

## عنوان مقاله:

(Investigating the concept and effect of epsilon in Conditional Mean Spectrum(CMS)

## محل انتشار:

هشتمین کنفرانس بین المللی مدیریت جامع بحران (سال: 1395)

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## خلاصه مقاله:

A common goal of dynamic structural analysis is to predict the response of a structure subjected to ground motions having a specified spectral acceleration( $S_a$ ) at a given period(Baker,2011). The prediction is often obtained by selecting ground motions that match a target response spectrum. The Uniform Hazard Spectrum (UHS) is an unsuitable target for this purpose, as it conservatively implies that large-amplitude spectral values will occur at all periods within a single ground motion. An alternative, termed a Conditional Mean Spectrum(CMS) provides the expected (i.e., mean) response spectrum, conditioned on occurrence of a target spectral acceleration value at the period of interest, on the other hand, the epsilon values are of engineering interest because of their impact on the (CMS). When target epsilon values which is taken resultant from seismic hazard disaggregation process are positive, the CMS calculation produces relatively lower response spectra than the UHS. but in the case of negative target epsilon, some of the relationships between the CMS and UHS would reverse. The case studies indicate that positive target  $\epsilon$  values occur almost in active seismic regions at long return periods, and also the special relevant seismicity models and certain applied ground motion prediction equations have the most significant effect on  $\epsilon$  values. and So that a combination of these the above mentioned characteristics parameters creates the most likely situation for .negative target  $\epsilon$  to occur

## کلمات کلیدی:

ground motions; Uniform hazard spectrum(UHS); conditional mean spectrum(CMS); Disaggregation; negative epsilon; return periods; ground motion prediction equation

## لینک ثابت مقاله در پایگاه سیویلیکا:

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