Table 1: Average and standard deviation of the fitness value for the TSP instances Part 1. (*) Denote experiments where optimal solution was found.

EDA		bays29	berlin52	burma14	ch130	dantzig42	eil51	eil76	eil101	fri26	gr17	gr24	gr48
UMDA	avg.	2324.5	10059.9	(*) 3371.5	11240.0	949.0	555.9	756.9	945.0	1085.2	(*) 2134.4	1506.7	7024.6
	dev.	61.3	651.1	50.6	524.5	58.8	34.5	25.3	33.3	49.8	34.3	74.0	318.0
MIMIC	avg.	2467.6	10921.3	(*) 3450.0	12841.4	1034.9	616.3	854.5	1112.3	1156.1	2184.2	1494.2	7358.8
	dev.	60.3	588.6	94.2	320.8	32.1	20.4	19.2	35.5	57.3	28.4	84.0	179.7
EBNA$_{BIC}$	avg.	2467.5	9893.8	(*) 3358.0	11465.3	935.1	540.7	756.5	961.5	1094.9	(*) 2137.7	1432.7	6812.1
	dev.	77.2	445.0	41.2	384.4	46.3	23.9	18.9	28.7	57.3	42.5	61.4	307.7
TREE	avg.	2818.8	12846.8	3598.8	20806.9	1206.9	744.5	1166.1	1597.3	1280.8	2290.8	1662.5	8877.7
	dev.	162.6	530.4	61.2	1149.4	71.1	22.9	64.1	67.4	51.6	72.2	106.9	726.0
UMDA$_c$	avg.	4305.1	20460.2	4229.7	39421.4	(*) 699.0	1185.8	1806.0	1891.8	1076.5	3375.2	2709.4	15835.9
	dev.	121.9	89.3	29.3	256.4	0.0	6.7	15.4	9.4	0.9	86.2	36.5	124.7
EGNA$_{ee}$	avg.	4235.3	18728.1	4048.7	37981.6	(*) 699.0	1127.9	1771.0	1881.9	1024.9	3042.0	2512.9	15144.6
	dev.	90.9	263.2	210.2	265.2	0.0	17.9	9.6	9.3	2.4	105.8	59.7	350.7
IDEA-ICE	avg.	3269.1	15813.6	3739.2	32330.9	947.7	998.1	1643.5	2008.2	1130.7	2675.7	1941.5	11771.4
	dev.	283.7	797.7	166.2	1373.2	77.4	65.6	75.9	177.9	84.2	114.9	115.7	868.4
EHBSA$_{WT}$	avg.	(*) 2020.0	(*) 7542.0	(*) 3323.0	6318.7	(*) 699.0	(*) 426.0	542.8	648.0	(*) 937.0	(*) 2085.0	(*) 1272.0	(*) 5046.0
	dev.	0.0	0.0	0.0	39.8	0.0	0.0	2.4	4.4	0.0	0.0	0.0	0.0
EHBSA$_{WO}$	avg.	(*) 2022.5	(*) 7584.6	(*) 3323.0	8654.9	(*) 701.8	428.4	(*) 538.0	756.7	(*) 937.0	(*) 2089.5	1272.0(*)	5065.6
	dev.	3.5	68.2	0.0	45.5	3.4	0.8	0.0	10.4	0.0	0.9	0.0	3.6
NHBSA$_{WT}$	avg.	2321.8	11729.7	(*) 3323.0	20787.5	1052.9	663.5	1070.3	1504.7	1041.5	(*) 2085.0	1383.4	7870.6
	dev.	23.0	217.9	0.0	225.8	19.9	7.8	16.3	21.2	27.7	0.0	20.9	108.8
NHBSA$_{WO}$	avg.	2177.8	9195.8	(*) 3345.2	9221.4	854.0	518.0	662.6	807.1	1048.3	(*) 2127.9	1369.3	6120.7
	dev.	87.9	268.8	25.9	324.1	31.6	17.6	25.0	31.9	47.2	39.9	42.9	342.4
REDA$_{UMDA}$	avg.	4064.9	21875.9	(*) 3521.1	37791.3	1750.0	1234.7	2166.7	2141.9	1118.4	2662.2	2201.3	15174.1
	dev.	66.5	504.2	102.1	401.1	286.2	13.3	28.7	93.9	30.5	224.4	166.0	140.3
REDA$_{MIMIC}$	avg.	3316.1	15850.3	4109.8	39310.6	(*) 705.0	893.4	2157.4	1959.1	1023.6	2639.2	1968.9	10901.9
	dev.	122.9	757.6	76.2	310.0	6.8	39.6	17.3	21.1	50.2	164.0	68.5	552.5
OmeGA	avg.	3353.5	18624.0	3753.9	42247.8	1393.6	1062.1	1737.4	1918.7	1461.4	2523.9	2007.0	13044.8
	dev.	159.6	671.4	194.1	428.7	53.1	34.1	37.8	33.0	51.3	131.3	102.0	436.6
Best Known Solutions		2020.0	7542.0	3323.0	6110.0	699.0	426.0	538.0	629.0	937.0	2085.0	1272.0	5046.0

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Table 2: Average and standard deviation of the fitness value for the TSP instances Part 2. (*) Denote experiments where optimal solution was found.

