	MultiThreading execution wall clock time						Sequential execution wall clock time					
exec 1	exec 2	exec 3	exec 5	exec 5	mthAVG	exec 1	exec 2	exec 3	exec 5	exec 5	segAVG	Speed-up segAVG/mthAVG
8,09E+08		1,70E+08	1,82E+08	1,65E+08	3,12E+08	2,38E+08	1,66E+08	1,52E+08	1,50E+08	1,49E+08	1,71E+08	0,55
8,68E+08	1,33E+08	1,34E+08	1,32E+08	,	2,76E+08	1,89E+08	1,49E+08	1,50E+08	1,47E+08	1,51E+08	1,57E+08	0,57
1,70E+08	•	1,34E+08	1,33E+08		1,27E+08	2,68E+08	1,48E+08	1,50E+08	1,47E+08	1,49E+08	1,72E+08	1,35
1,47E+08		1,01E+08	7,02E+07	7,72E+07	9,55E+07	2,24E+08	1,47E+08	1,49E+08	1,51E+08	1,48E+08	1,64E+08	1,71
1,03E+08	•	6,35E+07	1,24E+08	6,90E+07	8,54E+07	1,90E+08	1,51E+08	1,52E+08	1,52E+08	1,54E+08	1,60E+08	1,87
6,88E+07	•	6,27E+07	•	6,74E+07	6,60E+07	1,52E+08	1,49E+08	1,50E+08	1,51E+08	1,54E+08	1,51E+08	2,29
6,23E+07	,	7,07E+07	6,34E+07	7,16E+07	6,71E+07	1,46E+08	1,46E+08	1,46E+08	1,52E+08	1,50E+08	1,48E+08	2,21
1,08E+08	•	6,77E+07	6,02E+07	6,71E+07	7,40E+07	1,49E+08	1,48E+08	1,49E+08	1,52E+08	1,50E+08	1,50E+08	2,02
2,08E+08		5,90E+07	6,82E+07	6,70E+07	9,33E+07	1,53E+08	1,49E+08	1,49E+08	1,47E+08	1,49E+08	1,49E+08	1,60
7,75E+07	•	6,75E+07	6,92E+07	7,05E+07	7,30E+07	1,49E+08	1,51E+08	1,49E+08	1,49E+08	1,49E+08	1,49E+08	2,05
6,09E+07	•	6,91E+07	6,69E+07	5,80E+07	6,89E+07	1,51E+08	1,48E+08	1,50E+08	1,50E+08	1,50E+08	1,50E+08	2,17
6,79E+07	•	6,62E+07	5,84E+07	6,90E+07	6,51E+07	1,52E+08	1,46E+08	1,50E+08	1,53E+08	1,47E+08	1,50E+08	2,30
7,15E+07	•	6,56E+07	1,03E+08	6,79E+07	7,80E+07	1,49E+08	1,46E+08	1,52E+08	1,59E+08	1,49E+08	1,51E+08	1,94
1,06E+08	1,02E+08	6,72E+07	5,80E+07	6,72E+07	8,01E+07	1,48E+08	1,51E+08	1,49E+08	1,53E+08	1,52E+08	1,50E+08	1,88
7,95E+07	•	8,00E+07	1,17E+08	,	8,72E+07	1,50E+08	1,48E+08	1,50E+08	1,48E+08	1,50E+08	1,49E+08	1,71
6,66E+07	,	6,02E+07	5,94E+07	1,06E+08	7,93E+07	1,48E+08	1,48E+08	1,50E+08	1,48E+08	1,50E+08	1,49E+08	1,88
6,99E+07	•	6,70E+07	6,78E+07	6,76E+07	6,73E+07	1,48E+08	1,48E+08	1,50E+08	1,48E+08	1,32L+08	1,49E+08	2,21
