

AeroDef Manufacturing Summit and Exposition 2014

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25 – 27 February 2014

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Society of Manufacturing Engineers (SME)
One SME Drive
Dearborn, Michigan 48128
USA

Phone: 800-733-4763 or 313-425-3000
Fax: 313-425-3400

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AERODEF MANUFACTURING INTELLIGENCE SERIES

Join us for our three-day **Manufacturing Intelligence Series** and get exclusive access to the top people in Aerospace and Defense! Get an insider's look at the critical issues of the day during our interactive **Executive Insights Series** panel discussions and **Featured Speaker** presentations, our **Exclusive Keynote Presentation**, and **AeroDef Take Off!** and **AeroDef Afterburner** networking events. All are included with your registration.

EXCLUSIVE KEYNOTE SPEAKER

Wednesday, February 26, 8:00 – 9:00 am, The Deck



Gerould Young
Director, Materials & Manufacturing
Technology, Boeing Research & Technology

"The Lure of New Materials and the Corresponding Reality of Manufacturing at Rate and Cost"

Mr. Young leads the Materials and Manufacturing Technology Organization for Boeing Research & Technology. This team of 1,000 engineers and scientists is developing next-generation materials and manufacturing processes for existing and future Boeing products. He started at Boeing on the B2 program using 3D CAD to integrate systems routings into the structural design. He moved to the National Aerospace Plane program, where he designed, analyzed and tested a Mach 25 nose tip thermal protection concept. His expertise in computational fluids and non-linear finite element analysis took him to simulating manufacturing processes, impacts, explosions and evaluation of structural designs for commercial and defense products including F22, JSF and 777. He was promoted to management in Boeing's Structures Research and Development Organization and later held a functional management job maintaining the loads and dynamics skill base. He led three Boeing Joint Strike Fighter (JSF) technology programs focused on affordable titanium product forms casting, welding and forming. He led Boeing's enterprise-wide development for Structural Analysis and Loads processes producing such tools as the Common Structures Workstation and the Engineering Materials Database. Prior to his current role, Mr. Young was Director of Materials and Structures Technology, where he led Boeing's long-term research and development for next-generation structural technologies, which included materials, analysis tools and concept optimization. He holds a BS and MS in Mechanical Engineering from the University of Utah and is a graduate of the Advanced Management Program at University of Pennsylvania's Wharton Business School. He also holds four patents and has authored a number of technical papers.

SPONSORED BY SAP



EXECUTIVE INSIGHTS SERIES: TUESDAY

Tuesday, February 25, 9:00 – 9:45 am, Ballroom

"Sequestration: OEM & Supplier Perspectives." How deep cuts in defense program are driving OEMs and their suppliers to rethink business strategies.



Panelist: Kellie Johnson, President,
Ace Clearwater Enterprises

Ms. Johnson graduated from the University of Southern California in 1982 with a BA in International Relations and joined the family business in 1984. At that time, the company had annual revenues of approximately \$10 million, primarily in aerospace sheet metal forming and fabrication. She took over operations in 1985 and was promoted to president in 1989. Focusing on speed, quality and innovation, ACE Clearwater Enterprises has become a preferred supplier for most OEMs. Specializing in complex formed and welded assemblies, the company has grown to nearly 200 employees with current (2013) projected revenue at \$32 million. Ms. Johnson is on the board of the National Association of Manufacturers (NAM), as well as the NAM Executive Committee. She is a member of the board of trustees for the Manufacturing Institute. In 2006, she was appointed by Secretary of Commerce Carlos Gutierrez to serve on the Manufacturing Council and was reappointed to serve on the council under Secretary Locke with her term expiring in 2012, during which time she chaired the subcommittee on competitiveness.



Panelist: Mary Simmerman, Vice President,
F-35 Supply Chain Management,
Lockheed Martin Aeronautics

Ms. Simmerman is the vice president of Supply Chain Management for the F-35 Program. She joined Lockheed Martin in April 2011. In this role, she establishes and executes acquisition strategies to support program plans while maintaining procurement system integrity. She also ensures that suppliers execute their production commitments, achieve their affordability and international goals and provide a full range of sustainment services. She came to Lockheed Martin from Bell Helicopter-TEXTRON, where she last served as the vice president of Global Supply Chain Management and Textron International's Mexico operations from 2006 to 2011. In addition to Bell Helicopter-TEXTRON, she has held corporate and executive leadership positions with Northrop Grumman and the Boeing company supporting space, as well as civil and military programs for both fixed wing and rotorcraft platforms.

