Dynamics of two-axle railway freight wagons with UIC standard suspension

The dynamics of two different two-axle railway freight wagons is investigated theoretically and compared. Fully nonlinear models are considered. The hysteresis from dry friction and the effect of impacts between elements of the suspension are included. Bifurcation diagrams are shown in order to describe the eigen-dynamics of the wagons. Finally, the dynamics in a given curve is calculated for three different speeds.

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