

## عنوان مقاله:

EVALUATION OF LIQUEFACTION TRIGGERING UTILIZING PERTINENT UNCERTAINTIES

## محل انتشار:

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

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## خلاصه مقاله:

Liquefaction analysis is one of the most challenging issues in seismic geotechnical engineering. The pertinent uncertainties involved in the evaluation of liquefaction such as heterogeneous nature of soil deposit and probabilistic nature of earthquake loading, make the phenomenon to be complicated. Evaluation of liquefaction includes deterministic and probabilistic methods. Deterministic methods are simple but they are not capable of considering uncertainties. Regarding the pertinent uncertainties, it seems that reliability methods, which are based on statistics and probability theory, have a better estimation in comparison to deterministic methods. Reliability methods are able to consider the uncertainties and also to determine the appropriate safety factor proportional to variability of parameters and acceptable risk. In the present research reliability analysis of liquefaction utilizing Monte Carlo simulation has been studied. Application of the proposed method to the Loma Prieta earthquake cases verifies that .deterministic method is not accurate enough and reliability analysis should be used instead

## کلمات کلیدی:

Liquefaction, Uncertainty, Reliability Analysis, Monte Carlo Simulation, Probabilistic Approach

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1132272>