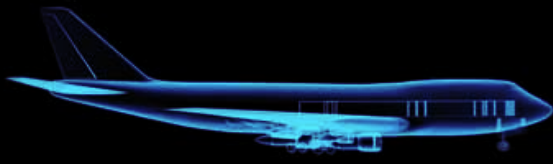
NOT PICTURED:

Major General Dennis M. Kenneally,
USA (retired), Executive Director,
Southwest Defense Alliance (SWDA)

David Herbst, Vice Chairman,
Southwest Defense Alliance (SWDA)

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EXCLUSIVE KEYNOTE SPEAKER
EXECUTIVE INSIGHTS SERIES
FEATURED SPEAKERS



33.7669° N
118.1883° W
2.25-2.27.2014

AERODEF MANUFACTURING INTELLIGENCE SERIES

EXECUTIVE INSIGHTS SERIES: WEDNESDAY

Wednesday, February 26, 1:00 - 2:00 pm, The Deck

“Cyber Security and Counterfeit Parts & Materials: An Escalating Global Challenge for Aerospace & Defense Manufacturers.” This panel will address issues that will help aerospace and defense manufacturers deal more effectively with outside cyber threats and recognize the increasing number of counterfeit parts in the supply chain.

Moderator: Richard M. (Dickie) George, Senior Advisor for Cyber Security, Johns Hopkins University Applied Physics Lab



Mr. George is the senior advisor for cyber security at the Johns Hopkins University Applied Physics Lab (APL). At the lab, he works on a number of projects sponsored by the U.S. government. He works with senior management at the lab on cyber strategy for protection of critical national systems.

He is also the lab's representative to the I3P, a consortium of universities, national labs and non-profit institutions dedicated to strengthening the cyber infrastructure of the United States. Prior to joining APL, he worked at the National Security Agency as a mathematician from 1970 until his retirement in 2011. While at NSA, he wrote more than 125 technical papers on crypto mathematical subjects, and served in a number of positions: analyst, and technical director at the division, office, group, and directorate level. He served as the technical director of the Information Assurance Directorate for eight years until his retirement.

Panelist: Barry Birdsong, Division Chief, Parts and Materials Engineering, Missile Defense Agency



Mr. Birdsong is the Parts, Materials & Processes (PMP) division manager for the Missile Defense Agency. He has served in this position since April 2006. In this role he is responsible for MDA requirements and policy regarding counterfeit parts, parts procurement, radiation effects, part selection, screening, and qualification criteria, failure analysis, DMSMS, COTS strategies, lead-free prohibitions, materials engineering and implementation of the Department of Defense corrosion prevention policy. He is also the manager of the MDA Parts and Materials Advisory Group (PMAG) that includes the MDA Failure Analysis Laboratories, the MDA Advisory Program and the Directorate Lead for Supply Chain Risk Management. In addition, he is program manager for over \$25 million in Small Business Innovative Research (SBIR) contracts related to parts and materials technologies.



Panelist: Stephen Dill, Chief Architect, Cyber Security, Lockheed Martin Information Systems & Global Services (ISSGS)

Mr. Dill has been working in communications systems design, operations and maintenance, and information security fields for 40 years, and has been with Lockheed Martin since 1991.

Mr. Dill is a Lockheed Martin fellow and cyber security architect in the Center for Cyber Security Innovation supporting the ISSGS business area and, occasionally, the rest of Lockheed Martin. He was recently the Cyber Security Solution Family Chief Architect, responsible for the coordination and execution of Cyber Security Research and Development in ISSGS. He has received certifications as information security specialist, program manager and information systems architect.



