DETAILED AGENDA INSIDE!

Built2Last:

Composites Durability Workshop

Presented by Composites One in Partnership with IACMI

February 23 - 24 • Laboratory for Systems Integrity & Reliability (LASIR) • Nashville, TN

Workshop Address:
Laboratory for Systems Integrity & Reliability (LASIR)
566 Mainstream Drive STE 700
Nashville, TN 37228

VANDERBILT SCHOOL OF ENGINEERING

LASIR Laboratory for Systems Integrity & Reliability

Networking Reception:
Please join us for a networking reception and supper-by-the-bite at The Row Kitchen & Pub on Thursday, February 23, from 6:00 p.m. - 9:00 p.m.

The Row Kitchen & Pub
110 Lyle Ave
Nashville, TN 37203

Register at: www.built2lastworkshop.eventbrite.com

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Composites One ®

ClosedMold Alliance — Composites One • MVP RTM North Technologies

The Institute for iacmi — Advanced Composites Manufacturing Innovation

The Composites Institute

MVP — Magnum Venus Products

8:00 a.m. **Introductions and Review of Agenda**
Corbett Leach, Lead Technical Support Manager, Composites One

Welcome
Bryan Dods, Chief Executive Officer, IACMI - The Composites Institute
Walt Beaver, VP Sales - East, Composites One

8:15 a.m. **Welcome to Vanderbilt University and the Laboratory for Systems Integrity & Reliability**
Introduction By: Douglas Adams, Distinguished Professor and Chair of Civil and Environmental Engineering and Daniel F. Flowers, Professor of Mechanical Engineering
Presented By: Philippe Fauchet, Dean of the School of Engineering, Dean's Chair in Engineering

8:30 a.m. **Industry Sector: Defense**
Composite Use in Rotorcraft and Durability Challenges

Presented By: Bill Fallon, Technical Fellow, Materials & Process Engineering, Sikorsky Aircraft
Bill Fallon is a Lockheed Martin Technical Fellow with 37 years of experience in Materials & Process engineering. A graduate of Rensselaer Polytechnic Institute, he has worked as a metallurgist in the steel industry, an advanced composite technology engineer in aerospace, and spent the past 32 years at Sikorsky leading, developing and implementing advanced material solutions on several programs. Bill led the introduction of more than 60 new materials, including a significant number of advanced composites on the RAH-66 Comanche Helicopter Program, most of which are now found on Sikorsky's current S-92®, S-76®, BLACK HAWK and the CH-53K aircraft. He has led the maturation of composite rotor blade manufacturing, composite process yield improvement, and the growth of composite usage at Sikorsky. His recent focus has been on long-term environmental effects on composite parts. Prior to becoming a Fellow, Bill managed Sikorsky's Materials & Process Engineering organization. He is a member of the Industrial Advisory Board for the University of Connecticut's School of Material Science & Engineering. Bill has also taught a Composites Failure Analysis Course for the National Transportation Safety Boards Helicopter Accident Investigation Program.

Out-of-Autoclave Prepreg Demonstration
Presented By: Dan Licata, Mid West Sales Manager, Gurit Composite Materials, Gurit (USA) Inc.
Direct to Part Tooling
Presented By: Dennis Williams, West Coast Technical Sales and Distribution Manager, SikaAxson U.S.
Durable Rapid Epoxy Sandwich Tooling
Presented By: Pat Cunningham, Director of Sales, SikaAxson U.S.
Demonstration: Composite Armor Backing Material Using Hybrid Thermoplastic Unidirectional Fabrics
Presented By: Will Chafin, Advanced Composites Sales Specialist, Composites One

10:00 a.m. **Break: Visit Our Vendor Tables**

10:15 a.m. **Industry Sector: Non Destructive Evaluation Methods**
Durability of Composites and Fiber Optic Sensing
Presented By: Dayakar Penumadu, Professor, The University of Tennessee Knoxville
Demonstration: Measuring the Unmeasurable in Composite Design for Durability
- Introduction to High Definition Fiber Optic Sensing (HDFOS)
- Measuring the Un-measureable
- Fiber Optic Sensor Layout Video
- Measure Instrumented Test Article on the ODiSIB
- Summarize the Benefits of HDFOS Sensing for Composite Design for Durability and Position with 0ther Solutions that are a Compliment

10:45 a.m. **Survey of Innovative Nondestructive Evaluation (NDE) and Structural Health Monitoring Applications for Composites**
Presented By: LASIR Staff
- Laser Vibrometry for Damage Detection in Composite Structures
- Innovative Health Monitoring Applications Using Nanoparticles
-- 10 Minute Break --
- Structural Health Monitoring Solutions for Composite Aircraft Structures
- Health Monitoring and Damage Detection for Wind Turbine Applications

12:00 p.m. **Lunch**

Preview of Upcoming 2017 Workshops and Events
Presented By: Corbett Leach, Lead Technical Support Manager, Composites Ones

1:15 p.m. **Industry Sector: Infrastructure**

Design Modifications for Durability Concerns of FRP Externally Strengthened Buildings and Bridges
Presented By: Trevor Gundberg, P.E. Director of Composites Engineering

