EXPANDYOUR SPHERE OF INFLUENCE IN THE AEROSPACE AND DEFENSE MANUFACTURING INDUSTRY



EXPOSITION AND CONFERENCE APRIL 5-7, 2011 PRESENTED BY

ANAHEIM CONVENTION CENTER ANAHEIM, CALIFORNIA WWW.AERODEFEVENT.COM



Society of Manufacturing Engineers

EXECUTIVE COMMITTEE





NORTHROP GRUMMAN Raytheon GENERAL DYNAMICS BO! Helicopter



MANUFACTURING 2011

EXPOSITION AND CONFERENCE | APRIL 5-7, 2011 ANAHEIM CONVENTION CENTER | ANAHEIM, CALIFORNIA WWW.AERODEFEVENT.COM

INNOVATIONS AT THE CORE OF AEROSPACE AND DEFENSE

Prepare yourself for AeroDef, a landmark event in aerospace and defense manufacturing.

- The first event devoted to the highly specialized needs of these manufacturing sectors.
- The only event to bring together the entire aerospace and defense manufacturing enterprise.
- An event of such importance to aerospace and defense that OEM executives are taking an active role in its development.

Senior executives from Boeing, Lockheed Martin, Northrop Grumman, Raytheon, General Dynamics, Bell Helicopter, the National Center for Defense Manufacturing and Machining and other organizations are working with SME to plan AeroDef – assuring you an unprecedented opportunity to meet those elusive buyers and hard-to-reach executives.

If your company provides cutting-edge technologies or the systems to support them, OEMs and their supply chains will be actively looking for you.

Don't wait when opportunity knocks.



EXECUTIVE COMMITTEE MEMBERS

Dianne Chong VP of Assembly, Factory and Support Technologies, Boeing Engineering, Operations & Technology The Boeing Company

Bill Saathoff Director, Production Engineering & Technology Lockheed Martin Aeronautics

Jim Calas Sector Director, Manufacturing Engineering Operations Northrop Grumman Aerospace Systems

Arlene Dabbs Director Advanced Manufacturing Engineering SAS Operations Raytheon

CALL NOW TO RESERVE EXHIBIT SPACE: Phone: 800.733.3976 Fax: 313.425.3407.

More information available at www.aerodefevent.com

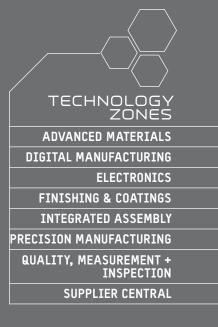
Dean Bartles Ph.D.

Paul Oldroyd Technical Fellow, Manager, Manufacturing Research & Technology Engineering & Xworx Bell Helicopter/Textron Inc.

Ralph Resnick VP, Chief Technology Officer and Director, Corporate Development National Center for Defense Manufacturing & Machining



VP & GM, Large Caliber Ammunition General Dynamics - Ordnance and Tactical Systems Division



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EXECUTIVE COMMITTEE





NORTHROP GRUMMAN

Raytheon

GENERAL DYNAMICS Ordnance and Tactical Systems











Turn to pages 7-9

breakdown of the

applications and

technologies that

will complement

Technology Zone.

and compete in your

for a more detailed

products, processes,

TECHNOLOGYZONES

Exhibits are organized by technology zones to help buying teams see each stage of the manufacturing process and find the specific technologies they want to see.

ADVANCED MATERIALS

Manufacturers of high performance materials and the manufacturing processes that make them possible

DIGITAL MANUFACTURING

Suppliers of computer integrated technologies that design, manufacture, test and simulate, together with rapid and additive technologies

ELECTRONICS

Companies that specialize in the design and integration of complex and dynamic electronic systems

FINISHING & COATINGS

Manufacturers of aerospace and defense coatings technology that can increase stealth endurance, quality and performance in a high stress environment

INTEGRATED ASSEMBLY

Companies that produce advanced techniques for manufacturing and assembly that enable aerospace and defense suppliers to meet stringent cost targets, quality requirements and time constraints for increased production

PRECISION MANUFACTURING

Manufacturers of high tolerance parts using advanced materials that feature complex surfaces, thin walls and challenging part geometries

QUALITY, MEASUREMENT + INSPECTION

Companies with the most advanced inspection, quality control, validation methods, and equipment for mission critical operations

SUPPLIER CENTRAL

The full spectrum of services for supplier partnering

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THE NEW REALITY FOR AEROSPACE AND DEFENSE **CUSTOMERS**

Military and commercial customers are under mounting pressure to change the way they do business. They need:

- Processes to mitigate risks in the transition from development to production
- Advanced technologies that fabricate, automate, and validate the assembly process from design and engineering through the build cycle

The large OEMs need the supply chain to take over more of the manufacturing process.