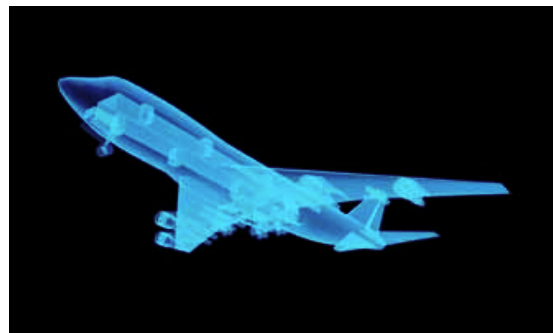
Panelist: Walter Keller, CEO, Nokomis

Mr. Keller founded Nokomis in 2002 and has cultivated state-of-the-art expertise and game-changing innovation in the area of non-contact automated detection, identification and diagnostics of electronics. Under his leadership, Nokomis has developed unique

ultra-sensitive RF and microwave capabilities that facilitate the sensing of unintended electronics emissions with substantially improved sensitivity, acuity and confidence over other available technologies. These technologies have been proven to be exceptionally capable for anti-tamper and counterfeit mitigation applications. Serving as principal investigator on 12 related efforts funded by the Navy, Air Force, Army, Defense Threat Reduction Agency (DTRA), and National Aeronautics and Space Administration (NASA) provides Mr. Keller with a breadth of experience in the detection and exploitation of electronic device electromagnetic emissions for defense applications.

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(continued)

EXECUTIVE INSIGHTS SERIES: THURSDAY

Thursday, February 27, 8:30 AM – 9:30 AM, The Deck

“The New Manufacturing Innovation Institutes: How Will They Help Aerospace & Defense Manufacturers?” An update on current and future initiatives of the federal program to promote investment and production in the U.S. Includes participants from the National Institute of Science and Technology Advanced Manufacturing Office, America Makes – the National Additive Manufacturing Innovation Institute (NAMII), Digital Manufacturing & Design Innovation Institute, and Lightweight & Modern Metals Manufacturing Institute.



Moderator: Michael F. Molnar, Director, NIST Advanced Manufacturing Office, Director, Advanced Manufacturing National Program Office, SME 2014 President



Panelist: Ralph Resnick, Founding Director, NAMII

Mr. Resnick joined the National Center for Defense Manufacturing & Machining (NCDMM) in September 2008 as vice president, chief technology officer, and director, Corporate Development. A professional with over 35 years of manufacturing experience, Mr. Resnick is responsible for providing technical leadership within NCDMM, promoting its mission with external stakeholders and adding new insight to the NCDMM business strategy. Before joining NCDMM, he was chief technology officer for both The Ex One Corporation and Extrude Hone. He was a major contributor in establishing Extrude Hone and Ex One as innovative leaders in advanced manufacturing process research and subsequent technology transition to the world’s factory floors. He holds a number of patents for designs of capacitance-based sensors and metrology systems and has made many presentations at leading technical conferences. He has been the principal investigator for many projects at the Department of Defense, Department of Energy, National Institute of Standards and Technology’s (NIST) Advanced Technology Program, National Science Foundation, National Center for Manufacturing Science, and Small Business Innovation Research (SBIR). He is a fellow of the Society of Manufacturing Engineers (SME) and presently serves on SME’s International Awards and Recognition Committee.



Thursday, February 27, 1:00 PM – 2:00 PM, The Deck

“3D Modeling Manufacturing World: Significant Advancements in 3D Manufacturing as it Relates to the Future of Aerospace & Defense.” Focus on the current applications and potential of 3D technology to be a transformational agent in aerospace and defense manufacturing.



Moderator: Al Sanders, Ph.D., President & CEO, Design-Vantage Technologies

Dr. Sanders is chairman of the National Defense Industry Association Advanced Manufacturing Engineering Capabilities Committee and also president and CEO of Design-Vantage Technologies, LLC. He founded the company in 2013 after working over 20 years in industry with the mission of helping clients transform their businesses to adapt to the changing manufacturing landscape and gain access to the same modeling and simulation tools and technologies for engineering and manufacturing used by Fortune 500 companies to mitigate risk and streamline their new product development practices. Dr. Sanders brings his clients a wide depth and breadth of industry experience in mechanical and electronic system development and has hands-on experience in disciplines that include technology development, systems engineering, component design and analysis, modeling and simulation, advanced design methods, advanced manufacturing, and six sigma. He has been a technical advisor to the Arizona Commerce Authority, which is in the process of finalizing an award contract with NIST to launch a new MEP center in Arizona that will help small- to medium-sized manufacturing companies in the state transform their businesses into factories of the future.



