# Presenting a Job Scheduling Algorithm Based on Learning Automata in Computational Grid

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**Abstract :** As a cooperative environment for problem-solving, it is necessary that grids develop efficient job scheduling patterns with regard to their goals, domains and structure. Since the Grid environments facilitate distributed calculations, job scheduling appears in the form of a critical problem for the management of Grid sources that influences severely on the efficiency for the whole Grid environment. Due to the existence of some specifications such as sources dynamicity and conditions of the network in Grid, some algorithm should be presented to be adjustable and scalable with increasing the network growth. For this purpose, in this paper a job scheduling algorithm has been presented on the basis of learning automata in computational Grid which the performance of its results were compared with FPSO algorithm (Fuzzy Particle Swarm Optimization algorithm) and GJS algorithm (Grid Job Scheduling algorithm). The obtained numerical results indicated the superiority of suggested algorithm in comparison with FPSO and GJS. In addition, the obtained results classified FPSO and GJS in the second and third position respectively after the mentioned algorithm.

**Keywords :** computational grid, job scheduling, learning automata, dynamic scheduling

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