

Seismic source inversion using genetic algorithm and 3-D strong motion simulation for the 1995 Itami earthquake(MJ5.4)

Hidenori Kawabe[1], masanori Horike[2], Kaoru Kusakabe[3]

[1] System Function Sci.,Kobe Univ, [2] OIT, [3] Faculty of Engineering, Kobe Univ

To achieve the prediction of strong ground motions precisely, it is very important to characterize source models and to make 3-D velocity structure models. This study presents a seismic source inversion using a genetic algorithm for the 1995 January 17 Itami earthquake (M5.4) and 3-D strong ground motion simulation of the earthquake using the source inversion results. As the inversion result, the fault is vertical, and the fault slip is mostly right-lateral strike slip. For the strong motion simulation, we succeed to simulate the observed displacement waveforms filtered from 0.1 to 1.0 Hz.