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FEATURED SPEAKERS

Tuesday, February 25, 8:00 AM - 8:45 AM, Ballroom

“The Economic Impact of Sequestration to the Industrial Base”

The Southwest Defense Alliance (SWDA) is a public benefit corporation formed in 1998. Headed by Executive Director Maj. Gen. Dennis Kenneally (retired), SWDA works to preserve and enhance critical defense missions and assets in the southwest United States. These significant operational, training and testing assets are linked by unique communications and satellite systems enabling them to work together in many ways. SWDA engages in communication efforts to ensure that local, state and federal elected officials in Arizona, California, Nevada, New Mexico, Texas and Utah have the information needed to be effective advocates.

David Herbst, Vice Chairman, Southwest Defense Alliance (SWDA)

Major General Dennis M. Kenneally, USA (retired)

Major General (ret) Dennis M. Kenneally is Executive Director of the Southwest Defense Alliance, a non-profit corporation of six southwestern states dedicated to protecting America's defense and industrial base. He was appointed by Governor Jerry Brown to the governor's military council and is a former member of the State Threat Assessment Advisory Group of the California Emergency Management Agency. A founding partner of Business Associates International, LLC, he serves on the board of directors of Maytag Aircraft Corporation of the Mercury Air Group, Inc., and Final Mile Logistics. Before his appointments, he worked as a contractor for the U.S. Department of Justice, as a consultant to the Chief Executive Officer of Maxim Systems, Inc., a Department of Defense contractor and as Chairman of the Board of the National Defense Industrial Association of San Diego. General Kenneally served in two Presidential administrations as Associate Administrator of the Veterans Administration (3rd ranking position) and was later appointed as the Deputy Assistant Secretary of the Air Force for Reserve Affairs. A decorated combat veteran, General Kenneally is the former Commanding General of the California Army National Guard, where he commanded the largest, most tasked Army National Guard force in the nation.

Tuesday, February 25, 3:00 PM, The Deck



Yancy D. Mailes, Director, History & Museum Program, Air Force Global Strike Command

Mr. Mailes is responsible for establishing policy and preserving the Command's institutional memory and its material heritage. The Command's six wings control the nation's entire inventory of Minuteman III intercontinental ballistic missiles, B-2 and B-52 bomber aircraft. He ensures that historians concentrate on documenting recent history (both at home station and in the deployed area), while maintaining the Command's unclassified and classified archives, and answering leadership and public inquiries. He also directs the Command's heritage program through museum exhibits, heritage displays, well-maintained airparks, and educational outreach programs.

Thursday, February 27, from 8:00 AM - 8:30 AM, The Deck



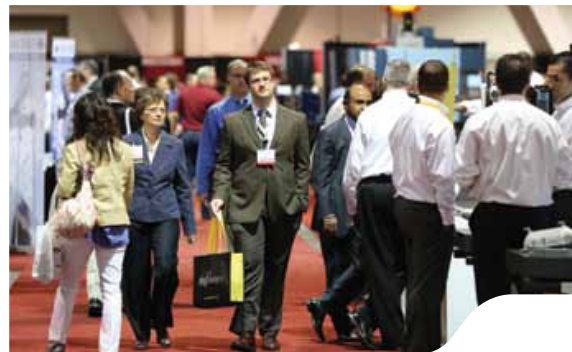
Michael F. Molnar, Director, NIST Advanced Manufacturing Office, Director, Advanced Manufacturing National Program Office, SME 2014 President

“The New Manufacturing Innovation Institutes”

Michael F. Molnar, FSME, CMfgE, PE, likes to be introduced simply as “a manufacturing guy from industry” with nearly 30 years of experience in advanced manufacturing. In 2011, he was named the first Chief Manufacturing Officer of the National Institute of Standards and Technology (NIST). Today he leads the NIST Advanced Manufacturing Office for extramural manufacturing programs and also serves as the director of the interagency Advanced Manufacturing National Program Office. As called for by the Advanced Manufacturing Partnership initiative, the AMNPO's mission is to foster industry-led partnerships and to form a “whole of government” approach to strengthen competitiveness and innovation in U.S. manufacturing. His experience includes leadership roles in advanced manufacturing, metrology, manufacturing systems, quality, technology development, sustainability and industrial energy efficiency. His credentials include service as a Federal Fellow in the White House Office of Science and Technology Policy, and election as Fellow of both ASME and the SME. He is a licensed Professional Engineer, a Certified Manufacturing Engineer and a Certified Energy Manager.

