Inverse acceleration problem is very difficult for a serial robot having less than 6 degree of freedom (DOFs), this difficulty is due to the complexity of the inverse Jacobian matrix. For the sake of this problem an approach to solve inverse acceleration of a robot was introduced in this paper, in which harmony search algorithm (HSA) was used to calculate the inverse problem without calculating inverse Jacobian matrix. It is proved that it is applicable by simulation inverse acceleration for a 3-DOF robot. ANSYS 15.0 was used as a simulation software package.

References


Inverse Acceleration Solution for Robot Manipulators using Harmony Search Algorithm


Index Terms

Computer Science

Algorithms
Keywords

Robot; Inverse acceleration solution; Harmony search algorithm