

PRELIMINARY NUMERICAL INVESTIGATION OF THE DYNAMIC CHARACTERISTICS OF HISTORIC MONUMENTS

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1. ABSTRACT

This paper includes the most important findings of a series of linear dynamics analyses focusing on the dynamic characteristics of Historic Monuments. The historic Monuments which were selected for this investigation are: a) The church of the Assumption of The Mother of God (Koimiseos tis Theotokou) at Zervati of the District of Argyrokastro, Albania, b) The church of Agia Triada, at the District of Karditsa, Greece c) Domed Mausoleum of Khond Barakah in Cairo. For the church of the Assumption of The Mother of God the behaviour of the structure prior and after the intervention process is studied. The numerical simulation for the church of Agia Triada is utilized by applying vertical and earthquake loads and by trying to predict the initiation of failure at various structural elements. A similar type of dynamic analysis was also employed in order to investigate the behaviour of the Mausoleum of Khond Barakah in Cairo.

Keywords: Historic Monuments; Numerical Investigation; Masonry

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