NETWORKING OPPORTUNITIES: TUESDAY & WEDNESDAY

Get energized for your AeroDef Manufacturing experience and join us on The Deck for the Take Off! It launches when the summit and expo opens on Tuesday, February 25, at 3:00. Hear an inspiring speaker and get a chance to meet the people making a difference in manufacturing, including and presenters, exhibitors and fellow colleagues. Get another opportunity to meet the presenters, exhibitors and colleagues at the AeroDef Afterburner on Wednesday from 3:30-5:30 pm, on The Deck. Sometimes the most valuable contacts you make takes place after work hours.



TECHNICAL SESSIONS

FANUC

Precision Machining & Tooling and Integrated Assembly & Robotics sessions are sponsored by FANUC

DAY ONE: TUESDAY, FEBRUARY 25

Predictive Tools for Optimized Composite Manufacturing 10:00 AM – 11:45 AM

10:00 AM - 10:30 AM

Operations Intelligence to Help Define Composite Processes, Characteristic Measurements and Production Predictive Analytics
Chuck Buckley, Director, Dassault Systemes

10:35 AM - 11:05 AM

Influence of ICME in the Design of New Generation Composite Components
Adi Sholapurwalla, Vice President of Technology, ESI Group

11:10 AM - 11:40 AM

Virtual Design and Virtual Testing for Predictive Engineering of Composites Structures
Rani Richardson, CATIA Composites Consultant, Dassault Systemes

Drilling & Machining for Integrated Assembly 10:00 AM – 11:45 AM

10:00 AM - 10:30 AM

C-130J Automated Drilling Systems
R. Barrett Kotnik, Applications Engineer, Lockheed Martin Aeronautics Co.

10:35 AM - 11:05 AM

Understanding One Shot Power Feed Drilling of CFRP/Al Stack for Aircraft Structure
Abdelatif Atarsia, Ph.D., Aerospace Manager, MAPAL, Inc.

11:10 AM - 11:40 AM

Integrated CNCs and Robots
Roger Hart, Engineering Manager, Siemens Industry, Inc.

Metallic Additive Manufacturing 10:00 AM – 11:45 AM

10:00 AM - 10:30 AM

Advances and New Technologies in Additive Manufacturing of Metals
Ian D. Harris, Ph.D., Technology Leader, EWI

10:35 AM - 11:05 AM

Surface Finish Enhancement of Ti-6Al-4V Components Fabricated via Electron-Beam Additive Manufacturing
Eric J. Fodran, Ph.D., Metallurgical and Manufacturing Engineer, Northrop Grumman

11:10 AM - 11:40 AM

Simulation and Modeling of the Metal Laser Powder Bed Fusion Process to Accelerate Certification
Wayne King, Ph.D., Director Accelerated Certification of Additively Manufactured Metals, Lawrence Livermore National Laboratory

Precision Machining: Innovative Metalworking Solutions 10:00 AM – 11:45 AM

10:00 AM - 10:30 AM

Enabling Tomorrow's Aerospace Technology Today
Mark Lohmeier, Aero Engine Program Manager, FANUC America Corporation

High Accuracy Platforms for Machining of Aerospace Components
Randy Von Moll, Director, Fives Cincinnati

11:10 AM - 11:40 AM

Handheld EDM Fastener Removal System
David Siedal, LM Fellow, Lockheed Martin/Manufacturing Technology

Machining of Composites 1:00 PM – 2:45 PM

1:00 PM - 1:30 PM

Drilling of Composites
Scott A. Daggett, Aerospace Specialist, OSG Tap & Die, Inc.

