Abstract

Particle swarm optimization (PSO) algorithm is a simple and powerful population based stochastic search algorithm for solving optimization problems in the continuous search domain. However, the general PSO is more likely to get stuck at a local optimum and thereby leading to premature convergence when solving practical problems. One solution to avoid premature convergence is adjusting the control parameters, inertia weight and acceleration coefficients. This paper proposes two adaptive mechanisms for adjusting the inertia weights namely self adaptive PSO1 (SAPSO1) and self adaptive PSO2 (SAPSO2) for mining association rules. The accuracy of the mined rules by these two algorithms when compared to weighted PSO shows that the self adaptive PSO produces better results when compared to weighted PSO.

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