Finishing category. Each category will be open to all additive manufacturing technologies with a winner and runner-up being selected from each.

Apply today at http://www.amug.com/technical-competition/

(left) Advanced Finishing: Praetorian Guard helmet, Andrew Sliwa, Custom Prototypes (right) Advanced Concepts: Old world engineering gets an additive makeover Ed Graham, ProtoCam

AMUG

GLOBAL AM USER GROUP

2018 AMUG CONFERENCE
PERCENTAGE OF ATTENDANCE BY INDUSTRIES



AEROSPACE

Aerospace and Space 12%



AUTOMOTIVE

Automotive 6%



CONSUMER

Consumer Products 5%



EDUCATION

Educational Institutes



GOVERNMENT

Government, Military, and Defense 6%



MEDICAL

.....

Medical and Dental 5%



SUPPLIER

AM Industry Suppliers



SERVICE PROVIDER

Service Provider 8%



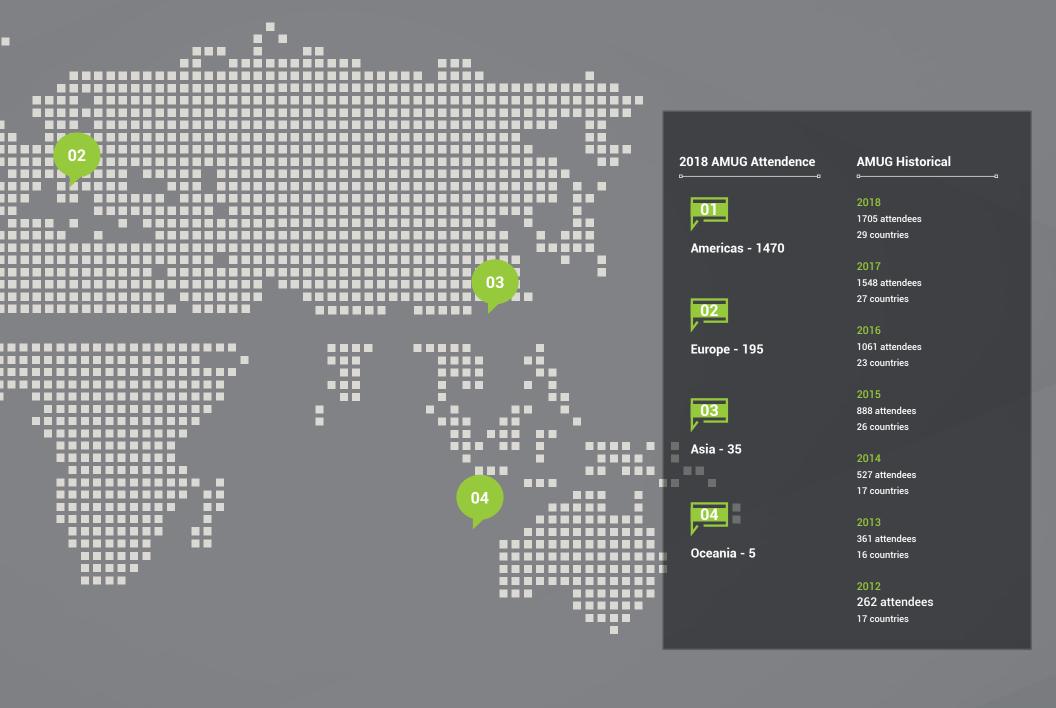
OTHER

Non-specified industry

27%



•••



2019 AMUG Conference

Sponsors and Exhibitors

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Carbon





























TITANIUM SPONSORS



PLATINUM SPONSORS

















































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Admatec Europe Aurora Labs Photocentric Solukon Maschinenbau GmbH Titan Robotics, Ltd.

GOLD SPONSORS

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LPW Technology

MakePartsFast

Markforged Metal AM Magazine Midwest Prototyping Mimaki USA Oerlikon AM Paxis LLC Praxair Surface Technologies Rapid Prototyping Services RAPID + TCT RePliForm **RICOH USA** RP America Sciaky, Inc. Siemens PLM Software, Inc. SmarTech Analysis

The TCT Group

SILVER SPONSORS

Association for Manufacturing Technology (AMT) Layered Manufacturing and Consulting Sigma Labs Inc

Kimya by ARMOR Pressure Technology, Inc.

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NEW MEMBER WELCOME

First time attending AMUG? Join us for the New Member Welcome on Sunday, March 31 at 4:00pm in the Grand Ballroom, 2nd floor.

UL AND TOOLING U-SME AT THE FUNDAMENTALS OF ADDITIVE MANUFACTURING CERTIFICATION

8:00am-4:00pm

UL and Tooling U-SME return to AMUG to present the first tier of their Additive Manufacturing (AM) certification program, Fundamentals of Additive Manufacturing on Sunday, March 31. The collaborative program is based upon UL's multi-tiered AM training program and Tooling U-SME's Professional Certification. The Fundamentals of Additive Manufacturing Certification includes the recommended prep course and seated certification exam.

Learn more and register here



Registration for course is separate from AMUG registration and additional costs apply.



Plan your time

and concludes Thursday night.

participate.

AMUG Conference starts on Sunday night

There are events prior to the AMUGexpo on

Sunday night. Plan your travel so you can

PRE-CONFERENCE TOUR AT RENISHAW

Host: Renishaw Inc.

Sunday, March 31

10:30am-2:45pm (you will be back in time for the New member Welcome)

Renishaw will host a tour of their facility in West Dundee. Sign up today, no additional fees apply.

RSVP. Sue Wilm at susan.wilm@renishaw.com

2019 AMUG Conference

AMUGexpo and Training Lab

3D Parts Unlimited	29	Cimquest	5	In'Tech Industries, Inc.	62	RePliForm	77
3D Systems	D16	Colorado Photopolymer Solutions	25	Inert	42	Ricoh Americas Corporation	45
3DCERAM INC	30	Computer Aided Technology (CATI)	P23	iSQUARED AG	36	RIZE INC.	P18
3Degrees	67	Desktop Metal	P16	Kimya by ARMOR	56	RP America	68
3YOURMIND	D7	Dinsmore & Associates, Inc	70	KURARAY	32	RPS - Industrial 3D Printing Systems	28
Additive Industries	D5	DMG MORI	P3	LINK3D	9	Sandvik Additive Manufacturing	P22
AddUp Inc	P5	DSM Additive Manufacturing	D18	Lithoz America, LLC	33	Sciaky, Inc.	75
Admatec Europe BV	46	DyeMansion	55	LPW Carpenter Additive	71	Senvol	35
Air Force Life Cycle Management Center-	P7	Dynamism	11	Markforged	73	Shanghai UnionTechnology Corporation	P14
Advanced Technology & Training Center	7	Dyndrite Corporation	D9	Materialise	P17	Siemens PLM Software	24
Alark Objects Inc.	•	Elementum 3D	4	Matsuura Machinery USA, Inc.	P9	Sigma Labs Inc.	18
Aleph Objects, Inc.	17	EnvisionTEC	P20	MET-L-FLO Inc	40	SLM Solutions NA, Inc.	D19
AlphaSTAR Corporation	16	EOS North America	D1	Metal Powder Industries Federation	52	SmarTech Analysis	41
Altair Engineering, Inc	57	Equispheres	10	MicroTek Finishing, LLC	P12	Solukon Maschinenbau GmbH	54
ANSYS	P11	Essentium, Inc.	D8	Midwest Prototyping, LLC	72	Stereo Lithography Assoc. Sales Co.	. 27
Arconic	13	EWI	6	Mimaki USA	74	Stratasys	D17
Arkema	P8	ExOne	D13	MSC Software	P6	Tekna	P2
ASM International	51	Fabrisonic LLC	20	North Star Imaging	8	Tethon 3D	43
Aurora Labs	61	Farsoon Technologies	D10	Oerlikon	69	TIGER-VAC INC.	34
Authentise	37	Flow Science	19	Paxis LLC	58	Titan Robotics, Ltd.	78
Baker Industries	23	Formalloy	14	Photocentric	53	TRUMPF Inc.	D11
BASF 3D Printing Solutions	D3	Formlabs		Pivot AM Service		Ultimaker	P19
BeAM Machines Inc	P4	GE Additive	D12		2		
Bel Air Finishing Supply	22	GEFERTEC	44	Plural Additive Manufacturing	P13	UTC 3D Innovation	3
BigRep	D6	GKN Additive	P24	PostProcess Technologies	P21	VAC-U-MAX	38
CAD BLU	47			Praxair Surface Technologies	76	VacuCoat Technologies, Inc.	63
Carbon	D2	GPI Prototype & Manufacturing Services	21	Pressure Technology, Inc.	26	Velo3D	P1
ChemCubed	48	GRANUTOOLS	12	Quintus Technologies	31	- Vorti-Siv	39
CIDEAS Inc.	59	Hawk Ridge Systems	1	Ramco Equipment	66	voxeljet America Inc.	64
ODEAO IIIC.	09	_ Hoganas AB	65	Rapid Prototyping Services	60	Wenzel America Ltd	50
		HP Inc	D15	Realize Inc.	49	Xact Metal	P10
12 2019 AMUG Conference PRELIMINA 31st Annual Education & Training Co		DA- SUBJECT TO CHANGE		Renishaw	D14	XJet	P15