Demonstration: Carbon Fiber Reinforcement in Infrastructure Repair: Remediation of a Concrete Column
Presented By: Steve Harrison, Technical Support Manager, Composites One

Resist Damage from Category 3 Hurricanes with Adhesively Bonded Composite Wharfs, Docks, and Marinas
Presented By: Stuart LaHaise, Sales Representative, Engineered Bonding Solutions

Demonstration: Structural Adhesives Application and Bondlines and Composite-Metal Assemblies
Presented By: Steve Harrison, Technical Support Manager, Composites One

Putting Heat Where it is Needed: Surface Resistance Heating for Traditional and Non-Traditional Composite Applications
Presented By: Marc Anderson, VP Sales and Marketing - North America, Lamina Heat, LLC

2: 45 p.m. **Break: Visit Our Vendor Tables**

3:00 p.m. **Industry Sector: Transportation**

Case History in Closed Molding
Presented By: Jim Shillito, General Manager, Water-Way, Inc.

Snap Cure Prepreg for Automotive Molding
Presented By: Dan Licata, Mid West Sales Manager, Gurit Composite Materials, Gurit (USA) Inc.

Demonstration: Temperature Controlled Light RTM Molding of a Tractor Hood

Pourable Structural Foam for High-Performance and Durable Service
Presented By: Mike Barnard, Technical Advisor - CCT-VIP, Gougeon Brothers, Inc.

4:30 p.m. **Equipping Yourself for Success**
Presented By: Andrew Hedger, Composites Product Line Manager, MVP

5:00 p.m. **Wrap Up and Q&A**

6:00 p.m. **Networking Reception:** Join us for a networking reception and supper-by-the-bite at The Row Kitchen and Pub from 6:00 p.m. - 9:00 p.m.

The Row Kitchen & Pub
110 Lyle Avenue
Nashville, TN 37203
(615) 321-1224

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For more information, visit www.acmanet.org/cct

Your Workshop Agenda — Friday, February 24

8:00 a.m. **Welcome and Review Agenda**
Corbett Leach, Lead Technical Support Manager, Composites One
A Short History of Long Standing FRP Structures
Presented By: Rick Pauer, Application Manager, Polynt
Defining Composites Durability: Structural Versus Cladding
Presented By: Robert E. Steffen, Ph.D., PE, Associate Professor, Construction Management Department, Western Carolina University

9:00 a.m. **Industry Sector: Industrial**
Preventing Failures by Predicting Failures: Proactive Composites Inspection
Presented By: Geoff Clarkson, President and CEO, UT Comp
Tales of the Longest Lasting Equipment in the Harshest Chemical Environments
Presented By: Michael Stevens, Principal Scientist, Ashland and Micheal Beneteau, Sr. Technical Support Specialist, NA CTSO, Owens Corning.
Demonstration: Light Resin Transfer Molding (Light RTM) of a Tank Manway Flange
Presented By: Doug Smith, President, RTM North

10:00 a.m. **Industry Sector: Architecture**
Examples of Durability in Architectural Composites: A Survey of Key Architectural Projects
Presented By: David Riebe, Vice President, Windsor Fiberglass, Inc. and Robert E. Steffen, Ph.D., PE, Associate Professor, Construction Management Department, Western Carolina University.

10:30 a.m. **The Impact of Manufacturing and Workforce in the State of TN.**
Presented By: J. Edward Townsend, III, COO, the Tennessee Department of Economic and Community Development

10:50 a.m. **Industry Sector: Architecture (Continued)**
Demonstration: Fabrication of an Architectural Part Using Reusable Molding (CCBM) Process
Presented By: Jim Noonan, Technical Support Manager, Composites One
Intumescent Composite Systems for Mass Transit and Architectural Applications
Presented By: Rick Pauer, Applications Manager, Polynt
Reusable Vacuum Bags: Make Higher Quality Parts at a Lower Cost
Presented By: Larry Audette, President, Prairie Technology Group, Inc.

11:50 a.m. **Wrap Up and Q&A**

12:00 P.M. **Lunch**

Travel Information

TRAVEL
Built2Last will be held at Vanderbilt University's Laboratory for Systems Integrity & Reliability (LASIR), February 23-24, 2017. Travel arrangements should be made to fly into Nashville International Airport (BNA) in Nashville, TN.

Laboratory for Systems Integrity & Reliability (LASIR)
566 Mainstream Drive STE 700
Nashville, TN 3722

HOTEL ACCOMMODATIONS
Recommended hotels are listed below. To make your reservations, please call the hotel directly or visit their websites.

Hilton Garden Inn Nashville Vanderbilt
1715 Broadway
Nashville, TN 37203
(615) 369-5900

Home2 Suites by Hilton Nashville Vanderbilt
1800 Division St
Nashville, TN 37203
(615) 254-217

Hurry, Space is Limited - Register Today!

Register Online at:
www.built2lastworkshop.eventbrite.com
Questions?
Contact Rachel Menges at rachel.menges@compositesone.com
or call 847.871.1323.