## عنوان مقاله:

EVALUATION THE EFFECT OF STRONG COLUMN-WEAK BEAM RATIO ON SEISMIC PERFORMANCE OF OPTIMALLY DESIGNED STEEL MOMENT FRAMES

## محل انتشار:

مجله بهینه سازی در مهندسی عمران, دوره 10, شماره 4 (سال: 1399)

تعداد صفحات اصل مقاله: 15

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## خلاصه مقاله:

The present work is aimed at assessing the impact of strong column-weak beam (SCWB) criterion on seismic performance of optimally designed steel moment frames. To this end, different SCWB ratios are considered for steel special moment resisting frame (SMRF) structures and performance-based design optimization process is implemented with the aid of an efficient metaheuristic. The seismic collapse performance of the optimally designed SMRFs is assessed by performing incremental dynamic analysis (IDA) and determining their adjusted collapse margin ratios. Three design examples of ۵-, ۱۰-, and ۱۵-story SMRFs are presented to illustrate the efficiency of the proposed methodology.

## کلمات کلیدی:

metaheuristic structural optimization, strong column-weak beam rule, performance-based design, seismic collapse performance, steel moment frame