

## عنوان مقاله:

Free vibration analysis of functionally graded conical shell with variable thickness resting on elastic foundation

## محل انتشار:

دومین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مکانیک، صنایع و هوافضا (سال: 1395)

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## خلاصه مقاله:

This paper investigates free vibration analysis of functionally graded conical shell with variable thickness resting on elastic foundation (Winkler-Pasternak) using first-order shear deformation shell theory. Equations of motion are derived from Hamilton's principle. The Navier-type solution is used for simply-supported boundary condition, and exact formulas are proposed for free vibration analysis. The material properties are graded in the thickness direction according to a power law. An accuracy of the present solutions is validated numerically by comparisons with some available results in the literature. Good agreement is observed. The parametric study is carried out to discuss the effects of gradient index, geometrical properties and elastic foundation constants on the frequency behavior of functionally graded conical shell with variable thickness.

## کلمات کلیدی:

Conical Shell, Free vibration, Functionally Graded, Variable Thickness

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/566348>