7,86E+07	,	6,70E+07 6,72E+07	5,84E+07	6,69E+07	6,79E+07	1,49E+08	1,48E+08	1,48E+08	1,50E+08	1,47E+08	1,49E+08	2,21 2,19
6,17E+07	•	7,01E+07	6,32E+07	2,21E+08	9,60E+07	1,47E+08 1,48E+08	1,48E+08 1,52E+08	1,48E+08 1,50E+08	1,50E+08 1,48E+08	1,51E+08 1,51E+08	1,49E+08 1,50E+08	2,19 1,56
6,62E+07	•	6,71E+07	6,65E+07	6,88E+07	6,73E+07	1,48E+08	•	•	1,48E+08	1,47E+08	1,50E+08	· ·
'	,		•	,		l '	1,51E+08 1,51E+08	1,50E+08	,	1,47E+08 1,50E+08	1,50E+08	2,23
6,72E+07	•	6,74E+07	6,65E+07	7,46E+07	6,87E+07	1,48E+08	,	1,48E+08	1,56E+08		′	2,19
6,66E+07	,	7,51E+07	6,27E+07	6,67E+07	6,67E+07	1,49E+08	1,48E+08	1,52E+08	1,51E+08	1,49E+08	1,50E+08	2,25
6,13E+07	•	6,75E+07	6,72E+07	6,64E+07	6,48E+07	1,47E+08	•	1,49E+08	1,50E+08	1,48E+08	1,48E+08	2,29
6,81E+07	•	6,73E+07	7,01E+07	6,19E+07	6,56E+07	1,48E+08	,	1,50E+08	1,49E+08	1,50E+08	1,50E+08	2,28
7,61E+07	•	6,18E+07	6,73E+07	6,03E+07	6,64E+07	1,47E+08	1,50E+08	1,49E+08	1,48E+08	1,51E+08	1,49E+08	2,24
1,44E+08	•	6,93E+07	6,66E+07	9,00E+07	8,86E+07	1,51E+08	1,49E+08	1,47E+08	1,50E+08	1,50E+08	1,49E+08	1,69
6,32E+07	•	6,77E+07	1,64E+08	6,72E+07	9,24E+07	1,46E+08	1,52E+08	1,48E+08	1,51E+08	1,49E+08	1,49E+08	1,61
6,49E+07	•	6,67E+07	6,72E+07	5,95E+07	6,53E+07	1,55E+08	1,52E+08	1,51E+08	1,49E+08	1,47E+08	1,51E+08	2,31
6,39E+07	•	9,91E+07	6,63E+07	6,67E+07	7,18E+07	1,47E+08	1,46E+08	1,51E+08	1,52E+08	1,47E+08	1,48E+08	2,07
6,68E+07	1,01E+08	5,92E+07	7,04E+07	6,81E+07	7,31E+07	1,63E+08	1,51E+08	1,49E+08	1,49E+08	1,50E+08	1,52E+08	2,08
9,32E+07	,	5,85E+07	7,76E+07	6,97E+07	7,19E+07	1,92E+08	1,49E+08	1,51E+08	1,48E+08	1,47E+08	1,57E+08	2,19
2,75E+08	•	6,96E+07	5,77E+07	1,04E+08	1,15E+08	1,65E+08	1,48E+08	1,50E+08	1,51E+08	1,48E+08	1,52E+08	1,33
6,73E+07	6,04E+07	6,48E+07	7,04E+07	1,37E+08	7,99E+07	1,52E+08	1,50E+08	1,50E+08	1,51E+08	1,48E+08	1,50E+08	1,88
6,88E+07	1,01E+08	5,74E+07	6,84E+07	7,53E+07	7,41E+07	1,59E+08	1,49E+08	1,49E+08	1,49E+08	1,62E+08	1,54E+08	2,07
