

DETERMINATION OF SPHERICAL CURVE DEFINING THE ANGLE OF SERVICE OF ANDROID ROBOT ARM BY METHOD OF SMALL MOTIONS SYNTHESIS

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A generalized method for determining the angle of service based on the synthesis of motions in the specified directions of the gripper's axis with immobile center is presented. As an example, the angle of the android robot's arm is defined, formed by the longitudinal axis of the gripper. The essence of the method is based on the study of position's sets of configurations defining the extreme positions of the points of a sphere of unit radius that specifies the angle of the service. On the basis of this, a spherical curve defining the shape of the desired angle is defined.

Keywords: manipulators mechanisms, service angle, robot motion synthesis, maneuverability, robotics, output link.

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