

Motion Prediction Equation in Thailand

Tuesday, June 20, 2023 11:17 AM (1 minute)

This research is to study earthquakes strong motion. According to the fact that the factor affecting peak ground acceleration (PGA) is distance, measurement PGA of earthquakes events were collected and have been selected and analysed to find the ground motion prediction equation (GMPEs) in Thailand to estimate seismic hazard or an affected area during a future earthquake in Thailand. The equation can be used to improve the accuracy of seismic hazard maps of Thailand. From a study of 28 local earthquake events, magnitude 3.0 to 6.4 range from 10 km to 600 km from the epicenter with 465 values of data set from seismic stations. In order to make the highest R-squared (R^2) of the peak ground acceleration, the researcher has divided GMPEs into three equations according to earthquake magnitude which are less than 4.0, between 4.0 - 4.9 and 5.0 and above. The result of R^2 of the peak ground acceleration is 86.63%, 86.17, 57.96, respectively. By comparing to six GMPEs equations in other countries, it is found that Jain's equation conforms to this research for all three equations. Therefore, these equations and Jain's equation can be used as GMPEs, as optional.

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Promotional text

Ground motion prediction equations in Thailand

Oral preference format

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Session Classification: Lightning talks: P1.2-2

Track Classification: Theme 1. The Earth as a Complex System: T1.2 The Solid Earth and its Structure