

عنوان مقاله:

The Application of Coefficient of Variations in Earthquake Forecasting

محل انتشار:

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نویسندگان:

A.B. Lashak - IIEES

M. Zare - IIEES

H. Abedi - Sharif University of Technology

M.Y. Radan - IIEES

خلاصه مقاله:

In this paper it will be investigated that whether it is possible to find some regions in which earthquakes occur as well-behaved random processes (instead of chaotic processes). If so, it will be possible to use analysis methods of random processes in earthquake forecasting. There are two main approaches for earthquake prediction; first, precursory methods based on relationship between abnormal behavior of some geophysical quantity (such as gravitational field, crust conductivity...) and earthquake occurrence. Second, forecasting methods based on the statistical analysis of earthquakes themselves, which is dealt with in this paper. Each probability distribution function (pdf) in statistics has its own coefficient of variations (CV) which due to it we can have a sense of dispersion and variance level of quantity which obeys that specific pdf and also its future variances. In the case of earthquake occurrence also it is possible to calculate the CV of inter-occurrence times of sequential earthquakes in a specified region and specified time interval, in order to find appropriate subregions in which random processes analysis tools can be used for forecasting future seismic behaviors. Here this idea has been applied to Iran

کلمات کلیدی:

Coefficient of Variations, Random Processes, Exponential Distribution, Seismological Provinces, Earthquake Forecasting

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