6,91E+07	6,65E+07	6,43E+07	7,10E+07	1,03E+08	7,49E+07	1,51E+08	1,48E+08	1,52E+08	1,49E+08	1,50E+08	1,50E+08	2,00
6,70E+07	6,71E+07	6,96E+07	•					1,51E+08	1,49E+08	1,87E+08	1,58E+08	2,01
6,81E+07	,		7,49E+07				1,50E+08	1,50E+08	1,50E+08	·	,	1,65
6,71E+07	6,52E+07	5,92E+07	6,77E+07	8,10E+07	6,80E+07					1,49E+08	1,49E+08	2,19
7,45E+07	1,37E+08	7,81E+07	5,84E+07	7,29E+07	8,42E+07	1,48E+08	1,52E+08	1,51E+08	1,49E+08	1,51E+08	1,50E+08	1,79
1,28E+08	6,77E+07	5,82E+07	6,13E+07	6,68E+07	7,63E+07	1,53E+08	1,50E+08	1,50E+08			1,50E+08	1,97
6,08E+07	8,09E+07	6,71E+07	9,97E+07	6,41E+07	7,45E+07	1,49E+08	1,48E+08	1,49E+08	1,50E+08	1,48E+08	1,49E+08	2,00
6,86E+07	6,99E+07	6,66E+07	5,75E+07	9,05E+07	7,06E+07	1,51E+08	1,50E+08	1,50E+08	1,49E+08	1,51E+08	1,50E+08	2,13
6,15E+07	7,54E+07	6,63E+07	7,19E+07	6,99E+07	6,90E+07	1,49E+08	1,51E+08	1,47E+08	1,48E+08	1,50E+08	1,49E+08	2,16
6,79E+07	6,82E+07			6,83E+07	6,64E+07	1,52E+08	1,53E+08	1,49E+08	1,51E+08	1,52E+08	1,51E+08	2,28
7,53E+07	6,79E+07	6,56E+07	6,78E+07	6,90E+07	6,91E+07	1,50E+08	1,50E+08	1,49E+08	1,48E+08	1,51E+08	1,50E+08	2,17
6,75E+07	6,93E+07	6,05E+07	5,81E+07	6,53E+07	6,41E+07	1,49E+08	1,48E+08	1,49E+08	1,52E+08	1,51E+08	1,50E+08	2,34
6,77E+07	7,96E+07	6,69E+07	6,51E+07	6,70E+07	6,92E+07	1,49E+08	1,48E+08	1,51E+08	1,49E+08	1,51E+08	1,50E+08	2,16
9,52E+07	6,71E+07	5,96E+07	6,76E+07	6,99E+07	7,19E+07	1,49E+08	1,46E+08	1,49E+08	1,52E+08	1,51E+08	1,49E+08	2,08
6,19E+07	6,74E+07	1,74E+08			9,80E+07		1,52E+08	1,54E+08	1,49E+08	1,47E+08	1,50E+08	1,53
6,18E+07	6,80E+07	6,68E+07		7,04E+07	6,68E+07		1,49E+08			·		2,24
1,01E+08	•	•					1,48E+08					1,86
6,09E+07	•	6,83E+07	•		6,44E+07		1,48E+08			*		2,32
6,91E+07	•	•	•			1	1,46E+08					1,94
6,32E+07	•	•	•		6,61E+07		1,51E+08					2,28
6,83E+07		•	•				1,51E+08				1,49E+08	2,19
7,18E+07		•		7,02E+07								
1,232.37	0,012.07	3,3 12 . 37	3,312.37	.,007	0,002.07	_,552.50	_,500	_,550	_,550	_,=_=.00	_,500	_,

