

## **Priority-based divisible load scheduling using analytical hierarchy process**

### **ABSTRACT**

The divisible load scheduling is a paradigm in the area of distributed computing. The traditional divisible load theory is based on the fact that, the communications and computations are obedient and do not cheat the algorithm. The literature of review shows that the divisible load model fail to achieve its optimal performance, if the processors do not report their true computation rates. The divisible load scheduling with uncertain communication rates has not been considered in the existing research. This problem lead us to propose a priority based divisible load scheduling method. The goal is to decrease the negative effects of communication rate cheating on the total finish time. The proposed method has been examined on several function approximation problems. It is found that the proposed method is extremely more efficient than either of the other methods.

**Keyword:** Divisible load scheduling; Priority-based method; Communication rate cheating; Analytical hierarchy process (AHP)