

A *SIMULINK* – *SIMMECHANICS* MODEL DEDICATED TO THE STUDY OF THE KINEMATIC PARAMETERS OF THE OCCUPANT’S MOTION DURING THE FRONTAL IMPACT

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Abstract

The paper presents a simplified model of the car occupant, developed with the Simulink-SimMechanics software, with which help it can be determined the kinematic parameters of the occupant’s body motion, during the frontal impact. There are presented comparatively the results obtained using the Simulink-SimMechanics model and the other ones presented by the authors in a previous paper based on a simplified mathematical model, starting from Lagrange’s equations and applying the numerical method Runge-Kutta of fourth order for solving the differential equation of motion.

Keywords

Simulink-SimMechanics model, simulation, impact, occupant, kinematic parameters.