Chicago Hilton, Lower Level - AMUGexpo and Training Lab

updated floor plan as of January 30, 2019







Hours Open

Location

Salon A/B/C/D, Lower Level

REGISTRATION and BADGE PICK-UP Speaker Center and Mobile App Desk Open 7:00am - 8:00pm 7:00am - 4:30pm

8th St North Registration, Lobby Level 8th St South Registration, Lobby Level

	d Breakouts open to all Conferen Times subject to change withou							
7:00am-8:00am	BREAKFAST		Grand Ballroom, Normandie and Boulevard, 2nd Floor					
8:00am-8:30am	AMUG OPENING ADDRESS PAUL E INSIGHTS AND HIGHLIGHTS MAR			International Ballroom, 2nd Floor				
8:30am-9:00am	2019 Guy Bourdeau Scholarship W	cholarship Recipients Presentation linner: VICTORIA SEARS, University o Winner: WENCHAO ZHOU, PH.D., Univ				International Ballroom, 2nd Floor		
9:00am-10:00am	KEYNOTE ADDRESS: "Additive Mar	nufacturing: Making Your Own Reality	r" TODD GRIMM, T.A. Grimm & Associa	ates		International Ballroom, 2nd Floor		
10:00am-10:30am	BREAK					Salon A/B/C/D, Lower Level		
10:00am-12:00pm	AMUGEXPO AND SPONSOR DEMO	OPEN				Salon A/B/C/D, Lower Level		
12:00pm-1:15pm	NETWORKING LUNCH					Grand Ballroom, Normandie and Bo	oulevard, 2nd Floor	
			BREAK	OUT SESSIONS BEGIN				
			AMUG PROGRAM			PLATINUM SP	ONSOR PROGRAM	
ROOM	International Ballroom	Continental A and B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room	
Track	Aerospace/Transportation	AM Metal Technologies	AM Technologies (Non-Metal)	Medical	Scanning & Metrology	PLATINUM SESSIONS	PLATINUM SESSIONS	
1:30pm-2:30pm	1.30pm-2.00pm 1,000+ Parts in Space — A User's Perspective Jillian Gorsuch, Dr. Gregory Dudder SSL Additive Center of Excellence 2.00pm-2.30pm Construction of Cube Satellite Used to Dispense Tube Satellites Using Additive Manufacturing Stewart Davis, CRP USA LLC	Streamlining Metal 3D Printing with Simulation Eric Miller, PADT	ROUNDTABLE Post Processing Additive Manufacturing (Non Metals) ROUNDTABLE TEAM: Jim Jennings, Bel Air Finishing John Oney, Elite Additive Luis Folgar, Additive Manufacturing Technologies Philipp Kramer, Dyemansion Daniel Hutchinson, PostProcess Technologies Ana Neves, RAMCO MODERATOR: Andrew Allshorn, At 3D -SQUARED	PANEL Medical Production Challenges From a Software Workflow Perspective PANEL: Leanne Gluck, Autodesk Chris Weber, Siernens Dave Flynn, Materialise MODERATOR: Ed Tackett, University of Louisville	WORKSHOP Introduction to Dimensional Measurement Giles Gaskell, Wenzel America Paul Hojan, Christie Digital	PLATINUM SESSION: ENVISIONTEC How Robotic 3D Printing is Transforming Metal Casting Howard Rhett Viridis3D	PLATINUM SESSION: DESKTOP METAL 1:30pm-2:00pm Advances in Technology and Materials in Metal 3D Printing Jonah Myerberg Desktop Metal 2:00pm-2:30pm Key Use Cases for Metal 3D Printing Ilya Mirman Desktop Metal	
2:30pm-3:00pm	BREAK					Grand Hall, Normandie and Boulevard, 2nd Floor		
3:00pm-4:00pm	Application of AM on the Space Launch System RS-25 Engine Andy Hardin, NASA	In Situ Sensing and Qualification Using Thermal Tomography John Middendorf Universal Technology Corp Jared Speltz University of Dayton Research Institute	Hot Lithography – New Possibilities in Stereolithography 3D-printing Markus Pfaffinger Cubicure GmbH	PANEL Additive Manufacturing Process Validation Panel Discussion PANEL: Jeph Ruppert, 3D Systems Laura Gilmour, EOS Maria Ostrom, GE Additive James Coburn, FDA MODERATOR: Ryan Kircher, Kircher Consulting	WORKSHOP Laser Scanning Hands-on Session Giles Gaskell, Wenzel America Bob Renella, CATI Derek Ellis, Fisher Unitech	PLATINUM SESSION: MATERIALISE How to Use Simulation to Reduce Your Costs in Metal AM Behnam Esfandiar Materialise	PLATINUM SESSION: SHANGHAI UNION TECH The Fit of Stereolithography in the AM Technology Universe Jun Reitz Shanghai Union Technology Corporation	
4:00pm-4:30pm	transition				4:00pm-4:30pm Additive Manufacturing Analysis			
4:30pm-5:30pm	Qualification of an AM Missile Defense Component with ICMSE Simulation Alicia Leslie, Raytheon Cody Godines, ALPHASTAR CORP	ROUNDTABLE Post Process Additive Manufacturing (Metals) ROUNDTABLETEAM Agustin Diaz, REM Surface Engineering Tim Hall, Faraday Technology Jason Marshall, NGC MODERATOR: Adam Brooks, EWI	ROUNDTABLE/PANEL Machine Service & Maintenance Panel: Mike Litrell, CIDEAS John Schaefer, DSM Additive Manufacturing Pat Warner, Renault F1 Team Rory Jackson, RAMP Inc Dennis Fogle, PIVOTAM Moderator: Andrew Allshorn, At 3D -SQUARED	ROUNDTABLE/PANEL Hospital-Based Additive Manufacturing Panel: Pete Liacouras, Walter Reed National Military Medical Center Robert Pugliese, PharmD, Thornas Jefferson University Health Beth Ripley, MD, PhD, VA Puget Sound Healthcare System Brian Farrell, DDS, MD, Carolinas Center for Oral & Facial Surgery Moderator. Andy Christensen, University Of Ottawa	Non-Contact Scanning Lu McCarty, Volume Graphics 4:30pm-5:00pm Applying Computed Tomography in the Development and Qualification of AM Processes Brett Muelhauser, North Star Imaging 5:00pm-5:30pm PANEL AM 3D Dimensional Validation Panel Discussion PANEL: Bob Renella, CATI Brett Muelhauser, North Star Imaging Derek Ellis, Fisher Unitech Lu McCarty, Volume Graphics	PLATINUM SESSION: POSTPROCESS TECHNOLOGIES How to Digitize your Additive Post-Printing Operation and Transform your Workflow Jeff Mize PostProcess Technologies	PLATINUM SESSION: RIZE3D PANELL Rizium, Carbon Fiber and Color. Transforming Additive Manufacturing in Meaningful Ways PANEL: Cody Cochran, Azoth MODERATOR: Kishore Boyalakuntla, Rize3D	
5:30pm-6:00pm				ALL SESSIONS CLOSED	Moderator: Giles Gaskell, WENZEL AMERICA			
5.50pm-0.00pm				ALL GLOSIONS GLOSED				

6:00pm-10:00pm

AMUGexpo, Training Lab and Technical Competition | Dinner and Networking

KEYNOTE 9:00AM-10:00AM "Additive Manufacturing: Making Your Own Reality" Todd Grimm T.A. Grimm & Associates



