

of Site Effect of Zarqa City and Hashemite University Campus Based on Microtremor Field Measurements - A Microzonation Study

Zarqa governorate is one of the important governorates in Jordan. It is the second populated after the capital Amman, the location of Zarqa gives it a great importance because it lies on the main high ways leading to Syria, Iraq and Saudi Arabia, most of Jordan's industries, power plants and strategic projects are located in Zarqa, which gives it a special importance. The Nakamura's technique is applied in this study for both areas; in order to determine the resonance frequencies (F) and amplification factors (A) for each site then draw there maps which will be of a great use in the field of civil and structural engineering by enriching the building codes. The results of our study show that; values of F are not affected by the time of recording. While values of A can vary accordingly. Results also show that the A varies from 0.8 to 8.55 in Zarqa and varies from 0.4 to 9.36 in Hashemite University Campus, F also varies between 0.37 Hz and 2.98 Hz in Zarqa city and varies from 0.59 Hz to 1.77 Hz in Hashemite University Campus, that means some constructions in the study area, in case of a major earthquake, may experience minor damages respectively

Primary author: OLIMAT, Waleed (Jordan Seismological Observatory)

Presenter: OLIMAT, Waleed (Jordan Seismological Observatory)

Track Classification: Theme 2: Events and Their Characterization