

## Used MATLAB Code to Study the Vehicle Bridge Coupling Vibration Based On the Method of Newmark- $\beta$

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**Abstract :** The study of interaction between vehicles and bridge structures has become extremely important. Large deflections and vibration induced by heavy and high-speed vehicles affect significantly the safety and efficiency of bridge. The vibration of a bridge caused by passage of vehicles is one of the most imperative considerations in the design of a bridge as a common sort of transportation structure. A major goal of this study is to create a simplified model of a vehicle bridge system in MATLAB. The model will then be used to study the influence of parameters to vehicle-bridge vibrations.

**Keywords :** vehicle-bridge interaction, Newmark- $\beta$ , MATLAB code

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