

Interactive comment on “Reliability-based strength modification factor for seismic design spectra considering structural degradation” by Sonia E. Ruiz et al.

Anonymous Referee #2

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The submitted manuscript concerns a new approach for the definition of the strength modification factor of design spectra to be used in the seismic design of degrading structures. In the opinion of this reviewer the considered topic is very interesting from scientific point of view, the paper is well written and the subject falls within the scope of the "Natural Hazards and Earth System Sciences" journal. Summarizing, I would recommend the paper for publication in NHESS considering only minor revision, as indicated in the following comment. The rate of variation of the vibration periods of a structure, in the passage from the undamaged to the damaged state, strongly depends on the structural type, on the interaction of the structural elements with the non-structural ones, as well as on the soil-structure interaction. Could the authors comment

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on whether the above parameters may have an effect on the proposed procedure, also considering the different design limit states furnished by current codes?

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