

CAMX

THE COMPOSITES AND ADVANCED MATERIALS EXPO

OCTOBER 26-29, 2015: CONFERENCE / OCTOBER 27-29, 2015: EXHIBITS
DALLAS, TEXAS USA / DALLAS CONVENTION CENTER

2015 POST-SHOW REPORT

COMBINED STRENGTH
UNSURPASSED INNOVATION

www.theCAMX.org

Produced by



Official Media Partner



GARDNER
Business Media, Inc.

CAMX 2015 Overview

94%

of attendees made new connections at CAMX

98%

of attendees recommend CAMX

"What a great show and a great atmosphere. Everyone was willing to share ideas and talk about their products. There was great excitement about the future of the composites industry. I can't wait to come back in 12 months time to see what new applications have been developed."

Tecnon OrbiChem

7,470

TOTAL ATTENDEES

50

COUNTRIES REPRESENTED

CAMX 2015 was held October 26-29, 2015 in Dallas, TX and proved to be the biggest and best attended North America composites event covering the advanced composites and FRP composites industries under one roof. **In only its second year, CAMX grew in size with more attendees and more exhibit space**, establishing itself as the largest global composites and advanced materials event in North America.

CAMX – The Composites and Advanced Materials Expo – is the one source for connecting and advancing all aspects of the world's Composites and Advanced Materials communities: R&D, engineering, manufacturing, service providers and end-users. **Regardless of the application** – transportation, aerospace, marine, wind energy, software, construction and infrastructure, medical, academics, sports and leisure – **CAMX is America's go-to event in the U.S. for the global composites and advanced materials communities.** It provides a venue for companies and individuals to grow business opportunities, develop industry skills, understand their potential impact on the industry and new markets, and showcase new innovations in products and technology. CAMX is jointly owned and produced by ACMA and SAMPE.

Event Highlights

- 550 Exhibitors
- 7.5 Unopposed Exhibit Hall hours
- CAMX Location: Dallas, Texas
- CAMX Virtual Career Fair
- 307 Technical/Education Sessions
- Co-located meetings and workshops with IACMI, ASTM D30, SPE, and FIBERS Workshop
- CAMX Awards featuring new technologies in the marketplace
- Opening Keynote Dr. Gary Smyth, Executive Director of Global R&D, GM

A Composites and Advanced Materials Event

COUNTLESS
Networking Opportunities

UNRIVALED
Exhibit Hall

LARGEST
Conference Program

About ACMA

The American Composites Manufacturers Association (ACMA) is the world's largest trade group representing the composites industry. It serves its members and the industry by providing strong, proactive leadership in growing the composites market and technical, legislative and regulatory affairs. To learn more and become a member, visit www.acmanet.org.



About SAMPE

The Society for the Advancement of Material and Process Engineering (SAMPE), is a global professional member society, provides information on new materials and processing technology via technical meetings, journal publications or books in which professionals in the field can exchange ideas and air their views. To learn more and become a member, visit www.sampe.org.



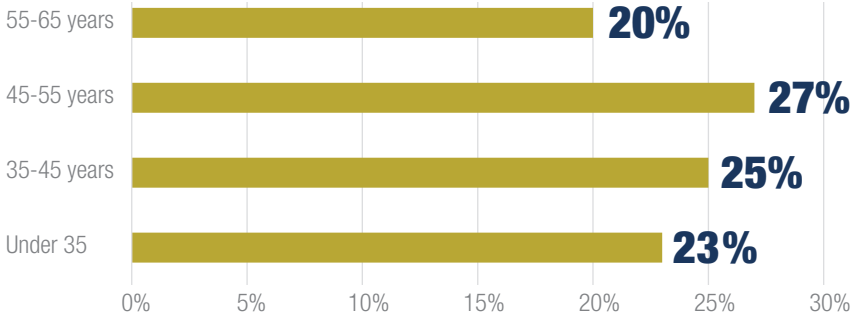
Packed house at the General Session.



On the floor manufacturing demonstrations.

