NATURAL FREQUENCY OF STRUCTURES AND STABILITY

SALMAN ADDHESAT

Faculty of Engineering Technology, Al Balqa' Applied Universit
P.O. Box 15008, Amman – Jordan

Abstract

This paper presents a mathematical model to compute with a good accuracy the natural frequency of structures, measuring this quantity is very important because determining the value of the natural frequency of the buildings helps in controlling the vibration of the building and preventing partially their failures. This paper presents two models to compute the natural frequency of tall buildings: the analytical model and finite element model. In this paper the natural frequencies of such constructions are computed analytically. The stability of such constructions depends strongly on their natural frequency. It is found that the stability of the buildings depends directly on the values of the natural frequency.