12:00pm-1:15pm	NETWORKING LUNCH					Grand Ballroom, Normandie and Bo	oulevard, 2nd Floor	
			BREAK	OUT SESSIONS BEGIN				
		DIAMOND SPONSOR PROGRAM		TRAINING LAB DIAMOND SPONSOR TRAINING SESSIONS				
ROOM	Waldorf	Williford A/B	Williford C	Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4	
1:30pm-2:30pm	DIAMOND SESSION: STRATASYS PANEL High Performance 3D Printing in Racing, Transportation & Aerospace PANEL: Andrew Miller, Team Penske William Carver, Sierra Nevada Corporation John Bultman, University of Dayton Research Institute MODERATOR: Kunal Mehta, Stratasys	DIAMOND SESSION: DSM Sustainable Manufacturing: No Longer a Dream with 3D Printing Hugo Da Silva DSM	DIAMOND SESSION: SLM SOLUTIONS 1:30pm-2:00pm Establishing Additive Capabilities at MOOG / Bill Massaro MOOG 2:00pm-2:30pm Effects of HIP on Density and Tensile Properties of SLM Inconel 718 Ken Sabo Concurrent Technologies Corporation	DIAMOND TRAINING: TRUMPF TruPrint 1000: How to Use Monitoring to Verify Part Quality and Machine Status Frederik Schaal TRUMPF; Inc.	DIAMOND TRAINING: EOS NORTH AMERICA AM Innovation Challenge – Application Sprint Fabian Alefeld, EOS North America	DIAMOND TRAINING: FORMLABS Additive Manufacturing Design and Optimization for Manufacturability Andrew Edman, FORMLABS	DIAMOND TRAINING: BASF Benchmarking of Polyamide 6 Powder Materials for Industrial Applications: Laser Sintering Versus Injection Moulding Claus Gabriel, Stefan Josupeit BASF	
2:30pm-3:00pm	BREAK		1	,	1	Grand Hall, Normandie and Boulevard, 2nd Floor		
3:00pm-4:00pm	DIAMOND SESSION: GE ADDITIVE AddWorks™ Customer Stories Chris Schuppe GE Additive	DIAMOND SESSION: EXONE EXOne Welcome Bob Wood EXOne The Digital Factory. Democratization of Manufacturing Through Hybrid Technologies and the Effective Use of Data Amy Elliott Oak Ridge National Labs	DIAMOND SESSION: RENISHAW Meticulous Machines for a New AM World Marc Saunders RENISHAW PLC	DIAMOND TRAINING: FARSOON Tooling Application Demonstration with Next Chapter Manufacturing Philip Conner Farsoon Technologies Jason Murphy Next Chapter Manufacturing	DIAMOND TRAINING: ADDITIVE INDUSTRIES Controlling Powder Evolution in Laser Powder Bed Fusion Shane Collins, Navjeevan Sandhu ADDITIVE INDUSTRIES	DIAMOND TRAINING: BIGREP BigRep PRO Demonstration Moshe Akmin, Frank Marangell BIGREP	DIAMOND TRAINING: 3YOURMIND How Software will make Engineers Love Ordering Parts Alexandre Donnadieu 3YOURMIND	
4:00pm-4:30pm	transition							
4:30pm-5:30pm	DIAMOND SESSION: 3D SYSTEMS Additive Manufacturing, The Next Chapter; subtitle: Q&A with Chuck Hull, the Father of 3D Printing Vyomesh Joshi Chuck Hull 3D Systems	DIAMOND SESSION: HP Scaling into Mass Production with Metal 3D Printing – Technology Differentiation & Applications Tim Weber HP Inc.	DIAMOND SESSION: CARBON Carbon and Riddell: Bringing Innovation to Head Protection Erica Berg Carbon		Training A	Area Closed		
5:30pm-6:00pm				ALL SESSIONS CLOSED				
6:00pm-10:00pm	AMUGexpo, Training Lab and Tech	nical Competition Dinner and Net	working			Salon A/B/C/D, Lower Level		

REGISTRATION - SPEAKER CENTER - MOBILE APP DESK

Hours Open Location

REGISTRATION and BADGE PICK-UP 7:00am - 5:00pm 8th St North Registration, Lobby Level

	nd Breakouts open to all Confere d Times subject to change witho			EGISTRATION and BADGE PICK-U peaker Center and Mobile App De	/-		
7:00am-8:00am	BREAKFAST		7			Grand Ballroom, Normandie and Bo	oulevard, 2nd Floor
8:00am-8:25am	AMUG INTERNATIONAL REPORT	STEFAN RITT, AMUG Ambassador	International Ballroom, 2nd Floor				
8:30am-9:00am	DRIVING INNOVATION Distinguish	ned INnovator Operator (DINO) Preser	tation			International Ballroom, 2nd Floor	
9:00am-10:00am		Manufacturing Race" BRAD KESELO		acturing		International Ballroom, 2nd Floor	
10:00am-10:30am	BREAK					Grand Ballroom, Normandie and Bo	oulevard, 2nd Floor
			RRFAK	OUT SESSIONS BEGIN			
				PLATINUM SPO	INSOR PROGRAM		
ROOM	International Ballroom	Continental A and B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room
Track	Aerospace/Transportation	AM Metal Technologies	Education & Training	Medical	Casting	PLATINUM SESSIONS	PLATINUM SESSIONS
10:30am-11:00am 11:00am-11:30am	10:30am-11:30am PANEL Operationalizing Additive Manufacturing at Point of Need - Warfighter Applications and Experiences Panel: CAPT Jason Bridges, US Navy	Emerging Technologies Supersonic Cold Spray Additive Manufacturing - Rapid Deposition of Copper/Aluminum Kent Herrick, Kinetic Research Corporation	Unlearn & Rethink: Maximizing Additive Value in Early Product Design Katie Tucker, WERK.	PANEL: Medical Applications Research Panel PANEL: Derek Straub, MTT Reed Ayers, CO School of Mines Ed Tackett, University of Louisville Nicole Wake, Montefore Medical Center	ROUNDTABLE Round Table on Managing Castings and 3D Printed Metal ROUNDTABLE TEAM Jack Ziemba, Aristo Cast Harold Sears, Ford Dave Rittmeyer, Hoosier Pattern Moderator.	PLATINUM SESSION: CATI Moving QC and Inspection to the Shop Floor with 3D Scanning Tim Crennen CATI	PLATINUM SESSION: ULTIMAKER Creating custom tools and functional parts with 3D printing at HEINEKEN Isabelle Haenen HEINEKEN
11:00am-12:00pm	Mr. Sam Pratt, US Marines Corp Mr. Michael Guinn, SOCOM Mr. Arinale Guinn, SOCOM Mr. Arinale Guinn, SOCOM Mr. Adrian Balley, US Army CCDC Mr. Adrian Balley, US Army CASCOM Pet Gen. William Marchall, New Jersey Institute of Technology COL Ken Letcher, Rock Island Arsenal Mr. Glen Drebes, US Air Force Moderator. James Zunino, US Army (CCDC) 11:30am-12:00pm Operationalizing Printed Electronics & Additive Manufacturing to Support the Warfighter James Zunino, US Army (CCDC)	FFF Metal Printing: from Filament Development to the Final Dense Metal Part Aljoscha Roch, Lucrezia Poli, Fraunhofer USA Printing a Smart Baseplate for Powder Bed Fusion Research Mark Norfolk, FABRISONIG LLC		MODERATOR: Peter C. Liacouras, Walter Reed National Military Medical Center	Brandon Lamoncha, HUMTOWN PRODUCTS	cle	osed
12:00pm-1:15pm	NETWORKING LUNCH				ı	Grand Ballroom, Normandie and Bo	oulevard, 2nd Floor
ROOM	International Ballroom	Continental A and B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room
Track	Aerospace/Transportation	DIAMOND SESSION	Education & Training	Materials	Casting	PLATINUM SESSIONS	PLATINUM SESSIONS
1:30pm-2:30pm	1:30-2:00pm Industrialization of Additive Manufacturing for the Automotive Industry: Challenges and Milestones Mike Kenworthy, DIVERGENT 3D 2:00-2:30pm AM for Foams. Qualification of 3D Printed Foams for the Vehicle Validation Process Lukas Knorr, BMW	DIAMOND SESSION: FARSOON The Future of Performance Materials in Powder Bed Fusion Technology Chuck kennedy Farsoon Technologies Chris Huskamp Jabil	ROUNDTABLE Identifying & Solving Process Inefficiencies in AM Andre Wegner, Authentise Pete Zelinski, Gartner Media	Designing a Powder Degradation Study Nate Kistler, Ben Ferrar LPW TECHNOLOGY	Investment Casting When I Was Young Over 5000 Years Ago Jack Ziemba ARISTO-CAST	PLATINUM SESSION: BEAM Characterization of Critical Parameters in Powder-Based Directed Energy Deposition Processes Rex Alexandre, Daniel Driscoll BEAM	PLATINUM SESSION: GNK ADDITIVE From Advanced Materials to AM Production Technologies Simon Hoeges, Katelo Sunday GKN Additive
2:30pm-3:00pm	transition		2:30pm-4:00pm				
3:00pm-4:00pm	3:00pm-3:30pm Ford Motor Company - FWD Transmission Case Machining Lift Assist Daniel D. Michalski, FORD Bob Heath, Eckhart 3:30-4:00pm Lift Assist Design and Testing at Ford Motor Co. Jay Haubenstricker, Ford Motor Co.	Education & Training Worldwide Standardization ASTM and ISO Update Moshen Selfi, ASTM International Christian Seidel, Fraunhofer IGCV (ISO)	Workforce Development Mini-Series Mike Vasquez, 3Degrees Company Megan Wooloock, Midwest Prototyping Jonathan Hopkins, Naval Sea Systems Command (NAVSEA)	ROUNDTABLE Bringing Photopolymers to Light: A Roundtable Discussion on the Future of Photopolymers ROUNDTABLE TEAM Stephanie Benight, Origin Raymond Weitekamp, Polyspectra Walter Vot, Adapheed Andrew Graese, DSM Additive Manufacturing Moderator Nate Schumacher, Midwest Prototyping	A Realistic Perspective of Life After Purchasing a Sand Printer Dave Rittmeyer, HOOSIER PATTERN	PLATINUM SESSION: XJET Powder-Free Ceramic & Metal AM Dror Danai XJet Ltd.	PLATINUM SESSION: PLURAL ADDITIVE MANUFACTURING PEEK, PEKK, Ultem: Building a Framework for Successful Open FFF Printing Outcomes Rod Reber ARKEMA Ed Israel Plural Additive Manufacturing
4:00pm		<u> </u>		ALL SESSIONS CLOSED	<u> </u>		<u> </u>
5:00pm- 5:15pm	Buses leave at 5:00pm Location: Ch	nicago Hilton, East 8th Street					

6:00pm-10:00pm

AMUG Off-Site Dinner and Networking Event

KEYNOTE 9:00AM-10:00AM "Winning the Manufacturing Race" Brad Keselowski, Keselowski Advanced Manufacturing



			BREAK	COUT SESSIONS BEGIN						
		DIAMOND SPONSOR PROGRAM		TRAINING LAB DIAMOND SPONSOR TRAINING SESSIONS						
ROOM	M Waldorf Williford A/B Williford C			Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4			
10:30am-11:00am	DIAMOND SESSION: EOS NORTH AMERICA Enabling Your Polymer Production Ecosystem: Introducing the Integra P 400 Dawid Leigh EOS	DIAMOND SESSION: BASF It's Time for Going Industrial with AM Volker Hammes, Francois Minec BASF	DIAMOND SESSION: ESSENTIUM ESSENTIUM and BASF: Material Innovation for High Speed Extrusion 3D-Printing Brandon Sweeney, Ph.D. ESSENTIUM, Inc. Kara Noack, BASF	DIAMOND TRAINING: RENISHAW Optimising Parameters and Scan paths for Multi Laser Metal Printers John Laureto, Kevin Brigden RENISHAW	DIAMOND TRAINING: HP 10:30am-11:00am How to design for Multi Jet Fusion Technology Elena Laso HP Inc. 11:00-11:30am An example of design mindset transformation with Multi Jet Fusion Lluis Pare HP Inc.	DIAMOND TRAINING: GE ADDITIVE GE Additive Software - Build Preparation Lars Bruns GE Additive	DIAMOND TRAINING: DYNDRITE Hands-on with Dyndrite Harshil Goel, Dyndrite			
11:30am-12:00pm				CLOSED		<u> </u>				
12:00pm-1:15pm	n NETWORKING LUNCH Grand Ballroom, Normandie and Boulevard, 2nd Floor									
		DIAMOND SPONSOR PROGRAM				ING LAB TRAINING SESSIONS				
ROOM	Waldorf	Williford A/B	Williford C	Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4			
1:30pm-2:30pm	DIAMOND SESSION: ADDITIVE INDUSTRIES Additive Manufacturing in Formula 1: A Wonderful Basis for a Solid Business Case Christoph Hansen Sauber Engineering AG Daan Kersten Additive Industries	Speed, Precision and Connectivity for Factory 4.0 Stephan Beyer, PhD BIGREP	Green Laser: Process Competence for 3D-printing of Pure Copper and Gold Damien Buchbinder, TRUMPF	DIAMOND TRAINING: CARBON Carbon Design for DLS (TM) Workshop Dee Kerr Beth Bernhardt CARBON	DIAMOND TRAINING: EXONE 1:30pm-2:00pm 3D Printers-Direct Molding Process Dr. Yoya Fukuda Kimura Foundry America 2:00-2:30pm Conversion of Conventional cores to Production 3D Printed Sand Cores Brandon Lamoncha Humtown Products	DIAMOND TRAINING: 3D SYSTEMS Additive: High Quality Silicone Part Production via Eggshell Casting Michael Fraser 3D Systems	Use and Measurement of Electrostatic Discharge Safe 3D Printing Materials Dr. Brandon Sweeney ESSENTIUM			
2:30pm-3:00pm	transition									
3:00pm-4:00pm	DIAMOND SESSION: 3YOURMIND Agile PLM: How Bosch Leverages Software to Find and Execute AM Use-Cases Dr. Victor Roman, Robert Bosch GmbH Aleksander Ciszek, 3YOURMIND	DIAMOND SESSION: DYNDRITE Introducing Dyndrite - A new era in additive begins! Harshil Goel, Dyndrite	DIAMOND SESSION: FORMLABS What's Next in 3D Printing: Formlabs Vision and Roadmap Max Lobovsky FORMLABS	DIAMOND TRAINING: DSM Setting SL Blade Gap John Schaefer DSM	DIAMOND TRAINING: STRATASYS Optimizing and post-processing FDM parts for High Performance and manufacturing Applications Shuvom Ghose GrabCAD	DIAMOND TRAINING: SLM SOLUTIONS Additive. Designer Pre- Processing Software How-To Kyle Adams Peck Lim SLM SOLUTIONS	DIAMOND TRAINING: BASF Application Driven Material Development for Fused Filament Fabrication Marth Faber Matthias Fischer BASF			
4:00pm				ALL SESSIONS CLOSED						
500 515	Buses leave at 5:00nm Location: Ch	iongo Hilton Fact 9th Stroot								
5:00pm- 5:15pm	Buses leave at 5:00pm Location: Chicago Hilton, East 8th Street AMUG Off-Site Dinner and Networking Event									

REGISTRATION - SPEAKER CENTER - MOBILE APP DESK

Hours Open

Location

REGISTRATION and BADGE PICK-UP

Speaker Center and Mobile App Desk Open

7:00am - 6:00pm 7:00am - 4:00pm 8th St North Registration, Lobby Level 8th St South Registration, Lobby Level

General Sessions and Breakouts open to all Conference Attendees
Speakers, Dates and Times subject to change without notice

Evening Programs include:

Speakers, Dates and	d Times subject to change withou	ut notice					
7:30am-8:30am	BREAKFAST		Grand Hall, Normandie and Bouleva	rd, 2nd Floor			
8:30am-9:00am	DRIVING INNOVATION PRESENTA	TION BY 2018 TECHNICAL COMPET	International Ballroom, 2nd Floor				
9:00am-10:00am	DRIVING INNOVATION INNOVATO	R SHOWCASE "Gideon Levy" TODI	O GRIMM, T.A. Grimm & Associates, A	AMUG AM Advisor		International Ballroom, 2nd Floor	
10:00am-10:30am	BREAK					Grand Ballroom, Normandie and Bo	ulevard, 2nd Floor
10:30am-11:00am	DRIVING INNOVATION 2019 TECH	HNICAL COMPETITION WINNERS AN	NOUNCED MARK BARFOOT, AMUG	Past President		International Ballroom, 2nd Floor	
11:00am-12:00pm	AMUG Business Meeting					International Ballroom, 2nd Floor	
12:00pm-1:15pm	NETWORKING LUNCH					Grand Ballroom, Normandie and Bo	ulevard, 2nd Floor
			BREAF	KOUT SESSIONS BEGIN			
			AMUG PROGRAM			PLATINUM SPO	NSOR PROGRAM
ROOM	International Ballroom	Continental A and B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room
Track	AM Metal Technologies	Medical	Software	AM Technologies (Non-Metal)	Materials	PLATINUM SESSIONS	PLATINUM SESSIONS
1:30pm-2:30pm	Additive Manufacturing of Aluminum Alloys and Aluminum Metal Matrix Composites Jeremy Iten	ROUNDTABLE/PANEL Post Processing of Printed Metal Medical Components PANEL:	Overcome the Bottleneck: Ford and trinckle Automate Design Workflows for Production Tools Deborah Mielewsky, Ford	1:30pm-2:00pm The Right Material for Small Parts Joerg Griessbach	ROUNDTABLE Top Material Companies Driving Innovation in the 3D Printing Market	PLATINUM SESSION: ADDUP AddUp Manager Build Preparation Software Demonstration	PLATINUM SESSION: MICROTEK FINISHING Taking Surface Finish to a NEW Dimension JT Stone
	ELEMENTUM 3D	Gina Alviti, Bel Air Finishing David Davidson, Dry Finish Justin Michaud, RemChem Daniell Hutchinson, Post Process Dr. Laurent Cataldo, BINC Industries MODERATOR Tom Mueller, Mueller Additive Manufacturing Solutions	Ole Bröker, trinckle	THE SL PRO 2.00pm-2:30pm True Colored LS-Parts with Full Strength Soeren Griessbach GS PRO GmbH	ROUNDTABLE: Ben Rader, BASF Ross Cunningham, Owens Corning Ernst A Poppe, DUPONT SPECIALTY OPERATIONS Dave McCann, Clariant Paul Heiden, Ultimaker Guillaume de Crevoisier, Arkema Sean Dsilva, Henkel MODERATOR. NATE Schumacher, Midwest Prototyping	Sean Pexton AddUp Inc.	Wesley Edwards MicroTek Finishing, LLC
2:30pm-3:00pm	BREAK					Grand Ballroom, Normandie and	Boulevard, 2nd Floor
3:00pm-4:00pm	Siemens SGT-A05 Combustor Design Simplification and Performance Improvement via Additive Manufacturing Bradley Lemke Siemens Energy, Inc.	ROUNDTABLE Ceramic 3D Printing / Additive Manufacturing for Medical Applications ROUNDTABLE TEAM: Shawn Allan, Lithoz Dror Danai, XJet Sandeep Rana, Admatec Moderator Michael Hascher, Eagle Engineered Solutions	ROUNDTABLE Enabling Production Scale with Additive Workflow Software ROUNDTABLE TEAM: Andre Wegner, Authentise Mike Vasquez, TraceAM Chris Weber, Siermens Dave Flynn, Materialise Shane Fox, Link3d Stephan Külnr, 3YOURMIND Moderator, Jordan Weston, MSOE	3:00pm-3:30pm 3D Printing Through Hands-On Experience at Oslo School of Architecture and Design Geir Jafe Jensen, The Oslo School of Architecture and Design 3:30pm-4:00pm Scaling Up 3D Printing Production with Automated Post-Processing Hans Van Toor, AM-FLOW	Casting WORKSHOP Gravity and Investment Casting Simulations using FLOW-3D Cast Parekshith Aliu Flow Science Pre-Registration Required Limited Participation: 15 Pre-register for session with	PLATINUM SESSION: MATSUURA MACHINERY USA Using Hybrid Metal AM to Supercharge your Injection Molds Thomas Houle Matsuura Machinery USA	PLATINUM SESSION: TEKNA Production of Advanced Powders for Metal AM Applications Jerome Pollak Tekna
4:00pm-4:30pm	transition				Cristine Webb at cristine.webb@flow3d.com		
4:30pm-5:30pm	Crowdsourced Troubleshooting of Metal AM Bob Markley 3rd Dimension Industrial 30 Printing Co	Digital Workflow for Creating a Prosthesis Even in the Jungle of Guatemala W. Brent Wright LifeNabled/Eastpoint Prosthetics and Orthotics	Education & Training Understanding the Fire and Explosion Hazards Associated with Additive Manufacturing Processes Jason Reason Lewellyn Technology, LLC	4:30pm-5:00pm Embedding Unique Functionality in 3D Printed Parts by Materials Solutions Richard Janssen Brightlands Materials Center 5:00-5:30pm A Novel Failure Criterion Applied for Fused Filament Fabrication Parts Gerardo Mazzei Capote Polymer Engineering Center, University of Wisconsin- Madison	deadline: March 25, 2019 No Additional Cost Apply Must be a conference attendee to participate Participants must supply their own laptop	PLATINUM SESSION: ARKEMA Material Specific Solutions for Transportation, Sport, and Dental Applications Steve Serpe, William Wolf Arkema	PLATINUM SESSION: SANDVIK Thinking Beyond Printing for Full Additive Manufacturing Value Keith Murray Mikael Schuisky Sandvik
5:30pm-6:00pm				ALL SESSIONS CLOSED			
6:00pm-10:00pm	Networking Dinner - A Taste of Chi	icago Location: Grand Ballroom, Nort	mandie and Boulevard, 2nd Floor				

Lights...Camera...Action...a conversation with Karl Myer (location: International Ballroom, Time 6:30pm-7:30pm)

NNOVATOR SHOWCASE 9:00AM-10:00AM Gideon Levy



			BREAK	OUT SESSIONS BEGIN	TDAIN	NOLAR		
		DIAMOND SPONSOR PROGRAM		TRAINING LAB DIAMOND SPONSOR TRAINING SESSIONS				
ROOM	Waldorf	Williford A/B	Williford C	Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4	
1:30pm-2:30pm	DIAMOND SESSION: HP All About Our Customer - Removing the Hype and Making AM Real Michelle Bockman HP Inc	DIAMOND SESSION: GE ADDITIVE Powder Characterization Methods Javier Arreguin GE Additive	DIAMOND SESSION: EXONE 1:30-2:00pm Binder Jet Process Development of MIM Grade Special Steel Powder Magnus Boström, PhD, Sandvik 2:00-2:30pm Combining technologies to optimize the use of 3D Printed Sand Dave Rittmeyer, Hoosier Patterns	DIAMOND TRAINING: FARSOON Farsoon Technologies Additive Workflow Preparation Techniques using Autodesk Software Ray Jones Farsoon Technologies	DIAMOND TRAINING: ADDITIVE INDUSTRIES Achieving Greater Control in Build Setup and Scan Strategies Navjeevan Sandhu Shane Collins ADDITIVE INDUSTRIES	DIAMOND TRAINING: BIGREP BigRep PRO Demonstration Moshe Akriin Frank Marangell BIGREP	DIAMOND TRAINING: 3YOURMIND Adding Flexibility and Automation to your AM Production Floor Stephan Kühr 3YOURMIND	
2:30pm-3:00pm	BREAK			Grand Ballroom, Normandie and Boulevard, 2nd Floor				
3:00pm-4:00pm	DIAMOND SESSION: CARBON PANEL: Moving Beyond Prototyping: Carbon's Digital Light Synthesis as a Tool for Manufacturing Medical Devices PANEL: Larry Monahan, Becton Dickinson Blane Larson, Resolution Medical MODERATOR Steve Pollack, Carbon	DIAMOND SESSION: BASF "Start to Finish AM Solutions — Design & Simulation, Novel Materials, and Finishing" Kara Noack Andreas Wüst BASF	DIAMOND SESSION: 3D SYSTEMS PANEL Scaling of Metals Additive Manufacturing PANEL Lee Zachman, rms Company Paolo Gennaro, GF Precicast Additive SA Scott Fosdick, GF Machining Solutions MODERATOR Kevin McAlea, 3D Systems	DIAMOND TRAINING: REVISHAW Optimising Parameters and Scan paths for Multi Laser Metal Printers John Laureto, Kevin Brigden RENISHAW	DIAMOND TRAINING: EOS AM Innovation Challenge — Application Sprint Fabian Alefeld EOS	DIAMOND TRAINING: FORMLABS Take a look at what's new for Formlabs SLA 3D printing Andrew Edman Nick King FORMLABS	DIAMOND TRAINING: ESSENTIUM Use and Measurement of Electrostatic Discharge Safe 3 Printing Materials Dr. Brandon Sweeney ESSENTIUM	
4:00pm-4:30pm	transition		I.	I	I.	I	I.	
4:30pm-5:30pm	DIAMOND SESSION: SLM SOLUTIONS 4:30pm-5:00pm Process Parameters for Increased Productivity Aaron LaLonde SLM SOLUTIONS 5:00pm-5:30pm Best Practices for Material Handling and Changing Material Types on a SLM System Kyle Adams SLM SOLUTIONS	DIAMOND SESSION: STRATASYS PANEL: Hyper-Realistic 3D Printed Parts, Now and In The Future PANEL: Scott Hanson, Medtronic, Inc. (Medtronic Neuromodulation) Brian McLean, Laika MODERATOR Ryan Schultz, Stratasys	DIAMOND SESSION: DSM The Additive Manufacturing Ecosystem Shapes Sustainable Manufacturing PANEL: TEA MODERATOR Jill Cohen, DSM	DIAMOND TRAINING: TRUMPF TruPrint 1000: How to Use Monitoring to Verify Part Quality and Machine Status Frederik Schaal TRUMPF	DIAMOND TRAINING: HP 4:30pm-5:00pm How to Add Color to Digital Workflows Dustin Kloempken HP Inc. 5:00pm-5:30pm What Do You Know About HP MJF? Trainings to Help You Accelerate Your Business Robb Miley HP Inc.	DIAMOND TRAINING: GE ADDITIVE GE Additive Software - Machine Data Analytics - Meltpool Lars Bruns GE Additive	DIAMOND TRAINING: DYNDRITE Hands-on with Dyndrite Harshil Goel, Dyndrite	
5:30pm-6:00pm			1	ALL SESSIONS CLOSED	1			

