

# Graph Algorithms

Implement a parallel version (MPI and/or OpenMP) of at least two of the following graph algorithms:

- Prim's Minimum Spanning Tree algorithm
- Dijkstra's Single Source Shortest Paths algorithm
- All-pairs Shortest Path algorithm
- TSP – Travelling Salesman Problem

and write a report on the used methodology, performance tests, results, analysis, etc. Elucidations may be taken from the textbook adopted for the course: "Introduction to Parallel Computing" by Ananth Grama et al.

Once implemented, performance test should be measured on the machine, such as speedup, efficiency and scalability- using your PCs, and/or colleagues' i-7 based machines...

OSS: Adopt, where possible, solutions involving the use of "advanced" MPI, such as virtual topologies, derived data types, non-blocking send-receives, etc., even if this results in a degradation of performances. Please show comparisons.

Finally, the adoption of a suitable display interface will be evaluated in a further positive manner.