L c 205.07	C 71 F : 07	C CEE : 07	C 145.07	7 025 07	C	1 525.00	1 405.00	1 525.00	1 505.00	4.405.00	1 505.00	2.20
6,26E+07	6,71E+07	6,65E+07	6,14E+07			1,52E+08	1,48E+08	1,52E+08	1,50E+08	1,48E+08	, and the second	·
6,07E+07	7,29E+07	6,08E+07	6,99E+07	7,25E+07	6,74E+07	1,49E+08	1,49E+08	1,51E+08	1,52E+08	1,49E+08	1,50E+08	2,23
6,82E+07	6,74E+07	6,72E+07	6,66E+07	6,86E+07	6,76E+07	1,49E+08	1,46E+08	1,51E+08	1,49E+08	1,50E+08	1,49E+08	2,21
6,84E+07	9,33E+07	5,77E+07	6,69E+07	6,76E+07	7,08E+07	1,49E+08	1,48E+08	1,51E+08	1,47E+08	1,48E+08	1,49E+08	2,10
6,76E+07	6,38E+07	8,27E+07	6,73E+07	1,03E+08	7,69E+07	1,51E+08	1,49E+08	1,51E+08	1,50E+08	1,46E+08	1,49E+08	1,94
6,45E+07	6,67E+07	5,98E+07	6,32E+07	6,70E+07	6,42E+07	1,49E+08	1,47E+08	1,50E+08	1,52E+08	1,48E+08	1,49E+08	2,32
6,70E+07	1,89E+08	1,09E+08	8,92E+07	7,67E+07	1,06E+08	1,48E+08	1,49E+08	1,47E+08	1,55E+08	1,46E+08	1,49E+08	1,40
6,80E+07	6,26E+07	6,68E+07	5,88E+07	1,07E+08	7,27E+07	1,47E+08	1,52E+08	1,50E+08	1,47E+08	1,48E+08	1,49E+08	2,05
1,09E+08	6,94E+07	6,94E+07	6,71E+07	6,68E+07	7,63E+07	1,52E+08	1,49E+08	1,50E+08	1,49E+08	1,50E+08	1,50E+08	1,96
6,47E+07	8,69E+07	5,87E+07	5,77E+07	6,83E+07	6,73E+07	1,53E+08	1,48E+08	1,49E+08	1,48E+08	1,47E+08	1,49E+08	2,21
6,63E+07	6,73E+07	6,69E+07	6,73E+07	9,38E+07	7,23E+07	1,48E+08	1,48E+08	1,50E+08	1,52E+08	1,52E+08	1,50E+08	2,07
6,75E+07	6,43E+07	6,70E+07	6,41E+07	6,39E+07	6,54E+07	1,48E+08	1,50E+08	1,48E+08	1,50E+08	1,51E+08	1,49E+08	2,29
6,73E+07	9,17E+07	5,78E+07	7,21E+07	7,86E+07	7,35E+07	1,49E+08	1,48E+08	1,48E+08	1,51E+08	1,50E+08	1,49E+08	2,03
6,09E+07	6,45E+07	1,33E+08	1,02E+08	6,72E+07	8,55E+07	1,50E+08	1,48E+08	1,49E+08	1,49E+08	1,46E+08	1,48E+08	1,74
1,94E+08	7,26E+07	5,81E+07	6,25E+07	1,39E+08	1,05E+08	1,48E+08	1,49E+08	1,50E+08	1,49E+08	1,50E+08	1,49E+08	1,42
6,93E+07	6,76E+07	7,95E+07	6,40E+07	6,81E+07	6,97E+07	1,49E+08	1,48E+08	1,48E+08	1,49E+08	1,53E+08	1,49E+08	2,14
6,81E+07	6,69E+07	6,52E+07	1,20E+08	7,13E+07	7,83E+07	1,47E+08	1,47E+08	1,49E+08	1,49E+08	1,50E+08	1,48E+08	1,89
6,82E+07	6,86E+07	6,75E+07	1,02E+08	7,04E+07	7,53E+07	1,51E+08	1,48E+08	1,50E+08	1,52E+08	1,51E+08	1,50E+08	2,00
6,45E+07	6,70E+07	5,97E+07	5,79E+07	6,85E+07	6,35E+07	1,52E+08	1,49E+08	1,49E+08	1,51E+08	1,51E+08	1,50E+08	2,37
9,99E+07	6,62E+07	6,71E+07	6,85E+07	7,19E+07	7,47E+07	1,48E+08	1,51E+08	1,54E+08	1,53E+08	1,49E+08	1,51E+08	2,02
7,14E+07	6,31E+07	1,45E+08	6,73E+07	6,54E+07	8,25E+07	1,51E+08	1,46E+08	1,50E+08	1,51E+08	1,51E+08	1,50E+08	1,82
6,12E+07	6,58E+07	6,67E+07	6,76E+07	6,65E+07	6,56E+07	1,49E+08	1,50E+08	1,48E+08	1,50E+08	1,49E+08	1,49E+08	2,28
