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## Study on strong motion simulations against an earthquake along the Sagami-trough in Japan and the spatial distribution of earthquake response with high-rise RC buildings

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I performed strong motion simulations against an earthquake along the Sagami-trough using certain methods. The simulation results show that the maximum values of strong motion are in good agreement with the GMPEs proposed by Shi and Midorikawa (1999), and the results with the improved empirical method proposed by Okawa et al. (2013) are slightly greater than those with the method proposed by Nakano (2020). I calculated the Peak Inter-story Drift Angle (PIDA) with high-rise RC buildings based on the strong motion simulations, and, evaluated the distributions of PIDA in Tokyo and the surrounding areas (including Ibaraki, etc.). I found the PIDA of buildings classified 100m height might be over 1/200 at the much area in Tokyo and surrounding areas (including Ibaraki, etc.) on an earthquake along the Sagami-trough in Japan.

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