Public Abstract

First Name:Zhentao

Middle Name:

Last Name:Xie

Adviser's First Name:A.Sherif

Adviser's Last Name:El-Gizawy

Co-Adviser's First Name:

Co-Adviser's Last Name:

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Title:KINEMATIC, DYNAMIC AND ACCURACY RELIABILITY ANALYSIS OF 6 DEGREE-OF-FREEDOM ROBOTIC ARM

Abstract:

In this article, first of all, it describes the procedure for kinematic and dynamic analysis of a 6-degrees-of-freedom robotic arm. In kinematic analysis, it includes kinematics and differential kinematics. In which, the Denavit-Hartenberg Parameters, Homogeneous Transformation Matrix, Direct Kinematic Function and Geometric Jacobian are derived. In the dynamic analysis, the Lagrange Formulation is derived and the equations of motion have been formulated in joint space using Lagrangian equation. Then, it presents the accuracy reliability analysis based on kinematic parameters.