

Calculation Method of Time History Including Large-scale Earthquake and Its Aftershock

Kimitoshi SAKAI Yoshitaka MURONO

As observed in the 2011 off the Pacific coast of Tohoku Earthquake, many aftershocks may occur after a large earthquake. Seismic stability of railway facilities against large earthquakes should be evaluated in consideration of aftershocks. For that evaluation, it is necessary to predict occurrence of aftershocks. In this research, we propose a prediction method, which can calculate magnitude and elapsed time of aftershocks after a main shock, based on statistical processing on past earthquakes including aftershocks. Preliminary calculation was conducted to obtain time history including aftershocks for a main shock having magnitude of 7.0 by the proposed method. By using the proposed method, we can calculate time histories of both a large-scale earthquake and its aftershocks.