

## عنوان مقاله:

Study of the space structures' performance via capacity spectrum

## محل انتشار:

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## خلاصه مقاله:

For a long time, structures, due to their lightness, were believed to be invulnerable to earthquake. While the Kobe earthquake in Japan in 1995 revealed that such structures should not be expected to be absolutely immune. To this end, the capacity spectrum method was utilized to evaluate the earthquake effect on the behavior of space structures. Such method gives the maximum result regarding the structure capacity and requirement based on acceleration and displacement. The comparison between the earthquake acceleration real spectrum and capacity spectrum methods was intended in this paper. The efficiency of the latter method for determining performance stages of space structures was then defined as the target point displacement. Having obtained the points of performance stages, that is, I.O or L.S and/or C.P., one could find structure weak points. To this end, after loading and selecting appropriate parameters, several structures with different heights and spans are examined from the viewpoint of static and dynamic analyses. The results indicate that the capacity spectrum method has rendered an acceptable appraisal on non-linear dynamic analysis.

## کلمات کلیدی:

One layered space drums; Performance stage; Capacity spectrum; space structures; space structures; dynamic analysis; spectrum method

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/322031>

