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OPTIMIZATION OF THE BEHAVIOR OF BUCKLING OF THE STRATIFIEDES BY GENETIC ALGORITHM

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Abstract : The laminated composite structures which are largely used nowadays, become unstable when they are prone to loadings of mechanical or thermal nature and flame in the elastic zone. Consequently, buckling has a very great importance when designing this kind of structure. In this work, we studied the phenomenon of the buckling which was devoted under investigation of the optimization of a composite material laminated by the use of a data-processing method based on a mathematical theory which uses the stochastic statistics it is the theory of the genetic algorithms (GA). The objective of this work is, the maximization of the rigidity of the plate laminated by maximizing the critical load of buckling according to the orientations of the folds.

Keywords : Composite laminated, optimization, Buckling, genetic Algorithm.