- produced components.
- systems.

Show them where you fit in the value chain.

More information available at www.aerodefevent.com

Jim Calas.

Sector Director.

Manufacturing

Engineering Operations

"We think AeroDef could

be groundbreaking. I don't

know of another show so

focused on aerospace and

Having the major aerospace

defense companies involved

defense manufacturing.

in the planning process

next level."

will take this event to the

Northrop Grumman

Aerospace Systems



- New technologies to make manufacturing more flexible and efficient
- Solutions to manufacturing challenges before they occur
- Affordable next-gen systems

• Companies with products that can compress time-to-market. • Suppliers that can deliver lighter, stronger, and more quickly

• Teams working in lockstep to develop the next generation of commercial aircraft, military programs, and tactical defense

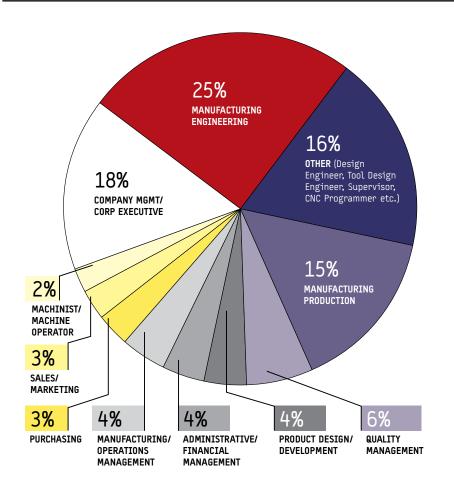
TARGETED ATTENDING COMPANIES

ACE Clearwater Enterprises Adams Rite Aerospace AERnnova Aero Engineering Inc Aerojet Applied Aerospace Structures Corp ATK BAE Systems Inc Bell Helicopter Textron Boeing Curtiss-Wright Controls Inc Department Of Defense Department Of The Air Force Department On The Navy GE Aviation General Atomics Aeronautical Systems General Dynamics GKN Aerospace Goodrich Corporation Gulfstream Aerospace Hamilton Sundstrand awker Pacific Aerospace Helicopter Technology Corp [|] Hitco Carb<u>on Composites In</u> ioneywell Aerospace International Aero Engineering ITT Integrated Structures Jaco Engineering Jacobs Technology et Propulsion Laboratory -3 Communications Lisi Aerospace Litton Guidance & Control Systems Lockheed Martin Aeronautics M7 Aerospace MD Helicopters Inc Meggitt Aerospace lojave Air Group Lopogram Systems Naval Air Warfare Center Nelson Aerospace Inc Nordisk Aviation Products Northrop Grumman Aerospace Systems Orbital Sciences Corp Pacific Airframe & Engineering Pacific Bulletproof Parker Hannifin Pratt & Whitney Precision Aerostructures Precision Ferrite & Ceramics Inc Raytheon Repair Tech International Inc Rocketdyr Rockwell Collins Rolls Royce Aircraft Engines Sandia National Labs Sikorsk Spirit AeroSystems Fag Tactical Aerospace Group Teac Aerospace Technologies Teledyne Technologies United Space Alliance nited Technologies /est Coast Aerospace /oodward Airframe Systems

CONVENIENT FOR **BUYERS AND SELLERS**

Anaheim is in the heart of aerospace country. California is home to more than 40,000 aerospace companies and suppliers. Boeing, Lockheed Martin, Raytheon, Northrop Grumman, and ATK are just some of the leading companies with major operations in California, and they are supported by thousands of smaller firms that provide the engineering, design and manufactured components that fuel the global aerospace and defense industries. Anaheim is also a short flight for key aerospace clusters in other states.

AUDIENCE PROFILE





Aerospace and defense manufacturing has become extremely specialized. On the exhibit floor, attendees will have the opportunity to see the entire manufacturing thread, from enabling technologies to the most advanced systems.

