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Press Release **Groundbreaking Study of Complex Composite Materials with MSC Nastran and Marc**

SANTA ANA, CA--(Business Wire - October 30th, 2012)

FEA software is instrumental in the field of complex heterogeneous composite materials

MSC Software Corporation, the leader in multidiscipline simulation solutions that accelerate product innovation, today announced that Stanford University is using MSC Nastran and Marc to conduct a

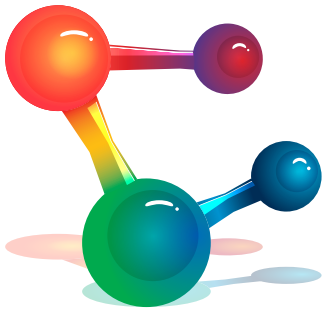
groundbreaking study on the testing and analysis of complex composite materials. The goals of the study are to reduce extensive and expensive testing programs, optimize the design of testing configurations and redefine structural deformation and failure processes. The sophisticated analysis capabilities of MSC simulation solutions are being used to predict the failure characteristics of heterogeneous composite materials to a greater degree and explore the possibilities of further innovation.

Traditional modeling of heterogeneous composite materials is almost always based on some degree of homogenization, taking materials with diverse characteristics and modeling them for evaluation based on materials with similar characteristics. Professor Tsai, Professor Research Emeritus in the Aeronautics and Astronautics department at Stanford University, and his team are using Mesomechanics to recognize local heterogeneity of composite laminates to build more accurate 2D shells and 3D solid models. Specialized composite analysis capabilities within MSC Nastran and Marc address the failure characteristics of the models. Preliminary results of the new method have been positive when it was recently applied to the novel bi-angle NCF (non crimp fabric) tape. Bi-angle NCF is a revolutionary lightweight material with strength equal to carbon materials and up to 30% lighter. The orientation of layers that makes BI-angle NCF unique was modeled, efficiently pre-processed, and analyzed with MSC's simulation solutions to optimize the manufacturing process.

"We have found that MSC Software's solutions have the combination of technical depth and ease of use."

"We have found that MSC Software's solutions have the combination of technical depth and ease of use," said Professor Tsai. "They made our challenge solvable. We are very pleased to be able to learn more about our problem and will continue to explore next steps."

"The need for lighter weight and stronger materials that have predictable behaviors is growing dramatically as a result of the greater demands for improved vehicle fuel efficiency and safety," said Dominic Gallelo, President & CEO of MSC Software. "Dr. Tsai has been a pioneer in this field and we are delighted to collaborate with him in this important project."



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With recent advancements in heterogeneous materials, it is becoming more critical to have physical and geometric models that better represent these complex materials. When analyzed, these models would provide a far more accurate evaluation of how heterogeneous composite materials will behave in real-life environments.

About Professor Stephen W. Tsai

Professor Stephen W. Tsai is a Professor Research Emeritus in the Aeronautics and Astronautics department at Stanford University. He holds both a B.E. degree and D. Eng. Degree in Mechanical Engineering from Yale University. Professor Tsai is also part of the Stanford University Structures and Composites Laboratory, and his research interests include the process and product development of composite materials that leads to improved design practice and commercialization. He has written two introductory texts on composite materials and two books on composites design and is known for the pioneering effort in promoting the use of spreadsheets as a design tool. He is also a member of the Nation Academy of Engineering, the American Society of Mechanical Engineering, and the Society of Aerospace Materials and Process Engineers and is an active participant in the International Conference on Composite Materials.

About MSC Software

MSC Software is one of the ten original software companies and the worldwide leader in multidiscipline simulation. As a trusted partner, MSC Software helps companies improve quality, save time, and reduce costs associated with design and test of manufactured products. Academic institutions, researchers, and students employ MSC's technology to expand individual knowledge as well as expand the horizon of simulation. MSC Software employs 1,100 professionals in 20 countries. For additional information about MSC Software's products and services, please visit: www.mscsoftware.com

About Compumod

First established in 1982, Compumod quickly became the name to trust for the supply and support of advanced computer aided engineering simulation tools throughout SE Asia. Relunched in 2010 Compumod is back, doing what it does best supporting the world's leading Engineering Analysis tools across Australia and New Zealand. Compumod's mission is to deliver state of the art Computer Aided Engineering tools and services to Australian and New Zealand businesses to help them achieve a competitive advantage and sustainable return on investment.

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