World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

The Optimal Indirect Vector Controller Design via an Adaptive Tabu Search Algorithm

Authors : P. Sawatnatee, S. Udomsuk, K-N. Areerak, K-L. Areerak, A. Srikaew

Abstract : The paper presents how to design the indirect vector control of three-phase induction motor drive systems using the artificial intelligence technique called the adaptive tabu search. The results from the simulation and the experiment show that the drive system with the controller designed from the proposed method can provide the best output speed response compared with those of the conventional method. The controller design using the proposed technique can be used to create the software package for engineers to achieve the optimal controller design of the induction motor speed control based on the indirect vector concept.

Keywords : indirect vector control, induction motor, adaptive tabu search, control design, artificial intelligence
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020