

Real-time Operation System for Earthquake. The real-time method estimating strong ground motion

Tomohiro Kubo[1], Yoshiaki Hisada[2], Masahiro Oi[3], Mizuho Ishida[3]

[1] Kogakuin Univ, [2] Kogakuin Univ., [3] NIED

The ROSE system estimates strong ground motions and seismic intensities immediately after earthquakes using two methods. One is based on a source model, which is quickly estimated after an earthquake, attenuation relations, and site amplification factors. The other is based on an interpolation technique using actual strong motion records and site amplification factors. The amplification factors are empirically estimated using the digitized sub-surface geology and elevations. The two methods are tested using the strong motion and damage data for the 2000 Western Tottori and 1997 North-Western Kagoshima earthquake. The first method estimates the ground motions more quickly, but the latter is more accurate.