



Control of Robot Manipulator Error Using FPDI-IQGA in Neural Network

Authors: Kumar, A. Sathish¹; Alavandar, Srinivasan²

Source: Journal of Computational and Theoretical Nanoscience, Volume 13, Number 3, March 2016, pp. 1740-1748(9)

Publisher: American Scientific Publishers

Buy Article:
\$113.00 plus tax
(Refund Policy)

ADD TO CART

BUY NOW

[< previous article](#) | [view table of contents](#) | [next article >](#)

[♥ ADD TO FAVOURITES](#)

Abstract:

Robot manipulators is predominantly handling devices and positioning. Manipulators are highly nonlinear system with strong coupling. In existing system, DOF arms are controlled using Fuzzy PDI in neural networks with same optimization. The feedback from the FPDI system is obtained with error. Normally moving arm error will occur in the system, in order to control and to avoid the errors a new novel method is implemented in the system. In this research work, a novel evolutionary algorithm is proposed by implementing genetic and quantum-inspired algorithm. It optimized the process efficiently to find the error occurrences in robot arm movement. So it increases the precision of the solution for better performance. Effectiveness of the proposed method is tested by computer simulation carried out with analysis and performance of the system than the existing system.

Keywords: FPDI; Feedback Error; Genetic; Quantum-Inspired; Robot Manipulator

Document Type: Research Article

DOI: <http://dx.doi.org/10.1166/jctn.2016.5106>

Affiliations: 1: EEE, CK College of Engineering and Technology, Cuddalore 607003, Tamilnadu, India 2: EEE, Agni College of Technology, Chennai 600130, Tamilnadu, India

Publication date: March 1, 2016

More about this publication?

Share Content



Access Key

- F *Free content*
- N *New content*
- O *Open access content*
- S *Subscribed content*
- T *Free trial content*

[Cookie Policy](#)