REGISTRATION - SPEAKER CENTER - MOBILE APP DESK

Hours Open

Location

REGISTRATION and BADGE PICK-UP
Speaker Center and Mobile App Desk Open

7:00am - 11:00am 7:00am - 2:00pm 8th St North Registration, Lobby Level 8th St South Registration, Lobby Level

General Sessions and Breakouts open to all Conference Attendees Speakers, Dates and Times subject to change without notice

opeakers, Dates and	d Times subject to change withou	ıt notice					
7:30am-8:30am	BREAKFAST		International Ballroom, 2nd Floor				
8:30am-9:00am	AMUG CLOSING AND FEEDBACK		International Ballroom, 2nd Floor				
9:00am-10:00am	KEYNOTE ADDRESS: "The Art and	Science behind LAIKA's Oscar® Awa	International Ballroom, 2nd Floor				
10:00am-10:30am	BREAK					Normandie and Boulevard, 2nd Floo	or
			RRFAN	OUT SESSIONS BEGIN			
				- CONTROL DEGIN			
			AMUG PROGRAM			PLATINUM SPO	NSOR PROGRAM
ROOM	Continental A	Continental B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room
Track	Aerospace/Transportation	Medical	Education & Training WORKSHOP	Materials CERAMIC AM TECHNOLOGIES	AM Technologies (Non Metal)	PLATINUM SESSIONS	PLATINUM SESSIONS
10:30am-11:00am	10:30am-11:00am Method for Powder Bed Parameter Development - Part 3 Eric Johnson John Deere	Let's Get Digital in Surgery! Heather Logan, Suresh Nayar Institute for Reconstructive Sciences in Medicine	Understanding the Process Characterization of Selective Laser Melting to Build Quality Parts Hajime Yamanaka California Polytechnic State University.	MINI-SESSION Oxides, Carbides (and Carbon), and Where to Print Them Amy Elliott, James Klett, Oak Ridge National Laboratory Applications in AM for a	Designing for Large-Scale Additive Manufacturing Alex Roschil, Phillip Chesser Oak Ridge National Laboratory	PLATINUM SESSION: ANSYS A First Look At The New Simulation Technologies and Design For AM Tools ANSYS Is Releasing This May Brent Stucker, Ansys	PLATINUM SESSION: DMG MORI Disruptive Parameter Development - How Digitization Supports Additive Manufacturing Nils Niemeyer DMG MORI
11:30am-12:00pm	11:00am-12:00pm Robust Additive Manufacturing Development and Industrial Implementations Youping Gao Castheon Inc		San Luis Obispo	Technical Ceramics Manufacturer Thomas Henriksen Ceramo, Inc. Designing for 3D Printing in Ceramic Andy Jeffery, Boston Ceramics MODERATOR: Kayleigh Porter, HRL Laboratories		CLOSED	CLOSED
12:00pm-1:15pm	NETWORKING LUNCH					International Ballroom 2nd Floor	
			AMUG PROGRAM			PLATINUM SPONSOR PROGRAM	
ROOM	Continental A	Continental B	Continental C	Marquette Room	PDR 2	Joliet Room	Astoria Room
Track	Aerospace/Transportation	Medical	Education & Training				
			Education & Training	Materials	AM Technologies (Non Metal)	PLATINUM SESSIONS	PLATINUM SESSIONS
1:30pm-2:30pm	Leveraging Additive Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of Colorado Denver	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns University of Bristol	Materials Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods The Virtual Foundry	AM Technologies (Non Metal) Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang Senvol	PLATINUM SESSIONS PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact	PLATINUM SESSIONS PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal
2:30pm-3:00pm	Manufacturing Technology for Production Racecar Parts Andrew Miller	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal
	Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal
2:30pm-3:00pm	Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing BREAK Benefits of Additive Manufacturing in Satellite Propulsion Leo Gard	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of Colorado Denver AM Metal Technologies Computational Fluid Dynamics Simulations for Additive Manufacturing Pareckshith Allu	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns University of Bristal Implementing Manufacturing Principles for Production with AM Mike Block, John Oney	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods The Virtual Foundry WORKSHOP Workflow for AM Powder Characterization PARTICIPANTS: Filip Francqui, GRANUTOOLS John Barnes, The Barnes Group Ryan Dehoff, Oakridge National Laboratory MODERATOR:	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang Servol Casting WORKSHOP Foundry In a Box, Pouring of Molten Metal Into Sand and Ceramic David Ritmeyer, Hoosier Pattern Jack Ziemba, Aristo Cast	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact Grand Ballroom, Normandie and Bc PLATINUM SESSION: VELO3D Manufacture Anything - V E L O3D Unlocks the full potential of Additive Manufacturing Dr. Zachary Murphre, Velo3D	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal PLATINUM SESSION: AIR FORCE LIFE CYCLE MANAGEMENT CENTER Microturbine Materials and Buildability Case Study Curt Taylor
2:30pm-3:00pm 3:00pm-4:00pm	Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing BREAK Benefits of Additive Manufacturing in Satellite Propulsion Leo Gard Aerojet Rocketdyne	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of Colorado Denver AM Metal Technologies Computational Fluid Dynamics Simulations for Additive Manufacturing Pareckshith Allu	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns University of Bristal Implementing Manufacturing Principles for Production with AM Mike Block, John Oney	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods The Virtual Foundry WORKSHOP Workflow for AM Powder Characterization PARTICIPANTS: Filip Francqui, GRANUTOOLS John Barnes, The Barnes Group Ryan Dehoff, Oakridge National Laboratory MODERATOR: Nathan Schumacher, Midwest Prototyping Prediction of Mechanical Performances and Topology Optimization of a 3D Printed Part Ryan Hammonds	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang Servol Casting WORKSHOP Foundry In a Box, Pouring of Molten Metal Into Sand and Ceramic David Ritmeyer, Hoosier Pattern Jack Ziemba, Aristo Cast	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact Grand Ballroom, Normandie and Bc PLATINUM SESSION: VELO3D Manufacture Anything - V E L O3D Unlocks the full potential of Additive Manufacturing Dr. Zachary Murphre, Velo3D	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal PLATINUM SESSION: AIR FORCE LIFE CYCLE MANAGEMENT CENTER Microturbine Materials and Buildability Case Study Curt Taylor
2:30pm-3:00pm 3:00pm-4:00pm	Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing BREAK Benefits of Additive Manufacturing in Satellite Propulsion Leo Gard Aerojet Rocketdyne transition Large Format Additive Manufacturing for Aerospace Manufacturing Applications Michael Kline	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of Colorado Denver AM Metal Technologies Computational Fluid Dynamics Simulations for Additive Manufacturing Pareekshith Allu Flow Science AM Metals Safety, Let's All Go Home in One Piece Every Night Paul Bates	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns University of Bristal Implementing Manufacturing Principles for Production with AM Mike Block, John Oney ELITE ADDITIVE LLC A Structured Design Process to Maximize Benefits of Additive Manufacturing Kevin Shay	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods The Virtual Foundry WORKSHOP Workflow for AM Powder Characterization PARTICIPANTS: Filip Francqui, GRANUTOOLS John Barnes, The Barnes Group Ryan Dehoff, Oakridge National Laboratory MODERATOR: Nathan Schumacher, Midwest Prototyping Prediction of Mechanical Performances and Topology Optimization of a 3D Printed Part	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang Servol Casting WORKSHOP Foundry In a Box, Pouring of Molten Metal Into Sand and Ceramic David Ritmeyer, Hoosier Pattern Jack Ziemba, Aristo Cast	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact Grand Ballroom, Normandie and Bc PLATINUM SESSION: VELO3D Manufacture Anything - V E L O3D Unlocks the full potential of Additive Manufacturing Dr. Zachary Murphree, Velo3D Scott Volk, Incodema3D	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal PLATINUM SESSION: AIR FORCE LIFE CYCLE MANAGEMENT CENTER Microturbine Materials and Buildability Case Study Curt Taylor University of Dayton Research Institute
2:30pm-3:00pm 3:00pm-4:00pm 4:00pm-4:30pm 4:30pm-5:30pm	Manufacturing Technology for Production Racecar Parts Andrew Miller Penske Racing BREAK Benefits of Additive Manufacturing in Satellite Propulsion Leo Gard Aerojet Rocketdyne transition Large Format Additive Manufacturing for Aerospace Manufacturing Applications Michael Kline Lockheed Martin Aeronautics Company	Voxel Printing From Software to Surgical Theater Nicholas Jacobson Inworks / Office of Innovations / University of Colorado Denver AM Metal Technologies Computational Fluid Dynamics Simulations for Additive Manufacturing Pareekshith Allu Flow Science AM Metals Safety, Let's All Go Home in One Piece Every Night Paul Bates	The AM Global Value Chain: Challenges and Opportunities for Firms and Users Jennifer Johns University of Bristol Implementing Manufacturing Principles for Production with AM Mike Block, John Oney ELITE ADDITIVE LLC A Structured Design Process to Maximize Benefits of Additive Manufacturing Kevin Shay Consolidated Nuclear Security LLC	Advancements in Metal Fused Filament Fabrication 3D Printing from Desktop to Industry Tricia Suess, Brad Woods The Virtual Foundry WORKSHOP Workflow for AM Powder Characterization PARTICIPANTS: Filip Francqui, GRANUTOOLS John Barnes, The Barnes Group Ryan Dehoff, Oakridge National Laboratory MODERATOR: Nathan Schumacher, Midwest Prototyping Prediction of Mechanical Performances and Topology Optimization of a 3D Printed Part Ryan Hammonds Solvay Specialty Poylmers	Using Machine Learning to Intelligently Generate and Analyze Additive Manufacturing Data Annie Wang Servol Casting WORKSHOP Foundry In a Box, Pouring of Molten Metal Into Sand and Ceramic David Ritmeyer, Hoosier Pattern Jack Ziemba, Aristo Cast	PLATINUM SESSION: MSC SOFTWARE New Methodologies to Capture and Simulate Variability Across the AM Build Space Jeff Robertson MSC Software - Simufact Grand Ballroom, Normandie and Bc PLATINUM SESSION: VELO3D Manufacture Anything - V E L O3D Unlocks the full potential of Additive Manufacturing Dr. Zachary Murphree, Velo3D Scott Volk, Incodema3D	PLATINUM SESSION: XACT METAL Low-Cost Metal PBF System Overview and Best Practices For Part Design Juan Mario Gomez Xact Metal PLATINUM SESSION: AIR FORCE LIFE CYCLE MANAGEMENT CENTER Microturbine Materials and Buildability Case Study Curt Taylor University of Dayton Research Institute

