

Evaluation Of Building Vibration Characteristics By Sequential Partial Measurement Of Microtremor

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In this paper, method to investigate the vibration characteristics of building by sequential two-point measurement of microtremor is proposed. The purpose of this method is to reduce the measurement cost compared to the conventional large-scale simultaneous measurement. By taking several patterns of two-point microtremor measurement and multiplying each transfer function, the elevational vibration mode is derived. By using the rotational spectrum of two-point on the same floor the rotational vibration mode is identified. Microtremor measurement is carried out on 9-storied office building in Yokohama, and the proposed method is verified to obtain the same result as conventional large-scale simultaneous measurement.