Spatial Distribution of Earthquake: A Comparative Fractal Analysis and Percolation Probability Calculation.

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The problem of comparing results of multifractal analysis for two regions is considered. The parameters for multifractal analysis like - maximum and minimum box Size in the box counting method, axis for the data - for different box shapes in both 2-D and 3-D are decided. The results are compared for Koyna-Warna, Andaman and Uttaranchal regions. Data for Koyna-Warna region and Uttaranchal are obtained from NGRI, while for the Andaman and Uttaranchal from NEIC and ISC. The criteria for deciding min-max box sizes for different shapes are decided on the basis of clustering , distribution and number of data points. Axis is decided by principal component analysis of the data. Percolation probability is calculated from earthquake spatial distribution based on different parameters.
keywords: fractal; multifractal; percolation; principal component analysis.

References

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