1:35 PM - 2:05 PM

Tips and Tricks for Drilling and Trimming Carbon Fiber and New Composite Materials
Mike MacArthur, Vice President of Engineering, RobbJack Corporation

2:10 PM - 2:40 PM

Cryogenic Machining of Titanium & Supply Chain Insertion
Jeff Langevin, Applications Engineer, Lockheed Martin Aeronautics
Jason Huff, Procurement Engineer, Lockheed Martin Aeronautics

Supply Chain Management 1:00 PM – 2:45 PM

1:00 PM - 1:30 PM

Planning and Designing a Lean Manufacturing Facility
Chris Williams, Project Manager, Burns & McDonnell

1:35 PM - 2:05 PM

Minimizing Energy Risk in A&S Manufacturing
Darren McKnight, Chairman, Board of Advisors, ZF Energy Development

2:10 PM - 2:40 PM

TBD

Quality, Measurement & Inspection 1:00 PM – 2:45 PM

1:00 PM - 1:30 PM

Machine and Production Uptime Through Predictive Maintenance Practices
Thomas Hoenig, President, GTI Spindle Technology, Inc.
Lisa Bailey-Beavers, VP Sales and Marketing, GTI Spindle Technology, Inc.

1:35 PM - 2:05 PM

Automated CCFX Inspection
Chad L. Victorino, Manufacturing Technology Engineer, Northrop Grumman

2:10 PM - 2:40 PM

Automated Metrology for Quality Control
Rohit Khanna, President, 3D Infotech

Finishing & Coatings **1:00 PM – 2:45 PM**

1:00 PM – 1:30 PM

Handheld Measurement System for Multi-Layer Coatings Inspection
Gary Ostrowski, Engineering Fellow, Northrop Grumman Corporation / Aerospace Systems
Yanko Sheiretov, Ph.D., Sr. Vice President, Product Development, JENTEK Sensors, Inc.
Juan Calzada, NDE for Low Observable System Program Manager, Air Force Research Laboratory

1:35 PM – 2:05 PM

Intelligent Sealant Application System (ISAS) Kaps
C. Y. Ingham, Automation Specialist, Systems & Materials Research Corporation
Malcolm D. Prouty, Ph.D., President, Systems & Materials Research Corporation

2:10 PM – 2:40 PM

In-Process Measurement of Specialty Coatings
David Zimdars, Ph.D., Manager of Terahertz Research and Development, Picometrix LLC, an Advanced Photonix Company
Owen H. Cupp, MSEE, Program Manager, Northrop Grumman Aerospace Systems
Miles H. Honkawa, Material & Process Engineer, Northrop Grumman Aerospace Systems
Juan Calzada, NDE for Low Observable System Program Manager, Air Force Research Laboratory



DAY TWO: WEDNESDAY, FEBRUARY 26

Inspection/NDT/ and Quality Assurance of Composite Systems **9:15 AM – 11:00 AM**

9:15 AM – 9:45 AM

Automated Composite Structure Inspection System (ACSIS)
Chris Esser, R&D Project Engineer, Ingersoll Machine Tools, Inc.

9:50 AM – 10:20 AM

Shearography NDT of Aerospace Composites
John Newman, President, Laser Technology, Inc.

10:25 AM – 10:55 AM

Quality Assurance of Surface Preparation Processes for Manufacture and Repair of Bonded Structures
Giles Dillingham, Ph.D., President, Brighton Technologies Group, Inc.

Fastener Technology for Integrated Assembly **9:15 AM – 11:00 AM**

9:15 AM – 9:45 AM

Automated Fastener Preparation and Kitting
Roger C. Richardson, Director of Business Development, Delta Sigma Company

9:50 AM – 10:20 AM

Development, Qualification, and Production of Pre-Sealed Aerospace Fasteners for Use with Manual and Automated Fastening Systems
Christopher M. Pavlos, Ph.D., Director of Development, Systems & Materials Research Corporation
Malcolm D. Prouty, Ph.D., President, Systems & Materials Research Corporation

10:25 AM – 10:55 AM

Non-Contact Fastener Flushness Inspection
Christopher Barrow, Senior Applications Engineer, Lockheed Martin Aeronautics

Additive Manufacturing: Aerospace Industry Trends **9:15 AM – 11:00 AM**

9:15 AM – 9:45 AM

An Overview of Additive Manufacturing at Lockheed Martin
Brian Rosenberger, LM Fellow, Lockheed Martin

9:50 AM – 10:20 AM

Maturation of High Temperature Laser Sintering Technologies and Infrastructure for Air and Space Vehicles
Pedro A. Gonzalez, Manufacturing Engineer, Northrop Grumman

10:25 AM – 10:55 AM

Recent Trends in Additive Manufacturing
Doug Czapllicki, Materials Engineer, Honeywell Aerospace

