

## عنوان مقاله:

THE FUNDAMENTAL PERIOD OF FOUR-LAYER SOIL DEPOSITS

## محل انتشار:

هشتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1398)

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## خلاصه مقاله:

Exact solutions for the estimation of the fundamental period of soil profiles, which is an important parameter of dynamic characteristics, lead to the proper design of structures against earthquake and therefore seismic hazard reduction. In this paper, an attempt has been made to present an analytical solution that is capable to precisely compute the fundamental period of four-layer soil profiles with constant shear wave velocity in each layer (homogeneous layers). Additionally, the proposed solution does not need iteration procedure in solving process. For this purpose, amplification function of linear elastic four-layer soil deposit subjected to the propagation of shear waves is obtained. Afterwards, by making the denominator of amplification function equal to zero, desired equation is achieved. The efficiency of the acquired equation is verified by SHAKE program and three approximate methods are employed for the sake of comparison.

## کلمات کلیدی:

Fundamental period, Amplification function, Analytical solution, Four-Layer soil deposit, Shake, Shear wave velocity

## لینک ثابت مقاله در پایگاه سیویلیکا:

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