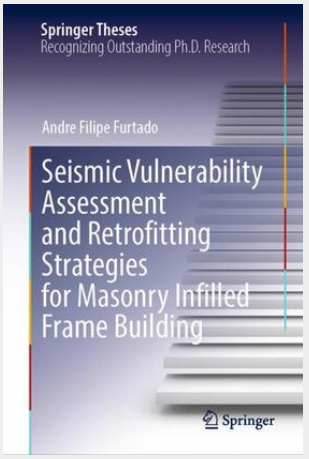
Furtado

Seismic Vulnerability Assessment and Retrofitting Strategies for Masonry Infilled Frame Building



This book reports on a comprehensive experimental characterization of the material, mechanical and dynamic properties of masonry infill walls. It analyses the critical parameters affecting their out-of-plane seismic behavior, including the effects of the panel support conditions, gravity load, and previous damage. Further, it offers an extensive review of infill masonry strengthening strategies and reports on the experimental assessment of various textile-reinforced mortar (TRM) strengthening solutions. It also presents the development, implementation and calibration of a numerical model to simulate the infill panels' seismic behavior, with the corresponding findings of various tests to assess the seismic vulnerability of an infilled RC structure. All in all, this outstanding PhD thesis offers a comprehensive review of masonry infill walls, and a timely overview of numerical and experimental methods for testing and preventing the out-of-plane seismic collapse of RC buildings.

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