

# Reconciling geometry and dynamics: models for oval domes

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<b>Abstract</b>	Modern monitoring provides an exhaustive depiction of the structural health state and easing the plan of maintenance and restoring interventions on historical buildings. Dynamic investigations, in particular, contribute to the calibration of mechanical and geometrical models for seismic reliability assessment. The present paper is intended to report and discuss on a few recent experiences on reconciling geometric survey information with the measured or calculated dynamic response of ancient heritage structures. When vibration tests are performed on the structure, acquisition records usually consist of acceleration response signals measured under ambient excitation. Reported applications will regard structures with oval shape domes, such as the Sanctuary of Vicoforte, S. Maria delle Grazie in Casale Monferrato and S. Agostino in L'Aquila.
<b>Keywords</b>	oval domes, seismic response, dynamic characterization, geometric survey