1 Algorithm

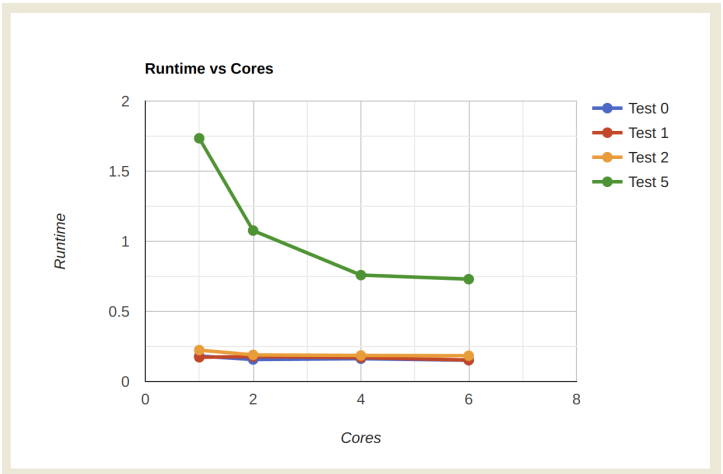
The algorithm implemented is the hybridTruss algorithm given in the paper 'Improved Distributed Algorithm for Graph Truss Decomposition'. When verbose output is required, BFS is run on the graph to generate its connected components using the right edges.

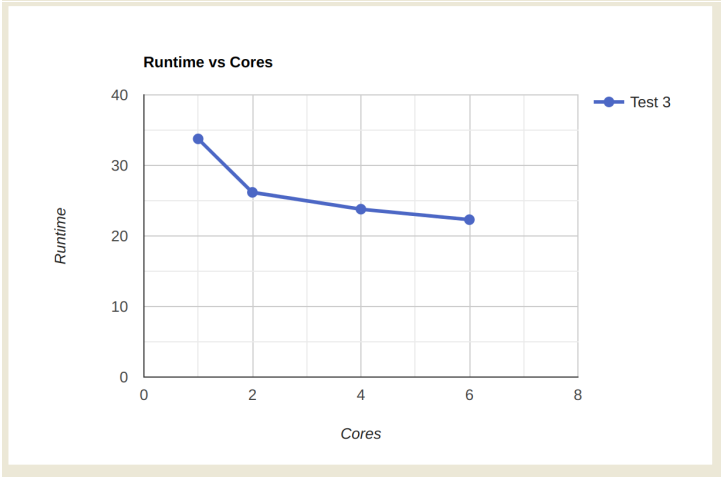
2 Speed Up & Efficiency

Note: Testing has been done only up till 6 processes which is the maximum my machine permits.

Speedup

Test Number	n	m	1	2	4	6
0	100	1489	0.182	0.156	0.163	0.152
1	1000	12481	0.173	0.178	0.171	0.153
2	5000	49755	0.224	0.190	0.186	0.184
3	10000	1250245	33.763	26.182	23.799	22.311
5	50000	517380	1.735	1.077	0.759	0.730





Efficiency

Test Number	n	m	Runtime
0	100	1489	0.182
1	1000	12481	0.173
2	5000	49755	0.224
3	10000	1250245	33.763
5	50000	517380	1.735

Tabelle 1: 1 process

Test Number	n	m	Runtime
0	100	1489	0.156
1	1000	12481	0.178
2	5000	49755	0.190
3	10000	1250245	26.182
5	50000	517380	1.077

Tabelle 2: 2 processes

Test Number	n	m	Runtime
0	100	1489	0.163
1	1000	12481	0.171
2	5000	49755	0.186
3	10000	1250245	26.182
5	50000	517380	0.759

Tabelle 3: 4 processes

Test Number	n	m	Runtime
0	100	1489	0.152
1	1000	12481	0.153
2	5000	49755	0.184
3	10000	1250245	22.311
5	50000	517380	0.730

Tabelle 4: 6 processes