عنوان مقاله:

Free Vibration of a Generalized Plane Frame

نویسنده:

M. Rezaiee Pajand

خلاصه مقاله:

This article deals with the free in-plane vibration analysis of a frame with four arbitrary inclined members by differential transform method. Based on four differential equations and sixteen boundary and compatibility conditions, the related structural eigenvalue problem will be analytically formulated. The frequency parameters and mode shapes of the frame will be calculated for various values of the structural properties, such as joint angles, springs stiffness and flexural rigidity of members. Finally, the obtained solution by the proposed method will be verified by authors finite element program.

کلمات کلیدی:

Differential transform method, Free vibration, Plane Frames, Elastic Supports and Joints

لینک ثابت مقاله در پایگاه سیویلیکا: