

NEWS RELEASE

July 27, 2016

## **AnalySwift joins national consortium to improve composites simulation**

WEST LAFAYETTE, Ind. and NORTH LOGAN, Utah –[AnalySwift LLC](#), a provider of modeling software for composites, has joined the [Institute for Advanced Composites Manufacturing Innovation](#) (IACMI) to help improve composites simulation.

“Membership in the Institute for Advanced Composites Manufacturing Innovation involves sharing resources and co-investing in support of its goals, and AnalySwift looks forward to participating,” said Allan Wood, president and CEO of AnalySwift. “We believe our software solutions, SwiftComp and VABS, provide a unique boost in accelerating the adoption of composites in many industries, including wind energy and automotive. SwiftComp breaks down barriers for engineers by enabling them to model composites as easily as metals using conventional structural elements in their finite element analysis codes and capturing all the microstructural details.”

The Institute of Advanced Composites Manufacturing Innovation is part of the U.S. Department of Energy’s [National Network for Manufacturing Innovation](#). This public-private partnership is focused on accelerating development and adoption of cutting-edge manufacturing technologies for low-cost, energy-efficient manufacturing of advanced polymer composites for vehicles, wind turbines and compressed gas storage. The multistate initiative includes a Purdue research team based in the [Indiana Manufacturing Institute](#) and the Purdue-based [Composites Design and Manufacturing HUB](#).

“This partnership with AnalySwift expands our national geographic footprint and enhances the capabilities offered to our members”, said Craig Blue, CEO of IACMI. “Gaining AnalySwift as a member broadens the diversity of the entire organization while contributing to our mission of developing new composite manufacturing technologies.”

Wenbin Yu, chief technology officer of AnalySwift and a Purdue associate professor of aeronautics and astronautics, said the analysis the company offers also will save users runtime when the software is being used in their research. AnalySwift licensed the SwiftComp

technology through the [Purdue Research Foundation Office of Technology Commercialization](#).

“Whether engineers are designing a new composite material or analyzing a structure, SwiftComp can reproduce first principle 3D analysis results at the efficiency of simple engineering models,” said Yu, who helped develop the technology at Purdue. “SwiftComp is a general-purpose multiscale constitutive modeling code for unified modeling of composites beams, plates/shells, or 3D structures. It can quickly and easily calculate all the effective properties for a wide variety of composites, computing the best structural model for use in macroscopic structural analysis, as well as de-homogenization.”

VABS, another software tool provided by AnalySwift, provides rigorous modeling for composite slender structures like wind turbine blades, delivering finite element analysis-level accuracy in a fraction of time needed for conventional methods. Developed at Georgia Institute of Technology and Utah State University, VABS can calculate one of the most accurate, complete sets of sectional properties such as torsional stiffness, shear stiffness and shear center for composite beams made with arbitrary cross-section and arbitrary material, Wood said. It also can predict accurate detailed stress distribution for composite beams.

#### **About AnalySwift**

[AnalySwift LLC](#) is a provider of composite modeling software, which enables an unprecedented combination of efficiency and accuracy, including multiphysics structural and micromechanical modeling. Drawing on university-based research, AnalySwift’s powerful solutions provide customers a competitive advantage through drastic reductions in engineering time, virtual testing earlier in the design process and handling of more complex composite structures. Licensed from Purdue University, Utah State University and Georgia Institute of Technology, their technologies deliver the accuracy of detailed 3D finite element analysis at the efficiency of simple engineering models, cutting analysis time by orders of magnitude.

#### **About the Institute for Advanced Composites Manufacturing Innovation**

The [Institute for Advanced Composites Manufacturing Innovation \(IACMI\)](#), managed by the Collaborative Composite Solutions Corporation, is a partnership of industry, universities, national laboratories, and federal, state and local governments working together to benefit the nation’s energy and economic security by sharing existing resources and co-investing to accelerate development and commercial deployment of advanced composites. The national

institute is supported by a \$70 million commitment from the U.S. Department of Energy's Advanced Manufacturing Office and over \$180 million committed from institute partners.

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