

## Finite Difference Method of the Seismic Analysis of Earth Dam

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**Abstract :** Many embankment dams have suffered failures during earthquakes due to the increase of pore water pressure under seismic loading. After analyzing of the behavior of embankment dams under severe earthquakes, major advances have been attained in the understanding of the seismic action on dams. The present study concerns numerical analysis of the seismic response of earth dams. The procedure uses a nonlinear stress-strain relation incorporated into the code FLAC2D based on the finite difference method. This analysis provides the variation of the pore water pressure and horizontal displacement.

**Keywords :** Earthquake, Numerical Analysis, FLAC2D, Displacement, Embankment Dam, Pore Water Pressure

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