

## Motion Planning of SCARA Robots for Trajectory Tracking

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**Abstract :** The paper presents a method for a simple and immediate motion planning of a SCARA robot, whose end-effector has to move along a given trajectory; the calculation procedure requires the user to define in analytical form or by points the trajectory to be followed and to assign the curvilinear abscissa as function of the time. On the basis of the geometrical characteristics of the robot, a specifically developed program determines the motion laws of the actuators that enable the robot to generate the required movement; this software can be used in all industrial applications for which a SCARA robot has to be frequently reprogrammed, in order to generate various types of trajectories with different motion times.

**Keywords :** motion planning, SCARA robot, trajectory tracking, analytical form

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