6,69E+07	6,25E+07	7,14E+07	6,60E+07	9,72E+07	7,28E+07	1,48E+08	1,49E+08	1,52E+08	1,53E+08	1,48E+08	1,50E+08	2,06
6,65E+07	6,85E+07	6,19E+07	1,22E+08	6,78E+07	7,74E+07	1,49E+08	1,47E+08	1,50E+08	1,51E+08	1,49E+08	1,49E+08	1,93
6,69E+07	7,57E+07	7,94E+07	6,15E+07	6,78E+07	7,03E+07	1,48E+08	1,49E+08	1,47E+08	1,54E+08	1,50E+08	1,50E+08	2,13
1,15E+08	6,35E+07	5,84E+07	7,24E+07	6,63E+07	7,52E+07	1,53E+08	1,51E+08	1,50E+08	1,51E+08	1,50E+08	1,51E+08	2,01
1,09E+08	6,66E+07	6,72E+07	6,33E+07	6,68E+07	7,45E+07	1,53E+08	1,48E+08	1,49E+08	1,50E+08	1,50E+08	1,50E+08	2,01
6,20E+07	6,73E+07	9,92E+07	7,04E+07	6,27E+07	7,23E+07	1,48E+08	1,47E+08	1,50E+08	1,50E+08	1,51E+08	1,49E+08	2,07
6,11E+07	6,47E+07	6,92E+07	6,68E+07	7,34E+07	6,71E+07	1,47E+08	1,47E+08	1,50E+08	1,50E+08	1,52E+08	1,49E+08	2,23
6,65E+07	6,96E+07	6,99E+07	6,15E+07	6,76E+07	6,70E+07	1,48E+08	1,48E+08	1,49E+08	1,50E+08	1,48E+08	1,48E+08	2,21
9,47E+07	7,01E+07	6,61E+07	5,93E+07	7,44E+07	7,29E+07	1,47E+08	1,51E+08	1,52E+08	1,49E+08	1,50E+08	1,50E+08	2,05
7,13E+07	7,11E+07	6,64E+07	7,02E+07	6,83E+07	6,95E+07	1,49E+08	1,49E+08	1,51E+08	1,51E+08	1,49E+08	1,50E+08	2,16
6,75E+07	6,32E+07	5,84E+07	7,05E+07	6,17E+07	6,42E+07	1,48E+08	1,51E+08	1,50E+08	1,50E+08	1,49E+08	1,50E+08	2,33
6,77E+07	6,42E+07	5,72E+07	6,69E+07	7,20E+07	6,56E+07	1,49E+08	1,48E+08	1,50E+08	1,52E+08	1,51E+08	1,50E+08	2,29
6,67E+07	6,92E+07	6,12E+07	1,29E+08	7,00E+07	7,93E+07	1,48E+08	1,51E+08	1,53E+08	1,51E+08	1,48E+08	1,50E+08	1,89
6,80E+07	6,76E+07	9,86E+07	6,19E+07	7,24E+07	7,37E+07	1,49E+08	1,51E+08	1,52E+08	1,51E+08	1,46E+08	1,50E+08	2,03
1,07E+08	6,18E+07	6,76E+07	6,71E+07	6,87E+07	7,45E+07	1,54E+08	1,50E+08	1,52E+08	1,54E+08	1,50E+08	1,52E+08	2,04
6,13E+07	6,90E+07	6,55E+07	6,47E+07	6,59E+07		1,48E+08	1,46E+08	1,49E+08	1,48E+08	1,47E+08	1,48E+08	2,26
	6,74E+07	•	•				•	1,48E+08	•			2,17
1,54E+08			6,74E+07				1,51E+08		1,47E+08			1,75
7,11E+07			5,88E+07		8,84E+07	1,52E+08			1,49E+08	1,47E+08	1,50E+08	1,69
6,04E+07	6,32E+07	6,84E+07			6,95E+07	1,49E+08			1,48E+08	1,50E+08	1,50E+08	2,15
6,08E+07	6,65E+07	6,76E+07	9,82E+07	7,12E+07	7,29E+07	1,49E+08			1,50E+08	1,50E+08	1,50E+08	2,06
1,27E+08	6,73E+07	6,70E+07		6,35E+07	7,23E+07 7,81E+07	1,49E+08	1,49E+08		1,50E+08	1,49E+08	1,50E+08	1,93
6,73E+07	6,69E+07	1,02E+08			7,81E+07 7,21E+07	1,46E+08			1,50E+08	1,49E+08	1,49E+08	2,07
6,69E+07	•		7,06E+07		7,21E+07 7,46E+07	1,46E+08		1,48E+08				1,99
0,036707	/,1JETU/	J,OUETU/	7,00ETU/	U,JUETU/	/,40LTU/	1,47 ETUO	1,401700	1,40LTU0	1,326700	1,4/LTU0	1,40LTU0	1,33

