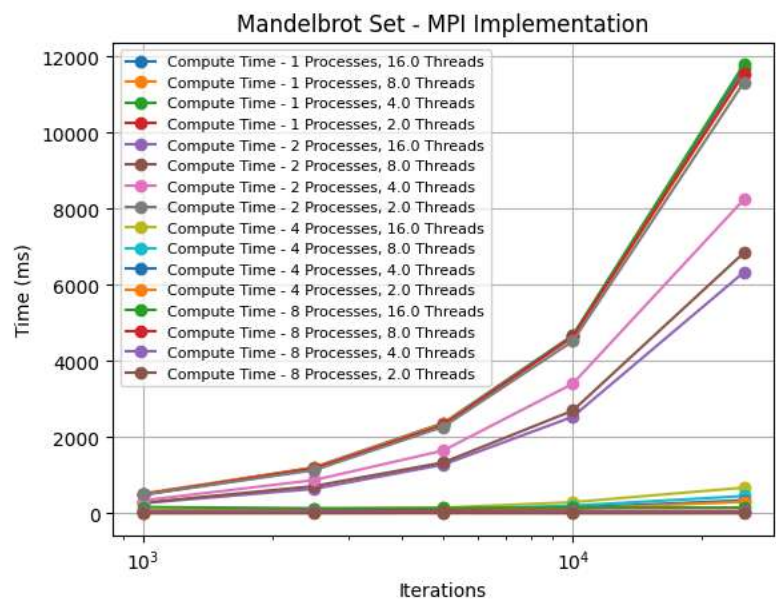


# OpenMP\_MPI Hybrid Implementation

## Performance Metrics



Processes	Threads	Iterations	Compute Time (ms)	Save Time (ms)
1	16.0	1000	495.30	44.70
1	16.0	2500	1206.90	39.30
1	16.0	5000	2370.90	38.60
1	16.0	10000	4673.40	38.30
1	16.0	25000	11710.20	37.20
1	8.0	1000	518.70	34.60
1	8.0	2500	1196.00	38.00
1	8.0	5000	2359.50	39.10
1	8.0	10000	4639.40	39.00
1	8.0	25000	11537.60	38.30
1	4.0	1000	488.60	39.00
1	4.0	2500	1159.60	37.10
1	4.0	5000	2321.20	37.70
1	4.0	10000	4664.30	39.60
1	4.0	25000	11791.60	38.90
1	2.0	1000	497.10	41.50
1	2.0	2500	1175.80	41.40
1	2.0	5000	2316.50	40.80
1	2.0	10000	4635.60	40.90
1	2.0	25000	11569.90	41.60

Processes	Threads	Iterations	Compute Time (ms)	Save Time (ms)
2	16.0	1000	267.50	39.60
2	16.0	2500	641.30	39.70
2	16.0	5000	1279.30	37.20
2	16.0	10000	2537.40	39.00
2	16.0	25000	6333.60	35.30
2	8.0	1000	277.60	38.60
2	8.0	2500	712.50	38.70
2	8.0	5000	1335.80	37.40
2	8.0	10000	2697.20	38.10
2	8.0	25000	6844.40	39.10
2	4.0	1000	336.40	39.30
2	4.0	2500	872.10	38.80
2	4.0	5000	1649.60	37.90
2	4.0	10000	3404.10	36.00
2	4.0	25000	8241.90	38.30
2	2.0	1000	491.00	42.20
2	2.0	2500	1132.10	41.50
2	2.0	5000	2274.10	42.20
2	2.0	10000	4522.20	42.80
2	2.0	25000	11321.60	42.50
4	16.0	1000	73.50	196.60
4	16.0	2500	109.70	192.60
4	16.0	5000	149.50	197.80
4	16.0	10000	291.80	193.70
4	16.0	25000	674.70	198.00
4	8.0	1000	40.20	117.80
4	8.0	2500	65.20	120.50
4	8.0	5000	111.20	116.50
4	8.0	10000	200.70	119.80
4	8.0	25000	453.30	117.60
4	4.0	1000	20.30	80.10
4	4.0	2500	40.60	76.40
4	4.0	5000	76.00	78.10
4	4.0	10000	146.50	78.50
4	4.0	25000	341.80	79.70

Processes	Threads	Iterations	Compute Time (ms)	Save Time (ms)
4	2.0	1000	13.60	44.30
4	2.0	2500	34.30	43.30
4	2.0	5000	63.20	44.90
4	2.0	10000	116.00	44.00
4	2.0	25000	303.00	45.20
8	16.0	1000	165.00	203.40
8	16.0	2500	132.40	199.50
8	16.0	5000	136.90	191.50
8	16.0	10000	149.10	195.90
8	16.0	25000	149.90	184.40
8	8.0	1000	60.80	115.20
8	8.0	2500	62.90	122.10
8	8.0	5000	63.90	121.50
8	8.0	10000	64.30	120.30
8	8.0	25000	61.60	124.40
8	4.0	1000	34.30	77.60
8	4.0	2500	33.40	75.20
8	4.0	5000	24.50	75.80
8	4.0	10000	32.70	78.80
8	4.0	25000	30.40	78.10
8	2.0	1000	1.70	44.40
8	2.0	2500	2.50	45.20
8	2.0	5000	4.90	44.90
8	2.0	10000	1.00	44.90
8	2.0	25000	2.00	44.50