Delegate Demographics

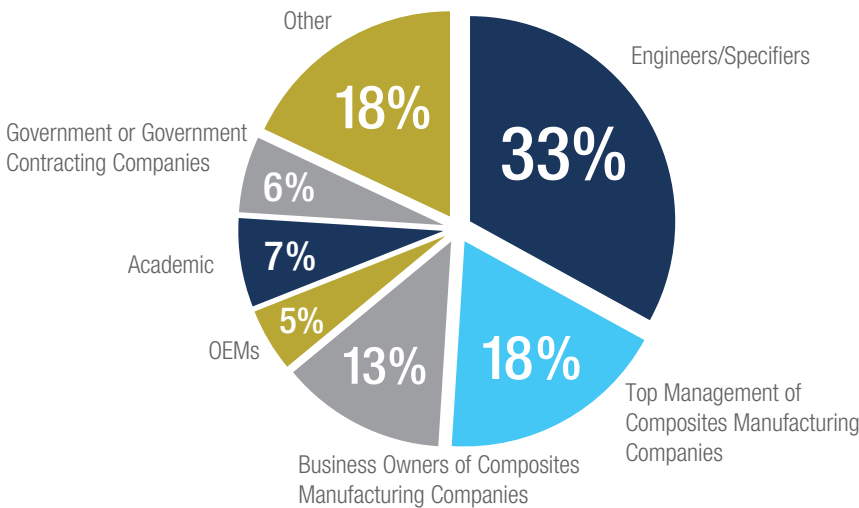
AGE RANGE



74% of attendee's companies are trying to expand into new markets

86% of companies are interested in reaching international markets, including Europe, South America, North America, Russia, India and China

ATTENDEE ROLE & COMPANY TYPE



72% OF ATTENDEES ARE INTERESTED IN ATTENDING CAMX 2016 IN ANAHEIM, CALIFORNIA

MARKET SEGMENTS:

- Aerospace: **14%**
- Automotive: **9%**
- Construction: **7.5%**
- Military/Government Applications: **7.5%**
- Marine: **6.5%**
- Energy (Wind): **6%**
- Energy (Power Generation/Other): **5.5%**
- Mass Transportation: **5%**
- Pipe and Tank: **5%**
- Less than **5%** per segment —

Architectural, Consumer Goods, Space, Sports Equipment, Electronics, Medical, Recreational Vehicles, Bath, Solid Surface/Cast Polymer, Swimming Pools, Other

TOP MOTIVATING REASONS FOR ATTENDING CAMX

- Networking Opportunities: **22%**
- Exhibit Hall: **14%**
- Conference Program: **11%**
- Looking for Specific Equipment/Materials to purchase: **11%**
- Find New Markets: **10%**



Sales and networking in the Exhibitor Lounge.



Poster Boards of the latest research.

CAMX Exhibit Hall

For the second time in North America, composites and advanced materials users, manufacturers and suppliers had access to the full spectrum of industry solutions in one location. Combining high-volume/low-cost material providers with low-volume/high-performance material delivered a unique experience and unprecedented opportunities for attendees and exhibitors alike. With 549 exhibiting companies and close to **2,000** different brands on display at CAMX, the show floor was the largest ever industry marketplace in the Americas.

Exhibitors hosted business meetings in their booths, at the convention center and at surrounding hotels. Off site venues were also packed each evening with receptions, customer dinners and other events filled with CAMX attendees.

549

EXHIBITING COMPANIES

111,000

net square feet of sold
exhibit booth space

20

EXHIBITING COUNTRIES
REPRESENTED

"I returned with many business card contacts and brochures to be utilized in our business operations."

TCB Composite

"The show was very well done and gave us many opportunities to meet existing and potential new customers."

R J Marshall

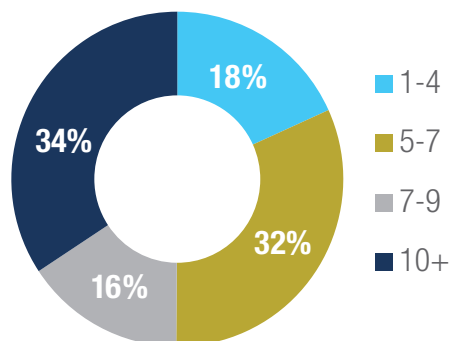
"The Show keeps getting bigger and better! Makes it nice to have the industry all under one roof for networking and discovering."

