

INSTITUTE FOR ADVANCED COMPOSITES MANUFACTURING INNOVATION

2017 Year in Review: Indiana

UPDATED 12/1/17

Composites° International





INDIANA MEMBERS



The Indiana Manufacturing Institute (IMI) is a 30,000 square-foot facilty at Purdue University and home to IACMI's Design, Modeling, and Simulation technology area.

WORKFORCE DEVELOPMENT IN INDIANA

More Than Two Thousand Trained in Indiana Workforce Initiatives

2 fully funded IACMI interns

6 interns funded by IACMI member, Dassault

122 attendees at the training workshop with Composites One

1700 students participated in Manufacturing Day 300 visited the IMI for American Society for Composites 2017, 32nd Technical Conference

IACMI INTERNSHIP PROGRAM

21 interns accepted from hundreds of applicants, nationally. 2017 placements include the Indiana Manufacturing Institute at Purdue University.



jeco plastic products

NATIONAL MEDIA COVERAGE

Forbes A Race To Replace: How Swapping Steel For Composites Will Make Cars More Efficient **Composites Will Make Cars More Efficient** Dec 8, 2016 | www.forbes.com

Three Technologies You Need to Start Paying Attention to Right Now

July 8, 2017 | www.inc.com

"The next big thing always starts out looking like nothing at all... #3: Materials Science: including new composite materials responsible for reducing the weight of Boeing's Dreamliner by 40,000 pounds and fuel use by 20 percent."



IACMI.org • 2360 Cherahala Blvd. Knoxville, TN 37932





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INDIANA IACMI PROJECTS

VOLKSWAGEN (W

~\$3M Project: Developing a sheet molding compound composite for use on exterior body panels

IMPACT: 25% reduction in cost and weight on a production model expected to be greater than 100k units annually PROJECT PARTNERS: Volkswagen | Purdue University | Oak Ridge National Laboratory (ORNL) | University of Tennessee, Knoxville (UTK) | Michigan State University (MSU)

DUPONT

PROJECT: Enable thermoplastic composite parts manufacturing for high volume, low cost, reduced weight automotive components with increased design flexibility. This is the first project selected with a dual focus on decreasing the cost of manufacturing and increasing design flexibility for automotive composites.

IMPACT: Advancements in both areas can open up new opportunities and become an enabler for large scale deployment of composite parts.

PROJECT PARTNERS: DuPont | Fibrtec | Purdue University | ORNL | MSU





PURDUE UNIVERSITY HOSTS AMERICAN SOCIETY FOR COMPOSITES 32ND TECHNICAL CONFERENCE | October 2017

400+ attendees, with 35% students, and 35% non-university attendees

6 plenary sessions

250 parallel talks

13 sponsors

WORKFORCE DEVELOPMENT INITIATIVES

DASSAULT SYSTÈMES SPONSORED INTERNSHIPS

IACMI Charter Member, Dassault Systèmes fully funds six long-term interns hosted at the Indiana Manufacturing Institute at Purdue University. The students have the opportunity to work on projects with composites design and simulation experts and industry partners.







MORE THAN 120 PARTICIPATE IN PROTOTYPING TO PROCESS HANDS-ON TRAINING AT PURDUE UNIVERSITY

HIGHLIGHTS: Jan-Anders Manson,
Distinguished Professor of Materials Engineering
and Chemical Engineering presented on Technical
Cost Modeling & Implementation Strategies | R.

Byron Pipes, Distinguished Professor of Engineering at Purdue University presented on Innovative Modeling and

Simulation Technology for Composites Manufacturing: The Virtual Factory | Wabash and Structural Composites leaders discussed integrating composites into the transportation and marine industries

RESULTS: Exposure to IN capabilities; project submissions; increased IACMI



Wabash displayed a composite trailer and explained the process and benefits of integrating composites into the company's fleet.