Investigate and Solving Analytic of Nonlinear Differential at Vibrations (Earthquake)and Beam-Column, by New Approach "AGM"

Authors : Mohammadreza Akbari, Pooya Soleimani Besheli, Reza Khalili, Sara Akbari

Abstract : In this study, we investigate building structures nonlinear behavior also solving analytic of nonlinear differential at vibrations. As we know most of engineering systems behavior in practical are non- linear process (especial at structural) and analytical solving (no numerical) these problems are complex, difficult and sometimes impossible (of course at form of analytical solving). In this symposium, we are going to exposure one method in engineering, that can solve sets of nonlinear differential equations with high accuracy and simple solution and so this issue will emerge after comparing the achieved solutions by Numerical Method (Runge-Kutte 4th) and exact solutions. Finally, we can proof AGM method could be created huge evolution for researcher and student (engineering and basic science) in whole over the world, because of AGM coding system, so by using this software, we can analytical solve all complicated linear and nonlinear differential equations, with help of that there is no difficulty for solving nonlinear differential equations.