The Art and Science behind LAIKA's Oscar® Award Winning 3D Printing Process
Brian McLean Laika



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			BREAK	OUT SESSIONS BEGIN				
		DIAMOND SPONSOR PROGRAM		TRAINING LAB DIAMOND SPONSOR TRAINING SESSIONS				
ROOM	Waldorf	Williford A/B	Williford C	Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4	
10:30am-11:00am	DIAMOND SESSION: RENISHAW To Boldly Go. Enterprising AM Dan Skulan Marc Saunders RENISHAW	DIAMOND SESSION: 3YOURMIND How an Agile MES can Unlock the Opportunity Hidden in AM Processes Dan Burseth Eckhart Stephan Kühr 3YOURMIND	DIAMOND SESSION: ESSENTIUM Industrial Solutions to Bridge the Gap Between 3D Printing and Machining PANEL: Blake Teipel, Ph.D Brandon Sweeney, Ph.D. Erik Gjovik Terry MacNeish	DIAMOND TRAINING: CARBON Carbon End-to-End DLS(TM) Process Overview Dee Kerr, Beth Bernhardt Carbon Carbon End-to-End DLS(TM) Process Overview Dee Kerr, Beth Bernhardt Carbon	DIAMOND TRAINING: STRATASYS Utilizing GrabCAD Print and Photoshop for Realistic Parts on the Stratasys J750 Evan Hochstein, JP Velasco Stratasys	DIAMOND TRAINING: SLM SOLUTIONS Additive. Designer Pre- Processing Software How-To Kyle Adams Peck Lim SLM Solutions	TRAINING LAB ENCORE TBA via Mobile App	
11:00am-11:30am			MODERATOR: Kendra Pulliam, Essentium					
11:30am-12:00pm				CLOSED				
12:00pm-1:15pm	NETWORKING LUNCH					International Ballroom, 2nd Floor		
		DIAMOND SPONSOR PROGRAM		TRAINING LAB DIAMOND SPONSOR TRAINING SESSIONS				
ROOM	Waldorf	Williford A/B	Williford C	Salon C Room 1	Salon C Room 2	Salon C Room 3	Salon C Room 4	
1:30pm-2:30pm	DIAMOND SESSION: TRUMPF Conforming Cooling: Taking Advantage of 3D-Printing in Tool and Die Frank Nachtigall TRUMPF	DIAMOND SESSION: EOS NORTH AMERICA Scan, Print, Ship — Combining Unique Technology with AM to Create a Revolutionary Product Fabian Krauss EOS North America Evan Schwartz AETREX WORLDWIDE, INC.	DIAMOND SESSION: FARSOON Farsoon Technologies - Innovation for the Future Chuck Kennedy Farsoon Technologies	DIAMOND TRAINING: DSM Modeling Process and Performance of High Performance Filaments Utilizing Digimat Software Greg Costantino DSM	DIAMOND TRAINING: EXONE EXONE USERS GROUP CLOSED SESSION	DIAMOND TRAINING: 3D SYSTEMS 1:30pm-2:00pm A path to effective quality analysis in Metal 3D Printing - Avoiding costly secondary inspections and processing Gautier Boeriswyl, 3D Systems 2:00pm-3:30pm Optimizing Manufacturing of Large Parts On Multi-Laser Printers Kirill Volchek, 3D Systems	TRAINING LAB ENCORE TBA via Mobile App	
2:30pm-3:00pm	BREAK					Grand Ballroom, Normandie and E	Boulevard, 2nd Floor	
3:00pm-4:00pm	DIAMOND SESSION: FORMLABS Deep Dive: Navigating the Future of SLA Materials Sharon Soong, Formlabs	DIAMOND SESSION ADDITIVE INDUSTRIES REPEAT Additive Manufacturing in Formula 1: A Wonderful basis for a Solid Business Case Christoph Hansen, Sauber Engineering AG Daan Kersten, ADDITIVE INDUSTRIES	DIAMOND SESSION: BIGREP How Large-Scale Additive is Transforming Industries Frank Marangell, BIGREP Ajmal Aqtash, Boyce Technologies	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	
4:00pm-4:30pm	transition	<u> </u>	I	I	I	I		
4:30pm-5:30pm	DIAMOND SESSION: DYNDRITE Introducing Dyndrite - A new era in additive begins! Harshil Goel, Dyndrite	CLOSED	CLOSED	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	TRAINING LAB ENCORE TBA via Mobile App	
5:30pm-6:00pm				ALL SESSIONS CLOSED				
6.00 10.00pill				, LE GEOGIOTO GEOGED				

6:00pm-10:00pm Family Dinner and Closing Location: Grand Ballroom, Normandie and Boulevard, 2nd Floor



Paul Bates UL

AMUG President president@amug.com Years of AMUG service: 7



Mark Barfoot EWI

Past President pastpresident@amug.com Years of AMUG service: 7



Gary Rabinovitz
Reebok

Chairman
chairman@amug.com
Years of AMUG service: 17*



Vince Anewenter
MSOE

Treasurer treasurer@amug.com Years of AMUG service: 8



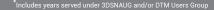
Leslie Frost GE Additive

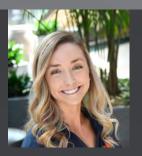
Secretary secretary@amug.com Years of AMUG service: 2

THE TEAM

For Users, By Users-

AMUG - an all-volunteer organization has been building the user group for 31 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 info@amug.com.





Jamie Cone

Vice President
vicepresident@amug.com
Years of AMUG service: 2



Carl Dekker

Vice President
vicepresident@amug.com
Years of AMUG service: 4*



Thomas Sorovetz
FCA US LLC

Event Manager, Track Leader eventmanager@amug.com Years of AMUG service: 26*



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DSM Additive

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Kim Killoran Stratasys

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Deputy Vice President - Expo deputyvp@amug.com Years of AMUG service: 3



