

# OPTIMAL SYNTHESIS OF THE GUIDING MECHANISMS USED FOR THE REAR WHEELS OF PASSENGER CARS

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**Abstract:** *In this paper, an analytical method for optimal geometric synthesis of the spatial linkages used for the guidance of the rear wheels of passenger cars is presented. According to the proposed method, the coordinates of the guiding points on the wheel carrier are established by constructive criteria. Taking into account the geometric constraints, for imposed positions of the wheel carrier, the global coordinates of the joints on car body are determined. The solution is obtained by the least square's approach.*

**Key words:** *guiding linkage, car wheel, geometric synthesis.*