

## Natural frequency of F.G. rectangular plate by shear deformation theory

### ABSTRACT

Natural frequency of functionally graded (F.G.) rectangular plate is carried out by using second-order shear deformation theory (SSDT). The material properties of functionally graded rectangular plates, except the Poisson's ratio, are assumed to vary continuously through the thickness of the plate in accordance with the exponential law distribution. The equations of motion are obtained by energy method. Numerical results for functionally graded plates are given in dimensionless graphical forms and the effects of material properties on natural frequency are determined.

**Keyword:** Natural frequencies; Shear deformation theory; Functionally graded rectangular plates