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# Seismic Vulnerability Assessment of Concrete Shear Wall Buildings through Fragility Analysis

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## ***Abstract:***

Seismic vulnerability assessment of shear wall buildings can be conducted through non-linear dynamic analysis, which requires detailed analytical modeling, the consideration of different earthquake intensity and structural performance measures. Reinforced concrete shear wall buildings were designed for Vancouver, representing a region of high seismicity in Canada, to assess seismic vulnerability of buildings constructed before and after the enactment of modern seismic design codes. The buildings either had a two-storey or a five-storey height, designed either using the 1965 or the 2010 National Building Code of Canada. Analytical models were generated for non-linear response time history analysis using computer software PRFORM-3D. Fiber-discretized sections were used for

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