

Author: Keyword: [ADVANCED](#)[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

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BUTSURI-TANSA(Geophysical Exploration)

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[\[PDF \(2554K\)\]](#) [\[References\]](#)**Application of microtremor array explorations for architectural seismic design**Shunichi Fukumoto¹⁾ and Tadashi Mimachi²⁾

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ABSTRACT Microtremor array explorations with broad-band period have been performed at a lot of sites for estimating deep and shallow S-wave velocity structures in the urban area. It has been conducted quite often in the last decade at sedimentary basins, such as Kanto, Osaka and Nohbi plains. However, few microtremor array explorations were conducted in practice work of architectural seismic design. In recent years, performance based design concept has been considered in the architectural design field. Therefore, microtremor array explorations have been applied to determine the seismic bearing capacity to the specific design (e.g. base isolated system buildings, high-rise buildings) considering strong ground motions for earthquakes generated by subducting plate or active fault near the construction site. In this paper, we show importance of local site effects for the seismic design and examples of the application of array exploration in the architectural seismic design field.

Key words: microtremor array exploration, architectural seismic design, performance based design

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