



## **Microtremor studies in the Izmir province of western Turkey**

Ş. Özyalı n (1), N. Türk (2), M. Akgün (1), A. Tunçel (1), A. Yurdakul (1)

(1) Dokuz Eylül University, Engineering Faculty, Department of Geophysics, Kaynaklar campus 35160 Buca İzmir, Turkey, (2) Dokuz Eylül University, Engineering Faculty, Department of Geology, Kaynaklar campus 35160 Buca İzmir, Turkey  
(aykuttuncel@hotmail.com)

Determining the site response period and acceleration coefficient of ground, is to reduce the earthquake damage and researching the behaviour of buildings in dynamic conditions and stable construction of the buildings. When the losses of lifes and damages caused to the state economy after earthquakes, construction of suitable buildings for types of grounds become very important. As microtremor recordings are easy and faster for data acquisition and affordable for field studies, it is as an useful geophysical technique to use in practice. İzmir is the third large metropolitan city located in the western turkey. When the geological structure and deposits where the city is placed are considered, the seismic properties of the ground becomes very important. Microtremor studies, were made at different parts of the city of Izmir using the Guralp CMG-5T type strong ground motion recorder. Microtremor recordings are evaluated using the nakamura method. Studies have revealed that smaller sampling ratios are necessary to reach a general conclusion, because of the highly changeable nature of the geology of İzmir.