Abstract

The state-of-the-art computer hardware is coming with multi-core processors. Even mobile phones are coming with dual-core processors. OpenMP is one technology supporting parallel programming on multi-core shared memory systems with the help of threads. In this paper, we observed the execution times Serial EM Clustering running on single-core and Parallel EM Clustering methods using OpenMP on I3 system. Observations are made varying number of threads, samples, dimensions and clusters. The results show that OpenMP Lower Triangular Canonical Form with Forward Substitution and Winograd's approach (OLFW) EM gives a considerable speed-up of 2.7 over serial standard EM.

References

A Critical Study of Efficient Multi-core EM Clustering


Index Terms

Computer Science

Keywords
Openmp  Multi-core  Parallel Programming  Expectation Maximization  Em