

# WORKSPACE ANALYSIS AND DESIGN OF A 3-DOF MICRO PARALLEL ROBOT

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**Abstract:** *In this paper a workspace analysis for a three-degree of freedom parallel micro robot is outlined by using optimality criterion of workspace and numerical aspects. We proposed a numerical procedure for determining and evaluating the workspace of the 3-RRR robot architecture. The analysis and algorithm can be used as a design tool to select dimensions, actuators and joints in order to maximize the workspace and improve stiffness within the workspace. A program was created in MATLAB for workspace analysis of 3 DOF parallel robots.*

**Key words:** *workspace, optimization, parallel robot, analysis, 3 DOF, singularities*



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