



USE OF ONLINE DEDICATED SOFTWARE MECHG-COMP FOR MICRO- AND MACRO-MECHANICAL ANALYSIS OF COMPOSITES

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Abstract: The micromechanics of composite materials consists in the observation of the individual properties of reinforcement & matrix in order to predict the composite behavior, thus avoiding exhaustive manufacturing/experimental routines in early design stages, with associated time and money saving. In this context, a free web-based software called MECH-Gcomp will be presented. This software is devoted to research and teaching on composite materials, and includes different types of reinforcements and many analytical models, taking into account specific characteristics of the materials. The software allows easy and fast estimate of properties of composites reinforced by long or short fibers, at aligned or random distribution, covering also particulate and nanocomposites, which is useful for the academic & industrial sectors as a preliminary analysis tool.