Global best Local Neighborhood in Particle Swarm Optimization in Dynamic Environment

Zalili Musa[1], Nurul Izzatie Husna Fauzi[1], Mohd Hafiz Bin Mohd Hassin[1], Mohd Nizam Mohd Kahar[1], Junzo Watada[2]

[1]Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Kuantan, Pahang, Malaysia

[2]Universiti Teknologi PETRONAS, Department of Computer and Information Sciences, Ipoh, Malaysia

Corresponding author Email: zalilimusa,@ump.edu.my

Received: 19 July 2017 Accepted: 6 September 2017

The conventional Particle Swarm Optimization (PSO) still has weaknesses in finding optimal solutions especially in a dynamic environment. Therefore, we proposed a Global best Local Neighborhood in particle swarm optimization in order to solve the optimum solution in a dynamic environment. Based on the experimental results of 50 datasets, show that GbLN-PSO has the ability to find the quality solution in a dynamic environment.

Keywords: PSO, Optimization, Big Data Environment, Local Neighborhood