EDA		gr96	gr137	hk48	pr76	pr107	pr124	pr136	rat99	st70	swiss42	ulysses16	ulysses22
UMDA	avg.	93616.9	144843.0	15486.9	166831.2	119614.6	151817.3	187461.5	1989.9	1042.5	1682.7	6943.7	7869.6
	dev.	3223.3	10116.2	622.7	8143.2	11209.6	8952.6	11888.7	103.5	45.9	125.9	35.4	501.1
MIMIC	avg.	110702.2	168174.7	17223.9	188665.3	130594.0	171455.4	228257.6	2464.8	1170.4	1832.3	(*) 7083.3	7773.3
	dev.	1198.2	8943.1	782.9	6360.5	13834.8	8931.1	7057.4	83.1	54.1	78.4	127.5	287.3
EBNA$_{BIC}$	avg.	95758.0	139634.6	15201.6	163651.5	122056.9	152818.5	188303.6	2039.8	1046.7	1677.3	6999.6	7389.9
	dev.	5077.0	3086.7	674.8	12420.7	10515.9	9301.5	8749.6	155.6	42.0	117.3	61.7	151.9
TREE	avg.	159475.6	264946.9	21752.9	261110.5	201442.0	269708.5	346853.5	3494.0	1547.5	2212.3	7126.1	8271.2
	dev.	5578.3	24392.1	1153.5	15224.8	14143.4	16058.0	14869.7	350.7	84.0	93.6	137.9	407.4
UMDA$_c$	avg.	79163.4	94883.1	37260.3	150780.0	58604.1	97877.6	287026.0	2107.9	2790.4	2479.7	8187.0	10854.6
	dev.	16.2	48.9	4942.1	0.0	102.7	27.3	0.0	4.0	14.6	20.4	353.8	963.4
EGNA$_{ee}$	avg.	77749.0	93498.6	34591.7	150780.0	58929.3	97107.8	270439.3	2084.5	2609.4	2433.9	7486.5	9801.0
	dev.	119.2	254.7	415.0	0.0	118.2	318.1	1669.0	15.6	35.4	13.5	220.8	156.2
IDEA-ICE	avg.	90359.4	135848.3	25698.7	174855.8	120053.0	149644.5	398619.3	2476.0	2295.7	2495.5	7706.7	8792.3
	dev.	6511.7	8563.1	1394.6	6672.0	12290.0	12606.8	38609.4	291.6	160.5	263.2	246.0	518.1
EHBSA$_{WT}$	avg.	(*) 55225.4	70609.5	(*) 11461.0	(*)108159.0	(*)44303.0	(*) 59034.6	97253.2	(*)1211.0	(*) 675.0	(*) 1273.0	(*) 6859.0	(*) 7013.0
	dev.	26.2	211.8	0.0	0.0	0.0	8.3	230.4	0.0	0.0	0.0	0.0	0.0
EHBSA$_{WO}$	avg.	69335.9	100524.4	11473.8	(*) 108159.0	59018.0	91149.8	134954.8	1489.5	784.8	(*) 1273.0	(*) 6859.0	(*) 7013.0
	dev.	827.5	1186.1	6.8	0.0	319.2	905.6	1128.8	16.9	11.0	0.0	0.0	0.0
NHBSA$_{WT}$	avg.	147449.5	255827.9	17843.2	229419.4	176273.5	264483.6	344678.2	3284.1	1410.2	1862.8	(*) 6863.3	7184.7
	dev.	2428.8	3624.1	344.2	5900.1	2977.0	3941.6	4103.2	52.7	22.0	24.4	6.0	69.0
NHBSA$_{WO}$	avg.	74414.1	125890.0	14112.7	143397.9	106897.2	116686.2	180325.8	1673.3	907.9	1527.9	6947.3	7218.7
	dev.	5532.3	9728.2	827.9	6982.9	7368.5	8858.6	23529.4	87.4	42.1	66.7	25.0	106.7
REDA$_{UMDA}$	avg.	320243.9	165303.4	34691.6	496847.3	109403.0	237997.6	335107.8	6937.7	3071.9	3484.0	7347.6	8981.7
	dev.	4078.5	18622.5	464.5	6258.6	14961.5	10500.5	7311.0	35.3	51.7	29.6	281.4	828.9
REDA$_{MIMIC}$	avg.	316931.1	—	25478.3	493559.7	110761.0	155189.0	323286.0	7022.6	3101.1	2278.0	7529.9	8932.5
	dev.	5098.7	—	1437.4	7331.1	0.0	0.0	0.0	95.0	36.9	68.4	197.7	248.2
OmeGA	avg.	97391.4	106789.7	36615.3	180982.7	69644.4	120027.3	278249.2	2226.5	2684.9	2609.4	7746.4	9487.7
	dev.	4067.9	2379.7	871.0	5223.1	1601.0	3178.7	5000.6	61.5	37.7	113.2	343.4	615.0
Best Known Solutions		55209.0	69853.0	11461.0	108159.0	44303.0	59030.0	96772.0	1211.0	675.0	1273.0	6859.0	7013.0