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Elizabeth Goode Goodelnk

Principal Consultant elizabeth.goode@amug.com Years of AMUG service: 13*



Andrew Allshorn At 3D-Squared

Global Ambassador, Track Leader -**AM Non-Metal Technologies**



Nora Cibula GE Additive

Global Ambassador



Stefan Ritt 3YOURMIND

Global Ambassador



Graham Tromans

GP Tromans

Global Ambassador



Tim Gornet University of Louisville

Sergeant-at-Arms, Nominating Committee Chair & Liaison



Aryn Bourk

Speaker and Mobile App Administrator



Kevin Ayers Danfoss

Liaison Team Lead



Jordan Weston MSOE

Liaison & Track Leader Chair



Brett Charlton

BD

Scholarship Committee - Chair



Liaison & Track Leader - Aerospace & Transportation

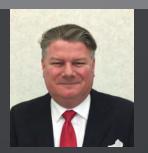


Emerson Automation Solution Scholarship Committee



Reebok

Liaison



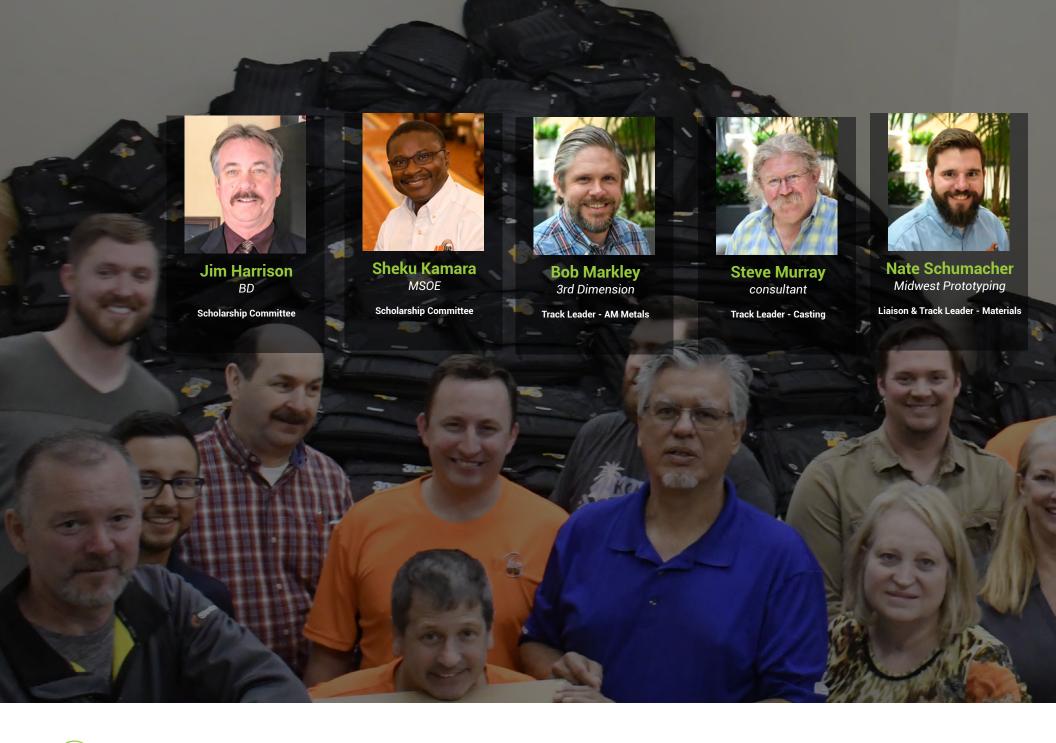
Wenzel

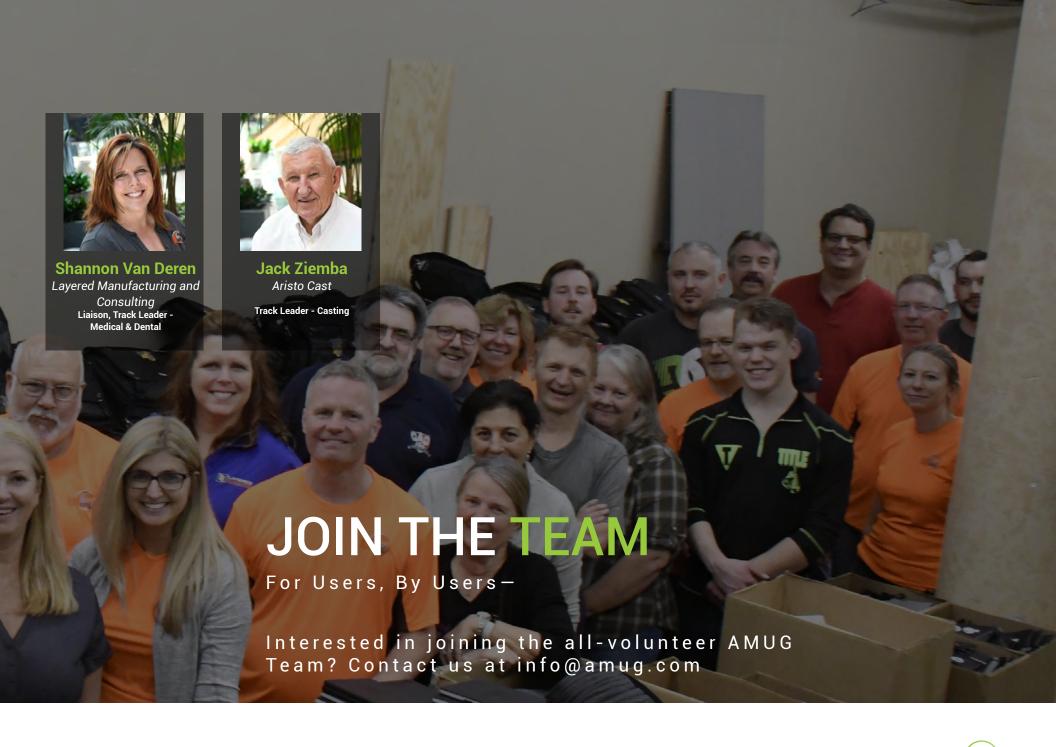
Track Leader - Scanning & Metrology



Titan Robotics

Scholarship Committee







1980s

3D Systems North American Stereolithography Users Group

Founded in the late 1980s, the users group was dedicated to the users of 3D Systems' stereolithography technology.

2001

3D Systems Users Group

In 2001, 3D Systems acquired DTM Corporation. Shortly after, the users groups for stereolithography and selective laser sintering consolidated into one association.

2011

Additive Manufacturing Users Group

At the 2011 conference, members voted to open the users group to owners/operators of all commercial additive manufacturing technologies. Objet and Stratasys joined as premier supporters of AMUG.

Selective Laser Sintering Users Group

This group, founded in the early 1990s, focused on the users of DTM Corporation's selective laser sintering technology

1990s

3DS Users Group, Inc. (3DSUG)

As more and more users operated technologies from other additive manufacturing companies, the users group elected to open its doors (speakers, AMUGexpo and Sponsors Program) to companies other than 3D Systems. Membership continued to be owners/operators of stereolithography and selective laser sintering.

2010

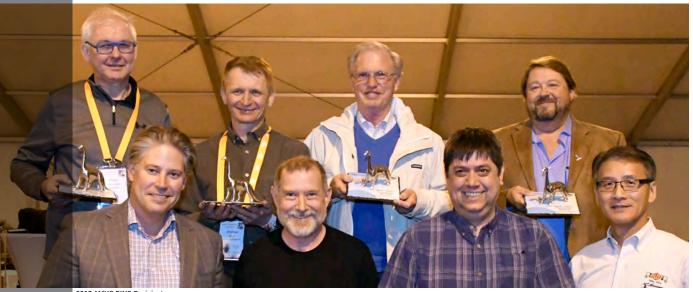
AMUG Celebrates 30 years of Community

Throughout the years, AMUG has grown from a small gathering of 12 individuals with a common cause to a global community with a common cause: A community that is pushing forward a passion for technology that inspires, redefines and empowers people every day, and that is changing manufacturing as we know it.

2018

AMUG HISTORY

WE LOVE WHAT WE DO AND WE LOVE OUR HISTORY-



2018 AMUG DINO Recipients

AMUG has grown, expanded and evolved to keep pace with the sweeping changes in the additive manufacturing industry. The users group has been hard at work since 1988 as a volunteer organization working with OEMs to design a community focused on advancing the uses of additive manufacturing technology.

The Additive Manufacturing Users Group's origins date back to the late 1980's when the founding industry users group was called 3D Systems North American Stereolithography Users Group, a users group solely focused on the advancement of stereolithography (SL) use with the owners and operators of 3D Systems' equipment. Today, AMUG educates and supports users of all additive manufacturing technologies. The primary charter of the group remains the same, but its members are much more diversified, global and focused in advancing additive manufacturing technology for rapid manufacturing and prototyping.

With AMUG's expanded range, operators/owners of any commercial technology — stereolithography (SL), selective laser sintering (SLS), 3D printing, CLIP, DMD, DMLM, DMLS, EBM, FDM, LC, LS, MJP, PolyJet, SLM, and more — can benefit from the information exchange and professional network that AMUG offers.

Objectives

- + Encourage effective communication of information amongst all additive manufacturing equipment owners and operators.
- + Provide a forum for presentations and the ability to network with colleagues.
- + Propose solutions to problems that involve basic modification to hardware or software.
- + Provide an open atmosphere for technology exchange.

Activities

- + Hold annual and periodic meetings for the purpose of conducting business of AMUG.
- + Establish special task or interest groups to study specific mutual areas of interest.
- + Identify problems and propose solutions or improvements and recommend uniform practices and techniques to be used by the membership.

