

**On evaluation of deviation for the strong motion prediction (No.2)**

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Considering the stratified layer structure as a computational model for the strong ground motion, we evaluate the deviation due to the uncertainty of the structural parameters. Thin layer finite element method, which results in solving the eigen value problem, is used for computing this model. When setting the values of uncertain parameters, they are considered as random variables. We evaluate the deviation of eigen values or the variation of the wave field which are affected by these random variables.

There are two kinds of method to evaluate the deviation. One is Monte Carlo type method, the other is evaluating directly from solving the stochastic eigen value problem with some approximation such as the perturbation method. We mainly deal with the Monte Carlo type method.