1 Performances optimization and input parameter analysis

The work-stealing scheduler module takes as input three different execution parameters:

- Array size;
- Number of servers that must be created by the scheduler;
- The sequential cut-off parameter that is the size of array that will be processed sequentially even in multi-threading execution of the scheduler.

All these parameters affects the concurrent ordering execution time, and relative speed-up on the sequential one. To estimate the

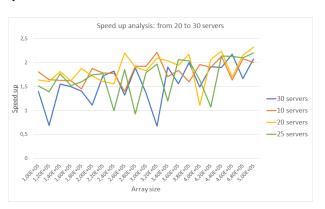


Figure 1:

2 Prova

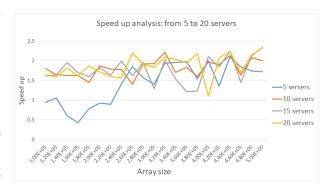


Figure 2:

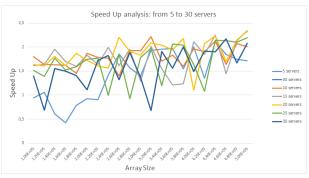


Figure 3:

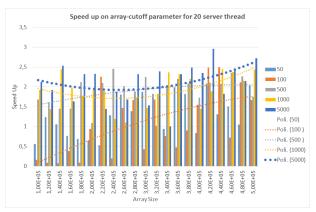


Figure 4:

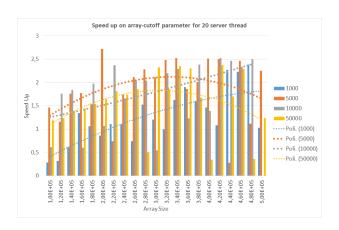


Figure 5:

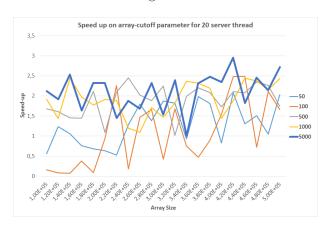


Figure 6:

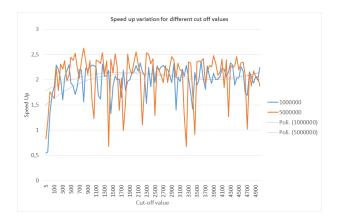


Figure 7: