

## **ANALYTICAL ANALYSIS FOR SIMPLY SUPPORTED COMPOSITE PLATES UNDER UNIFORMLY DISTRIBUTED LOAD**

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### **ABSTRACT**

The response of simply supported cross-ply symmetrically composite plates subjected to uniformly distributed load, with lamination  $[0\ 90\ 90\ 0]$  discussed. Matlab is used to perform the analysis, depending on classical lamination plate theory. A number of factors such as aspect ratio, side to thickness ratio and modulus ratio and their effect on deflection and stresses of laminated composite plate, subjected to a uniformly distributed load have been studied. The results showed that, the effect of coupling is to increase the deflection to increase the aspect ratio and modulus ratio, and increase the stress with an increase in the side to thickness ratio and modulus ratio.

**KEYWORDS:** Nanocomposite Plates, Fiber, Versus Modulus Ratio