Emerging Technologies in Composite Manufacturing **9:15 AM – 11:00 AM**

9:15 AM – 9:45 AM

Waterjet Trimming and Drilling of CFRP Components for Advanced Aircraft
Mohamed A. Hashish, Ph.D., Sr. Vice President, Technology, Flow International Corporation

9:50 AM – 10:20 AM

Net Molded, Complex Shaped, High-Performance Composite Parts for Cost and Weight Reduction
Jason Gabriel, Account Manager, Eastern Region, North America, TenCate/CCS Composites

10:25 AM – 10:55 AM

Electroplated Additive Manufactured Parts - A Synergy of Technologies to Make Robust Composites Without Tooling
Sean Wise, President, RepliForm, Inc.

Composite Processes for Reduced Cost & Improved Quality **2:15 PM – 4:00 PM**

2:15 PM – 2:45 PM

Rate Up, Price Down: Improved Process Management, from the Freezer to the Autoclave, Reduces Costs and Enables Better Quality Control in High-Rate Production Environments
Avner Ben-Bassat, President & CEO, Plataine Technologies, Ltd.

2:50 PM - 3:20 PM

Reducing Autoclave Cycle Times Through the Use of Pressurized Water Mold Temperature Controllers

Kip Petrykowski, Business Development Manager - Composites, SINGLE Temperature Controls, Inc.

3:25 PM - 3:55 PM

Composite Processing Utilizing Real-Time Visibility of Viscoelastic Properties During Cure

Louis C. Dorworth, Division Manager, Abaris Training Resources, Inc.

Robotic Applications

2:15 PM – 4:00 PM

2:15 PM - 2:45 PM

Vision Guided Robotic Assembly System

David Siedal, LM Fellow, Lockheed Martin/Manufacturing Technology

2:50 PM - 3:20 PM

Automated Robotic Sanding

Jerry Brimer, Manufacturing Engineer, Coatings Automation, Northrop Grumman Aerospace Systems

3:25 PM - 3:55 PM

Advanced Robotic Applications

Chris Kolb, Aerobotix (invited)

Additive Manufacturing - Industry Collaboration

2:15 PM – 4:00 PM

2:15 PM - 2:45 PM

Advanced Additive Manufacturing Materials

Luke Rodgers, Senior Materials Engineer, Stratasys

2:50 PM - 3:20 PM

CSI: More Effective Manufacturing Collaboration for the Model-Based Environment

John Gray, Solution Manager, ITI TranscenData

3:25 PM - 3:55 PM

America Makes - The National Additive Manufacturing Innovation Institute: Investments in Additive

Rob Gorham, Deputy Directory - Technology Development, National Additive Manufacturing Innovation Institute (NAMII)

Precision Machining - Controls & Optimization

2:15 PM – 4:00 PM

2:15 PM - 2:45 PM

Real-Time Adaptive Control for Tool Optimization

Robert P. Caron, President, Caron Engineering, Inc.

2:50 PM - 3:20 PM

Innovative Processes and Products for Machining Titanium Aerospace Components

Michael Standridge, Industry Specialist Aerospace, Sandvik Coromant
Brian Hoefler, Research & Development Aerospace Team Leader, Sandvik Coromant

3:25 PM - 3:55 PM

Practical Adaptive Machining

Daniel J. Braley, Manufacturing Technology Engineer, Northrop Grumman Aerospace Systems

DAY THREE: THURSDAY, FEBRUARY 27

Assembling Composites

9:45 AM – 11:30 AM

9:45 AM - 10:15 AM

Automated Drilling and Countersinking of Composite Titanium Material Stacks One Shot

George N. Bullen, CPIM, President & CEO, Smart Blades, Inc.

10:20 AM - 10:50 AM

Composite Tooling Assembly Strategies

James Diedesch, Senior Manufacturing Engineer, Janicki Industries

10:55 AM - 11:25 AM

TBD

Dan Day, The Boeing Company

Accuracy in Integration & Assembly

9:45 AM – 11:30 AM

9:45 AM - 10:15 AM

Dimensional Engineering for Determinant Assembly: Applying Dimensional Engineering Tools to Optimize Assembly Processes

Don Jasurda, VP of Sales, Dimensional Control Systems, Inc.

