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[\[Image PDF \(1026K\)\]](#) [\[References\]](#)**ANALYSIS METHODS OF STOCHASTIC MODEL:
APPLICATION TO STRONG MOTION AND FAULT PROBLEMS**Muneo HORI¹⁾, Tsuyoshi ICHIMURA²⁾ and Hidenori NAKAGAWA³⁾

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The difficulty of modeling underground structures is a bottleneck in quantitatively studying earthquake phenomena. Stochastic modeling that accounts for the uncertainty of modeling is an alternative, and the authors have been developing two analysis methods for a stochastic model. This paper presents these methods in a unified manner, emphasizing the efficiency of numerical computation. The earthquake wave propagation and the surface earthquake fault formation are solved as examples, and the results are compared with observed data to examine the validity and limitation of the analysis methods of the stochastic model.

Key Words: stochastic modeling, earthquake wave propagation, surface earthquake fault, strong motion, strain localization

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