The AeroDef Innovations areas scattered throughout the show floor also feature an overview of emerging technologies and new applications.

ADVANCED MATERIALS

- Alloys
- Autoclaves
- Casting & Fixtures
- Ceramics •
- Cladded Metals
- Composites
- Exotics
- Inconel
- Metals
- Nano Materials •
- Plastics
- Titanium

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Bill Saathoff, Director, **Production Engineering &** Technology, Lockheed Martin Aeronautics

"Travel budgets are tight, so any time we can get a group together and cover a lot of territory, that has great value. Our customers in the government are looking for radical changes in the way business is done, so we'll be sending our manufacturing technology group. I look forward to AeroDef to tell the industry what we really need."

DIGITAL MANUFACTURING

- Additive Manufacturing
- CAD/CAM
- Design
- Design for Manufacturing & Assembly (DFMA) ٠
- Direct Digital Manufacturing
- Enterprise Resource Planning (ERP)
- Finite Element Analysis (FEA)
- FMEA
- Material Requirements Planning (MRP)
- Modeling & Simulation
- Product Lifecycle Management (PLM)
- Product Development
- Prototypes
- Rapid Technologies
- Rapid Tooling

ELECTRONICS

- Batteries & Power Systems
- COTS and Open Architectures
- Data Storage
- Electro-Optics
- Embedded Systems
- Fiber Optics
- Integrated Circuits
- Interconnect Devices
- Micro Electro Mechanical Systems (MEMS)
- Networking
- Piezo Systems
- Relays
- **RF** Products
- Semiconductors
- Sensors
- Software
- Transducers



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FINISHING & COATINGS

- Adhesives
- Anodizing
- Anti-corrosion
- Brazing •
- Chemical Processing •
- Cleaning-Ultrasonics •
- Coating Measurement & Analysis •
- ٠ Cold Spray
- Deburring •
- Electroplating •
- Electrocoating • •
- Environmental •
- Heat Treating Painting (Liquid)
- •
- Plating
- Powder Coating • Pretreatment •
- Process Automation Control •
- Shot Peening
- Thermal Spray Coating •
- Vibratory Finishing
- Wet Blasting

INTEGRATED ASSEMBLY

- Adhesives
- Assembly
- Automated Drilling •
- End Effectors
- End-of-Arm Tooling
- Fastening
- Joining
- Laser Tracking
- Motion Control
- Motors & Drives
- RFID/RTLS (Real Time Location Systems) •
- Robot Guidance •
- Robotics •
- Safety
- Software
- Tool Changers
- Vision Systems
- Welding

Dianne Chong, VP of Assembly, Factory and Support Technologies, Boeing Engineering, Operations & Technology The Boeing Company

"The specific emphasis on aerospace manufacturing will set AeroDef apart. Also the direct contact with customers. Suppliers can find out the specific technologies we need and can use this to direct what their companies do to develop or refine their products."



PRECISION MANUFACTURING

- Boring
- Broaching
- CNC
- Deburring
- Drilling & Tapping
- EDM
- Fixtures
- Flexible Manufacturing Systems •
- Forming & Fabricating
- Grinding
- High Speed Machining
- Machine Controls
- Machine Verification Software
- Micro-Machining

• Screw Machining

Workholding

Waterjet Cutting

- Milling
- Multi-Tasking Machines
- Saws

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Tooling

Welding

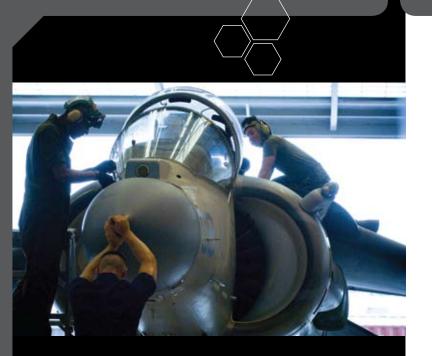
Turning



- 3D Scanning & Reverse Engineering
- AS9100-NADCAP Certification
- CMMs
- Data Acquisition Management
- FMEA
- Foreign Object Damage/Debris (FOD)
- Laser Scanners
- Laser Tracking Systems
- Machine Vision
- Metrology
- Multi Sensor & Optical Systems
- Non-Destructive Testing & Evaluation
- Portable Measuring Arms
- Probing Systems
- Software
- SPC-Statistical Process Control
- Structural Fatigue & Material Testing
- Testing Labs
- Thermal Imaging Cameras
- X-Ray

