

# MODELING AND SIMULATION OF VEHICLE VERTICAL VIBRATION FROM POWERTRAIN AND ROAD EXCITATIONS

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## TÓM TẮT:

In order to study the interaction between driveline system torsional vibration and vehicle vertical vibration, a 2D vibration model with a combination of powertrain and road excitations is established. Lagrange's equation is applied to formulate the equations of motion of the vehicle vibration model with 11 DOF. Matlab/Simulink is used to simulate the vibration and analyze the vehicle ride comfort. The simulation results for a two-axle vehicle with 4x4-powertrain system are presented.