FOR IMMEDIATE RELEASE

New PreVABS Preprocessor Available for VABS Composite Rotor Blade Simulation Software

West Jordan, Utah (USA), April 4, 2018- AnalySwift, LLC, a provider of efficient high-fidelity modeling software for composites and other advanced materials, announced today that a versatile new preprocessor called PreVABS is now available to users of the powerful VABS composite blade simulation software. The VABS software is an engineering code for rigorous simulation of composite slender structures, especially helicopter and wind turbine rotor blades, and the new PreVABS greatly improves the user experience.

Students in the Multiscale Structural Mechanics (MSM) group at Purdue University developed the new PreVABS under the direction of Dr. Wenbin Yu, professor in the School of Aeronautics and Astronautics. PreVABS helps engineers in the early stages of simulation of composite slender structures, commonly called composite beams. It is designed to reduce the workload of preparing input files for VABS and to make the process automatic for design and optimization purposes.

"Cross sections with general and airfoil shapes can be created," said Wenbin Yu, professor at Purdue University. "This replaces an earlier program, also called PreVABS, which had been discontinued and was no longer available. PreVABS is a completely new code, which has many improved capabilities. Unlike the previous program, PreVABS is now free and open source."

Some of the features of PreVABS include:

- Capability to create nose mass in an airfoil type cross section
- The post-processing function to visualize the recovered strains and stresses in Gmsh
- Capability to read stacking sequence code
- Design-oriented parametric input files to draw the cross section naturally
- Isolated material database file to enable reusability
- Global transformation capability to release the burden of calculating geometries by hand

PreVABS is available for free download through the Composites Design & Manufacturing HUB (cdmHUB.org), hosted by Purdue University. Please visit the PreVABS webpage on cdmHUB.org to download PreVABS or for additional information. You will also find a helpful discussion forum for technical questions about VABS and PreVABS.

VABS is a general-purpose cross-sectional analysis tool for computing beam properties and recovering 3D stresses/strains of slender composite structures. It is a powerful tool for modeling composite helicopter and wind turbine rotor blades, as well as other slender composite structures, such as landing gear, propellers and high-aspect ratio wings. VABS can calculate the ply-level details with the accuracy of 3D FEA in seconds on a typical laptop computer. VABS is capable of rigorously reducing an original 3D slender solid with complex cross-sections into a simple engineering beam model. Please visit the VABS webpage to learn more.

About AnalySwift

AnalySwift, LLC is a provider of composite software, which enables an unprecedented combination of efficiency and accuracy, including multiphysics structural and micromechanics modeling. Drawing on

cutting edge university technology, 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. Our technologies deliver the accuracy of detailed 3D FEA at the efficiency of simple engineering models, cutting analysis time by orders of magnitude. SwiftComp is licensed from Purdue Research Foundation. VABS is licensed from Utah State University, and Georgia Institute of Technology. AnalySwift is a member of the Institute for Advanced Composites Manufacturing Innovation (IACMI. Find out more at analyswift.com.

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