

# **Seismic Assessment of Existing Irregular Masonry Buildings by Nonlinear Static and Dynamic Analyses**

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## Abstract

The use of nonlinear static (pushover) analysis in the case of existing irregular masonry buildings is validated by a comparison with results from nonlinear dynamic analysis, assumed as reference because considered as able to represent the actual seismic behavior. After the selection of a regular prototype case study building, different irregular configurations are defined (in terms of plan irregularity and finite stiffness of horizontal diaphragms). Specific formulations are considered for the selection of load patterns for the pushover analysis and the definition of limit states on the capacity curve. A general overview of possible approaches for modelling and analysis of masonry buildings is presented in the introduction.