10:20 AM - 10:50 AM

Developments in Robot Accuracy for Aerospace Manufacturing

Chris Blanchette, National Account Manager - Distribution, FANUC America Corporation

10:55 AM - 11:25 AM

Computer Aided Inspection for Better Precision Parts, Much Faster, at Lower Cost & with Greater Confidence

Bill Greene, Founder/Vice President of Business Development, Level3 Inspection

Additive Manufacturing: Aerospace Case Studies

9:45 AM – 11:30 AM

9:45 AM - 10:15 AM

3D Printing of a Rocket Engine

Youping Gao, Discipline Lead, Aerojet Rocketdyne

10:20 AM - 10:50 AM

Additive Manufacturing for High Pressure Hydraulic Valve Manifolds

Gerhard Hummel, Dipl.-Ing. MSc., Hydraulics System Engineer / Designated Certification Specialist, Airbus Operations GmbH

Frank Schubert, Dipl.-Ing., Scientific staff member, Technical University Chemnitz

Alexander Altmann, Dipl.-Ing. (FH), R&T Project Manager, Liebherr-Aerospace Lindenberg GmbH

10:55 AM - 11:25 AM

Additive Metal Applications for Gas Turbine Engine Components

Greg Morris, Strategy/Business Development, Additive Technologies, GE Aviation

Advanced Technologies
9:45 AM – 11:30 AM

9:45 AM - 10:15 AM
MicroBlasting Technologies: Optimizing Control and Automation
Colin Weightman, Director of Technology, Comco, Inc.

10:20 AM - 10:50 AM
Air Pollution Control Equipment for Aerospace Coating and Finishing
Scott Gagliostro, Sales Engineer, Munters

10:55 AM - 11:25 AM
Continuous Inspection for Web-Line Production Using Non-Contact Ultrasound
Anuj Bhardwaj, President & CEO, The Ultran Group

Additional Papers:

Synthesis, structure, and behaviour of a new CVD- TiB2 coating with extraordinary properties for high performance applications 149

Breaking the Ground in the Execution of the Mission 734
R. Resnick

Air Force Global Strike Command 750
Y. Mailes

Scanning Technology for the Production of Legacy Aircrafts 758
C. Rene-Bazin

Additive Manufacturing at Lockheed Martin Aeronautics 766
B. Rosenberger



Additive Manufacturing/3D Printing Resource Center – Booth 339

Explore the growing number of applications by visiting the Additive Manufacturing/3D Printing Resource Center. On display you will find parts representing major technologies including stereolithography, laser sintering and fused deposition modeling. You will also find information on how this technology can lower production expenses, speed product development, enable new designs, and change how and what you manufacture.

- **Morning Session: Tactical information**—A look at the technology landscape, what’s available and what you need to know to get started.
- **Afternoon Sessions: Strategic information**—How to map out your plan; choosing technologies, services and when to get in.



Meet the Additive Manufacturing/3D Printing Knowledge Bar Host



Todd Grimm, president of T. A. Grimm & Associates, was recently named as one of TCT Magazine’s 20 most influential in the additive manufacturing (AM) industry. A consultant, writer, author, speaker and advisor, he is editor for ENGINEERING.com and columnist for The TCT Magazine, and the author of User’s Guide to Rapid Prototyping. Todd serves on the board of the Additive Manufacturing Users Group (AMUG) as its AM industry advisor and has served as chairman of the Society of Manufacturing Engineers’ (SME) community for additive manufacturing.



Additive Manufacturing Certificate Program

Review Course: Monday, February 24th, 9am – 3pm, UC – Irvine

Exam: Tuesday, February 25th, 12:00pm – 3:30pm, Long Beach Convention Center



The review course will include instruction on foundational additive manufacturing principles and will be supported by observation of additive manufacturing applications in action. Course attendees will participate in practice exercises that incorporate concepts and applications from the lecture and lab.

Completing the exam and receiving the Additive Manufacturing Certificate serves as verifiable proof of your foundational

knowledge. While the review course is recommended for exam candidates, it is not required to sit the exam. Knowledge and expertise with multiple materials, processes, and equipment are necessary. It is strongly advised that all potential examinees take the pretest on the website to determine readiness. Additional information may be found on the website: www.sme.org/rtam-certificateprogram.