MATHEMATICAL MODEL OF KINEMATICS AND DYNAMCS OF POWERED EXOSKELETON TREE ACTUATOR

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Abstract

We propose a kinematic scheme of a tree actuator of the powered exoskeleton. In our research we examine mathematical models of kinematics and dynamics of its actuator and present values of modified Denavit — Hartenberg parameters, reachability matrix of the actuator's units and the Z vector, which characterizes the spatial arrangement of the rotation axes of kinematic pairs

Keywords

Exoskeleton, synthesis of kinematic structure, modified Denavit—Hartenberg coordinate system, reachability matrix, dynamic equation of exoskeleton's actuator

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