Cambro Manufacturing

EXHIBITOR CATEGORIES

- Additives/Fire Retardants/Fillers
- Adhesives & Sealants
- Armor/Ballistic Materials
- Assembly/Bonding Equipment
- Auxiliary Processing
- Braiding, Knitting/Stitching
- Carbon Fiber Systems
- Carbon Fibers
- Ceramic Materials
- Cleaning Products
- Coatings
- Composites Structural Elements
- Compounds/Putties
- Consulting Services
- Core Materials
- Cutting Equipment
- Education/Training
- Fabricating Supplies
- Fabrics
- Foams
- Glass Fibers
- Manufacturing Process Development
- Material Research and Development
- Matrix Materials
- Mold Release Systems
- Nano Materials
- Ovens/Dryers/Furnaces
- Preforms
- Prepregs
- Presses/Compression
- Reinforcements
- Repair
- Resin and/or Gel Coat
- Resin Transfer Molding
- Testing Equipment
- Testing Laboratory
- Thermoplastics
- Tools and Tooling Equipment
- Other

HOURS SPENT BY ATTENDEES IN THE EXHIBIT HALL



82%

OF ATTENDEES SPENT
OVER FIVE HOURS IN
THE EXHIBIT HALL

General Session & Awards

In both the CAMX Awards and the Conference Program, CAMX showcased innovations in materials and manufacturing, best practices in all aspects of the industry, and solutions to challenges. The CAMX Conference Program is unsurpassed in terms of content and experts on hand to share their knowledge. During the most extensive conference program for the industry anywhere in the world, CAMX delivered three full days of sessions comprised of Technical Papers, Education Sessions, and Panels in twelve tracks and over 55 unique topics and categories. From technical research on all aspects of advanced materials and composites, to manufacturing and business management topics, and trends and insights on the future of the industry, attendees received valuable information presented by expert speakers in all areas.

GENERAL SESSION

Dr. Gary Smyth, Executive Director of Global Research and Development at General Motors Company, gave a presentation that provided insights into the future of composites in the automotive market, including lessons learned from the Corvette's use of composites. He also provided a high-level perspective on transformational change now going on in the automotive industry.



INNOVATION AT CAMX

The CAMX Award recognizes industry innovations and leadership that have the potential to significantly impact composites and advanced materials in the marketplace. The 2015 CAMX Award was presented to two game-changing entries that reflect the depth and breadth of the CAMX theme: Combined Strength. Unsurpassed Innovation. All 13 companies who were finalists, as well as the two winners, join an elite group of leaders and visionaries within the composites and advanced materials community.

COMBINED STRENGTH AWARD

BAAM CI (Big Area Additive Manufacturing-Cincinnati Incorporated)
Submitted by: Cincinnati Incorporated, in conjunction with ORNL

UNSURPASSED INNOVATION AWARD

TCA Ultra Lite – The Ultimate Lightweighting Material
Submitted by: Continental Structural Plastics



POSTER SESSION WINNER

1st Place - Overall Winner

Carbon Nanotube Fiber Composites for Simultaneous Structural Health Monitoring and Strengthening of Steel Structures:

PRIMARY AUTHOR: University of Delaware, Sagar Doshi, Shafique Ahmed, Erik Thostenson, Jennifer McConnell, Thomas Schumacher.



VIRTUAL CAREER FAIR

The CAMX Virtual Career Fair connected CAMX job seekers with companies seeking qualified job candidates within the composites and advanced materials industry. Hosted by AeroIndustryJobs.com and CompositesIndustryJobs.com, the career fair featured 60 composites and advanced materials industry jobs.

"This conference and exhibition is a very exciting development for the composites industry."

