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#### عنوان مقاله:

A STUDY ON SOME DAMAGEASSESSMENT METHODSBASEDONTHE DYNAMIC CHARACTERISTIC CHANGES

#### محل انتشار:

هفتمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1394)

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#### خلاصه مقاله:

In recent years many researchers have studied on the damage assessment based on dynamic characteristics. Alongside these researches, a lot of damage indices were proposed by researchers to locate and quantify the damage of the structures or to rank their vulnerability relative to each other. The variation of frequency and Softening indice are two methods to assess the damage based on dynamic characteristics. This paper studies on the performance of the frequency changes and Softening indices to assess the damage. In the paper three RC frames are modeled and nonlinear dynamic analyses are done. To identify the performance of the methods, the damage intensities which are measured by frequency changes and Softening indice, are compared to the damage intensities measured by Park-Ang indice. Park-Ang indice is one of the most widely used damage indices. Park-Ang is not based on the dynamic characteristics, but it can be a reliable indice to compare the results. The results show that in all the frames there are very strong correlations between frequency changes or Softening indice with Park-Ang. So it can be concluded that both of the methods are acceptable. Although the correlations between frequency changes and Park-Ang, but the difference is negligible. . The difference may be for inaccurate calculations of the final periods

### كلمات كليدى:

Damage Assessment, Frequency Changes, Final Softening, Park-Ang, Pearson Correlation

# لینک ثابت مقاله در پایگاه سیویلیکا:



