

SCIENTIFIC BULLETIN



**AUTOMOTIVE SERIES** 

## NUMERICAL MODELS OF THE VEHICLE POST COLLISION KINEMATICS

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Abstract

The present paper presents a mathematical model that may be used to study the kinematics of the vehicle after the collision. The algorithm is based on solving some differential equations using Runge – Kutta numerical method. The way time step and total runtime is computed is also presented. A FE model is developed to study various methods useful to study post collision vehicle kinematics.

Keywords

Analytical model, Runge-Kutta, time step control, FE model, LS - Dyna