SUPPLIER CENTRAL

- Assembly Services
- Components
- Consulting
- Design Services
- Engineering Services
- Environmental
- Equipment Repair
- Kitting
- Machine Shops
- MRO
- Service Bureaus
- Service Management •
- Staffing and Recruiting •
- Sub-Assemblies •
- Sub-Systems •
- Supply Chain Management
- Testing & Laboratory Services
- Training & Education



INTRODUCING



Executives from Boeing, Lockheed Martin, Northrop Grumman, Raytheon, General Dynamics, Bell Helicopter and the National Center for Defense Manufacturing and Machining will be among thousands of aerospace and defense contractors actively searching for new technology-based products to reduce the time and cost of the development cycle.

Exhibitors can request direct access to representatives from these prime contractors through AeroDef's "Flyby" program, oneon-one 15-minute meetings that are a business twist on speed dating.

For more information, visit www.aerodefevent.com.

A LABORATORY FOR LEARNING

For high-level attendees, a high-level technical conference is of critical value. and a major focus of OEM executives shaping the agenda for AeroDef. These workshops will offer attendees and exhibitors the opportunity to discuss the pervasive challenges that cross manufacturing lines.

Technical Conference – high-level speakers and panels on management issues, best practices, and lessons learned in integrating new technologies and applications

Social Learning - facilitated sessions for interactive discussions on problem solving, industry issues, and design considerations

AeroDef Innovations - an overview of emerging technologies and new applications

Market Outlook and Forecast - the expected impact of Federal budget constraints, production forecasts, globalization and demand fluctuation, future workforce and lean manufacturing

Virtual Community – to continue 24/7 leading up to and beyond the event, facilitating new relationships and enabling additional access to solutions and technical resources

The Talent Pool - Use AeroDef to scout for new talent and engage the next generation in technology and manufacturing

Networking – Expositions and conferences are the granddaddy of networking events, and a chance to mix social occasions with business. AeroDef will provide opportunity for you to expand your circle and meet your customers throughout the three-day event.



Dean Bartles, Ph.D. VP & GM, Large Caliber Ammunition General Dynamics -**Ordnance and Tactical Systems Division**

"AeroDef's advantage is in its direct focus on aerospace and defense manufacturing. Other manufacturing shows don't seem to draw high-level executives from aerospace and defense. This is a good venue for companies in digital manufacturing, product lifecycle manufacturing, intelligent machining—and any state of the art technology."

EXHIBITOR PROMOTIONAL OPPORTUNITIES

Free Exhibitor Badges - Unlike other shows that allocate the number of badges by the size of your booth, AeroDef exhibitors receive an unlimited number of free floor passes to maximize your opportunities to network, identify new technologies, and see how your competitors are positioning their products and services.

SUPERCHARGE YOUR PRESENCE

There you'll be. In front of thousands of aerospace and defense professionals. People you've been trying to get in to see. Buyers. Influencers. Press. Analysts. Peers. Make every minute and dollar of your investment count. Think outside the booth and build your brand through AeroDef Sponsorship Opportunities.

These highly visible platforms include Keynotes, Town Hall panel discussions and VIP receptions. Or work directly with our sponsorship team to develop a custom

approach that meets your marketing objectives. Custom opportunities can include private lunch and learn programs and VIP hospitality events that can be developed with your budget in mind!

For more information on sponsorship opportunities at AeroDef Manufacturing 2011, contact Kara Nacarato at 313.425.3110 or email sponsorships@sme.org.

It's Your Moment. Make the Most of It.

Paul Oldroyd Technical Fellow. Manager, Manufacturing Research & Technology Engineering & Xworx Bell Helicopter/Textron Inc.

"A show like Aerodef can make us aware of emerging technologies that may be disruptive in nature. Something that provides a step function change rather than an incremental change. New ways to automate or integrate automation into a conventional manufacturing process. Developing the supply chain is huge."