EmergenTek LLC



Conference Program & Paper Award Winners

307
PRESENTATIONS

372
SPEAKERS

"CAMX is the go-to place for advanced material concepts and contacts. In only two years, it has brought together an extensive representation of the advanced materials industry. Keep up the good work!"

South Dakota School of Mines

CONFERENCE TRACKS

- Accelerating Materials Insertion
- Advances in Traditional Materials
- Business & Regulatory
- Design, Analysis, & Testing
- Green & Sustainability
- Manufacturing
- Market Applications (Aerospace and Defense)
- Market Applications (Industrial/Consumer)
- New Materials
- Non Destructive Evaluation
- Processes
- Work Force Development and Technologies

BEST IN TRACK WINNERS

ACCELERATING MATERIALS INSERTION

Molecular Dynamics Simulation Procedure to Predict Thermoplastic Solubility and Phase Separation Behavior in a Thermoset. *Christopher Childers, The Boeing Company*

ADVANCES IN TRADITIONAL MATERIALS

An Evaluation of Test Methods for Determining Adhesive Shear Stress-Strain Properties. *Kara Storage, Air Force Research Laboratory, RXSA*

DESIGN, ANALYSIS, & TESTING

The Effect of Fracture Toughening a Thermoset Resin on the Fracture Toughness of a Fiber-Reinforced Laminate. *Stephen Brooks, Reichhold, LLC*

GREEN & SUSTAINABILITY

Silk for Light-Weight Syntactic Foams and Tough Textile Composites. *Darshil Shah, University of Cambridge*

MANUFACTURING

Autonomous Systems: Driving Composite Materials in a New and Disruptive Direction. *Shawn Walsh, Army Research Laboratory*

MARKET APPLICATIONS (AEROSPACE AND DEFENSE)

Development of an Ablative 3D Quartz / Cyanate Ester Composite for the Orion Spacecraft Compression Pad. *Jay Feldman, ERC Inc. - NASA Ames Research Center*

MARKET APPLICATIONS (INDUSTRIAL/CONSUMER)

Evaluation and Implementation of FRP Shapes for Lock and Dam Structures. *Ruifeng Liang, West Virginia University*

NEW MATERIALS

New DCPD Based Resins for Low Cost Composites. *Hui Yu, New Functional Polymers, LLC*

NON DESTRUCTIVE EVALUATION

Triboluminescent Composite with In-situ Impact Sensing Capability. *David Olawale, Nanotechnology Patronas Group Inc., FAMU-FSU College of Engineering*

PROCESSES

Effect of Overlap Length on the Mechanical Properties of Flake Reinforced Thermoplastic Composites. *Ferrie van Hattum, Saxion University of Applied Sciences*



Attendees enjoyed topics in 13 composites technology tracks.

THANK YOU CAMX 2015 Volunteers & Sponsors

CAMX STEERING COMMITTEE

Karin Anderson, PDS Technical Services
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Carl LaFrance, Molded Fiber Glass Companies
Marcy Offner, Composites One
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Tony Bennett, AkzoNobel Polymer Chemistry
Bill Dolan, Dolvations
Matthew Hayden, Polynt
Richard Higgins, HK Research Corporation
James Jones, Composites Consulting Group
Jake Marquis, Kenway Corporation
Rick Pauer*, Polynt
Fred Watson, Graco, Inc.

*Committee Chair



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Michael Stevens, Ashland, Inc.
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Sandeep Vennam, PPG Fiber Glass

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CATEGORY
CHAIRS & REVIEWERS

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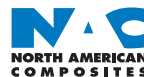
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Premier



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Contributor



CAMX

THE COMPOSITES AND ADVANCED MATERIALS EXPO

September 26–29, 2016: **Conference** / September 27–29, 2016: **Exhibits**
Anaheim Convention Center / Anaheim, California

COMBINED STRENGTH.
UNSURPASSED INNOVATION.

DISCOVER exciting new industry developments
GROW your business opportunities
DEVELOP industry skills and connections
RECOGNIZE your potential impact on the industry

SAVE THE DATE

2016

www.theCAMX.org

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PRODUCED BY

