

**Sheinman, Izhak; Frostig, Yeoshua****Postbuckling analysis of stiffened laminated panel.** (English) Zbl 0683.73023

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Summary: An analytical-numerical procedure is applied to investigate the post-buckling behavior of a composite laminated stiffened panel. The panel is modeled by plate elements for which the nonlinear equations are derived (via a variational principle) in terms of the lateral displacement and Airy stress function, and treated by resolving the variables into eigenfunctions in conjunction with a finite-difference scheme.

**MSC:**

74G60 Bifurcation and buckling

74S30 Other numerical methods in solid mechanics (MSC2010)

74E30 Composite and mixture properties

74K20 Plates

**Keywords:**

nonlinear partial differential equations; Galerkin analysis; minimum error in truncation process; Newton's method; nonlinear set converted into linear sequence; analytical-numerical procedure; variational principle; Airy stress function; resolving the variables into eigenfunctions; finite-difference scheme

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