عنوان مقاله:

Estimation of Natural Frequencies of Structures by Wavelet Transform

محل انتشار:

پنجمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1386)

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خلاصه مقاله:

In this paper a methodology for identification of natural frequencies of structural systems using wavelet transform (WT), which is capable of yielding time-frequency representation of the structural responses, is proposed and a new framework for system identification is devised. The current work utilizes wavelet transform to identify structural dynamic characteristics from transient response of the system when subjected to ambient excitation. The effectiveness of this technique in determination of modal frequencies of buildings as applied to two buildings is presented. Finally, WT is then compared with NExT-ERA with regard to the number of identified modes and frequencies thus obtained.

کلمات کلیدی:

Wavelet Transform; Natural Frequency Estimation; Time-Frequency Transform

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