

**Nonlinear Hysteresis Model of RC Members
Considering Strength Degradation by Cyclic Loading**

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It is well known that the strength of RC columns is degraded by cyclic loading, particularly in the post-peak region. It is important, therefore, to take into account the strength degradation caused by cyclic loading, in order to examine the seismic capacity of RC structures by using dynamic response analysis. In this study, first, we have developed a nonlinear dynamic hysteresis model which can take into account the strength degradation caused by cyclic loading. Second, we have attempted to evaluate the effects of cyclic characteristics of earthquake on the strength degradation in the post-peak region by using this model. Consequently, we have clarified that the post-peak behavior of RC structures varies depending on cyclic characteristics of the ground motion.