NEWS RELEASE

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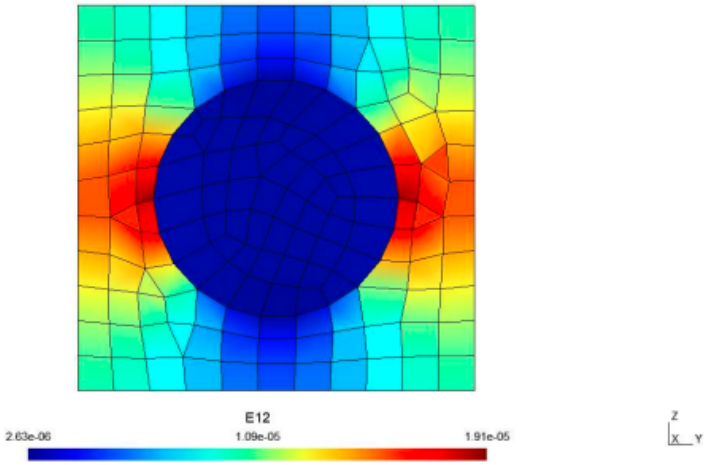
Federal University of Paraiba Leverages SwiftComp Simulation Software for Composite Materials

University studies composites with spherical inclusions of silicon carbide and aluminum matrix



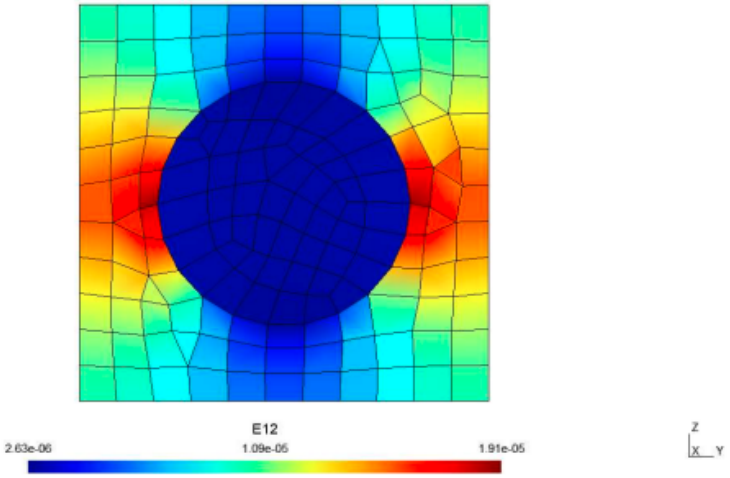
West Lafayette, Indiana (USA) - AnalySwift, LLC, a provider of efficient high-fidelity modeling software for composites, announced today that Federal University of Paraiba is participating in its Academic Partner Program (APP), and it is using its SwiftComp simulation software for researching composite materials. The work is part of the research being conducted in the Department of Mechanical Engineering.

The APP offers participating universities no-cost licenses of engineering software programs VABS and SwiftComp so students, researchers, and faculty can leverage the tools in their academic research.

The SwiftComp program general-purpose multiscale modeling code that enables users to perform efficient and accurate modeling of composites and other advanced materials (metamaterials, architected materials, porous materials, tailorable composites etc.). It can be used either independently as a tool for virtual testing of composites or as a plugin to power conventional FEA codes with high-fidelity multiscale modeling for composites.

"We are excited by the work being done by the Federal University of Paraiba and pleased they have selected SwiftComp as part of their composite materials research efforts," said Allan Wood, president & CEO of AnalySwift. "As a versatile general-purpose, truly multiscale modeling code for composites, it directly and seamlessly links detailed microstructure and structural behavior for composite structures including beams, plates/shells, and 3D structures."

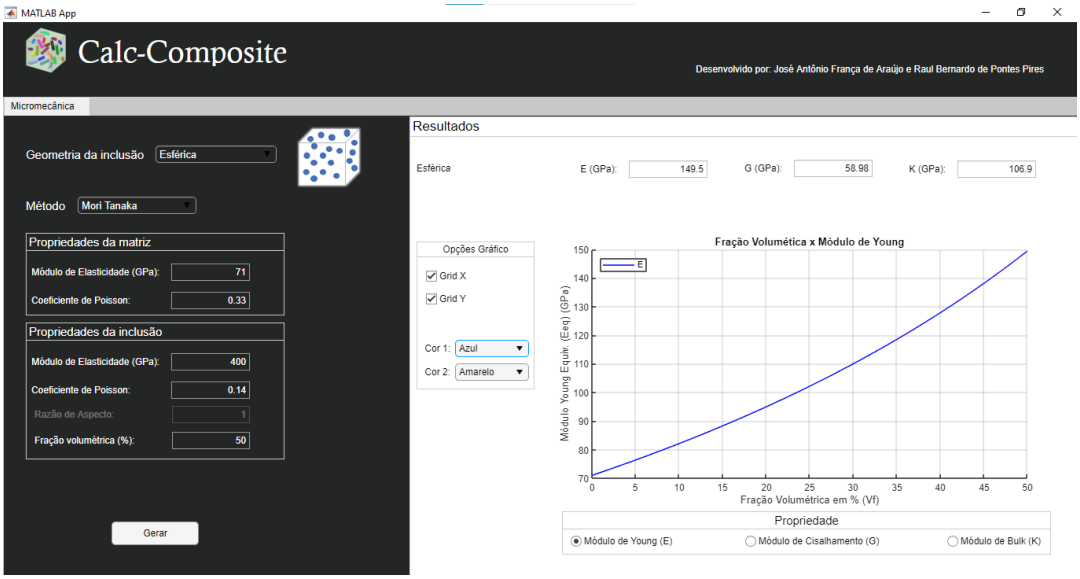
"We studied the composite with spherical inclusion of silicon carbide and aluminum matrix," said Raul Bernardo de Pontes Pires, a graduate student at Federal University of Paraiba working under the direction of Prof. Marcelo Cavalcanti Rodrigues. "Through SwiftComp, we were able to better understand the behavior of composite materials quickly and effectively. We compared the methods of homogenization of the mean fields with the values obtained by SwiftComp and had excellent precision."



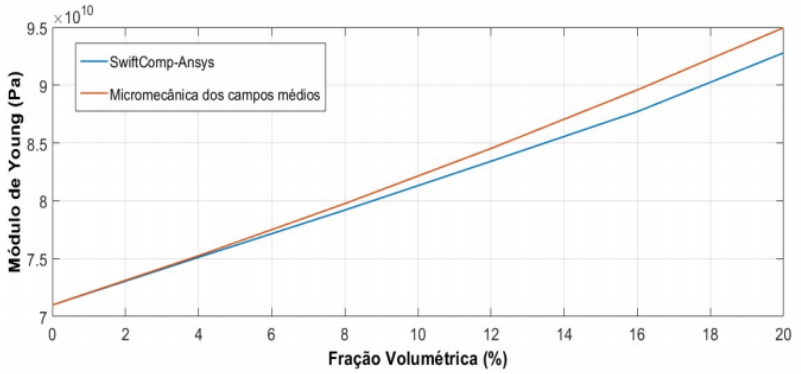
A simulation performed with the help of SwiftComp and third-party software provider, Ansys, demonstrating a deformation field for Carbon-Epoxy.

"After validating the midfield homogenization models, we developed a matlab software for homogenization of composite materials using the dilute suspension, Mori-Tanaka, self-consistent, and differential scheme for spherical inclusion, aligned and misaligned fiber composites," continued Pires. "Below are several charts demonstrating the comparison of the homogenization through the homogenization model of the mean fields with the values obtained by SwiftComp, which show nice agreement. I'd like to thank the AnalySwift team, because through this software I managed to greatly develop my knowledge about composite materials. I

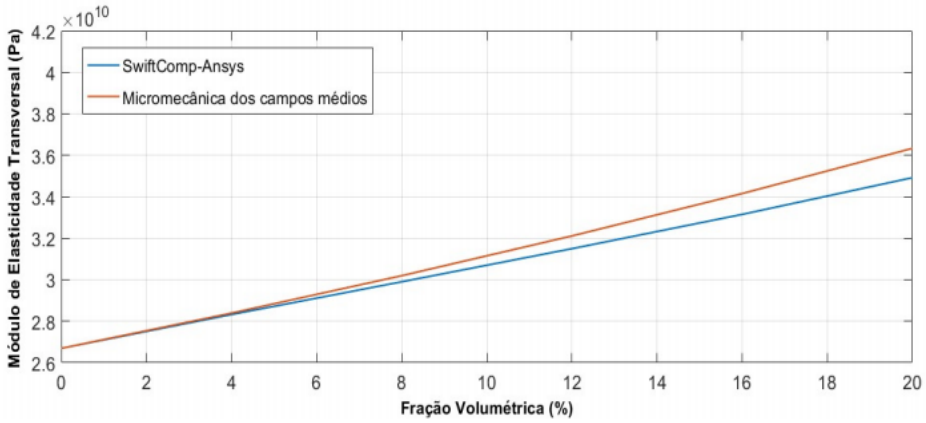
also commend the fact that they are supporting the development of science and technology through their Academic Partner Program.”



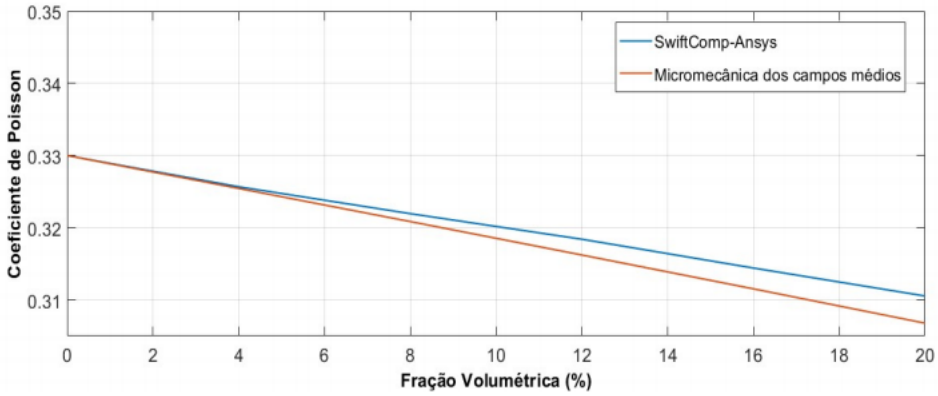
Calc-composite software interface.



Comparison of Young's modulus obtained with SwiftComp and micromechanics of mean fields (Mori Tanaka method)



Comparison of the transverse modulus of elasticity obtained with SwiftComp and micromechanics of mean fields (Mori Tanaka method)



Comparison of the poisson coefficient obtained with SwiftComp and mean field micromechanics (Mori Tanaka method)

"SwiftComp saves hours in computing time and resources with accuracy comparable to modeling all the microstructural details using 3D FEA," said Dr. Wenbin Yu, CTO of AnalySwift. "It can also predict accurate local stresses and strains in the microstructure for the purpose of predicting strengths, as well as thermal expansion of composites."

About AnalySwift

AnalySwift, LLC is a provider of composite simulation software, which enables an unprecedented combination of efficiency and accuracy, including multiphysics structural analysis 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. The company's 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, Georgia Institute of Technology, and Purdue University. Find out more at analyswift.com.

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