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More information available at www.aerodefevent.com

LOGISTICS



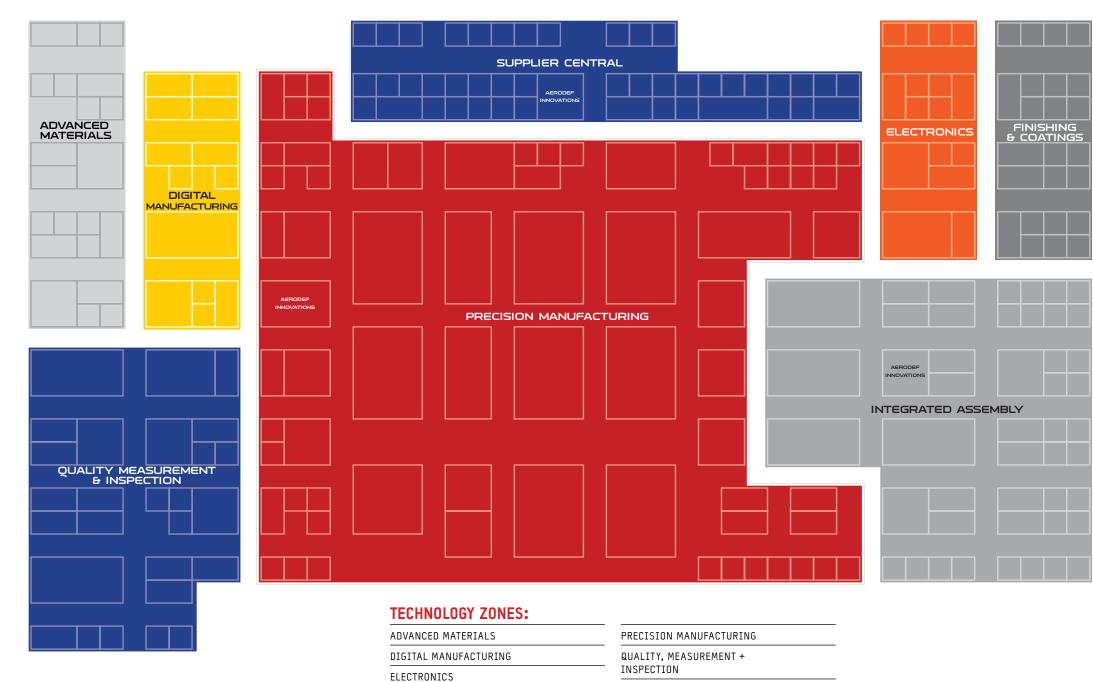
To accelerate business, innovation, and interaction at all levels of the supply chain, SME is extending the following benefits **FREE** or at nominal cost to AeroDef exhibitors:

Exhibitor Invites is a simple, highly effective and FREE alternative to the customer tickets traditionally offered to exhibitors. With Exhibitor Invites, you can customize, preview, and approve a series of three html emails that include your booth number, logo, personalized text, and product photos-without turning over your customer list to SME. All it takes is 20-30 minutes. Compare that to the time and work required to mail merge and send tickets to your customers and prospects. To maximize your business opportunities, SME is absorbing the cost and offering this service FREE to our exhibitors.

Pre-show Mailing List - FREE to all exhibitors, these lists include all pre-registered attendees who have opted in to receive exhibitor mailings. Full contact information is included. The pre-show list is updated weekly prior to the show and available in Excel format.

Countdown to the Show! - To generate momentum and attendance in the weeks leading up to the show, AeroDef is offering a limited number of opportunities at a nominal fee, to sponsor or advertise in our Countdown to the Show e-Newsletters that will provide news, show updates, and exhibitor news and announcements.

CALL NOW FOR COMPLETE PROGRAM DETAILS: Phone: 800.733.3976 Fax: 313.425.3407



FINISHING & COATINGS INTEGRATED ASSEMBLY

Join the AeroDef conversation at twitter.com/aerodefmfg More information available at www.aerodefevent.com



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FLOOR PLAN

SUPPLIER CENTRAL



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JOIN THE INNER CIRCLE OF AEROSPACE AND DEFENSE MANUFACTURING

Senior executives from principal OEMs want to see you at AeroDef. It is in their best interest.

- They need to find the next source of emerging technologies.
- They need new applications to modernize the supply chain.
- They are helping SME develop AeroDef because they have monumental challenges that require your solutions.

Don't run the risk of missing future contracts and teaming opportunities.

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