

Table 1: Average and standard deviation of the fitness value for the LOP instances Part 1.

EDA		$t75i11xx$	$t65f11xx$	$t65b11xx$	$t65d11xx$	$t65i11xx$	$t65l11xx$	$t65n11xx$	$t65w11xx$	$t69r11xx$	$t70b11xx$	$t70d11xx$	$t70i11xxb$
UMDA	avg.	62164530.0	213233.2	347664.7	230905.1	14324840.0	16598.3	31709.8	134639900.0	759502.0	515097.0	363256.1	352090.6
	dev.	425190.0	1386.6	2588.2	1222.5	64720.0	30.6	130.8	690920.0	4557.2	1507.0	2518.1	2544.3
MIMIC	avg.	62896000.0	212131.5	349367.5	231885.1	14308840.0	16680.5	31707.0	135448100.0	760787.0	521441.6	369703.4	361891.4
	dev.	177260.0	874.4	1411.9	1107.9	28732.0	19.6	57.6	668680.0	2380.6	1821.7	2069.6	1547.6
EBNA <sub>BIC</sub>	avg.	62293670.0	213758.5	347066.5	231010.4	14307670.0	16615.6	31507.9	134486400.0	763679.3	514378.0	365189.9	354048.8
	dev.	318296.0	1116.8	3183.3	1052.2	63990.0	45.4	114.5	695440.0	1908.8	3421.6	3265.3	2758.4
TREE	avg.	60732360.0	203975.2	337591.3	222940.3	13904190.0	16454.0	30546.7	129572400.0	740227.6	501573.9	356029.3	340584.9
	dev.	519732.0	2492.6	4785.8	2299.5	99652.0	77.2	143.4	1205720.0	4087.6	7360.3	2898.4	5083.9
UMDA <sub>c</sub>	avg.	51062490.0	165958.3	285721.2	189727.6	11806500.0	14668.7	26307.3	109648700.0	607199.4	420238.5	296698.9	287550.6
	dev.	187084.0	424.4	1407.0	1239.0	72560.0	242.1	147.0	588640.0	8102.9	387.0	1764.3	2595.7
EGNA <sub>ee</sub>	avg.	54284030.0	178833.8	293023.9	199360.3	12561350.0	14910.4	27855.2	115943400.0	643811.2	436424.2	317826.4	300604.4
	dev.	581364.0	230.4	1431.7	1229.7	47570.0	278.9	92.9	532360.0	11340.5	4471.0	1386.3	620.7
IDEA-ICE	avg.	60691949.2	206925.3	338262.6	228223.0	13707379.8	16408.5	30448.1	131261325.4	735288.7	508688.3	360817.7	347023.4
	dev.	686754.6	604.0	3126.3	2398.8	112114.9	82.4	157.9	883949.7	7882.3	3682.5	3720.9	3327.7
EHBSA <sub>WT</sub>	avg.	63554042.2	217217.0	356357.4	237209.8	14469163.0	16719.0	32116.0	138175074.0	770970.0	528413.9	376594.1	366400.0
	dev.	10424.2	59.6	17.8	146.7	0.0	0.0	27.0	5492.0	154.8	9.2	88.7	0.0
EHBSA <sub>WO</sub>	avg.	57153299.2	194141.4	318403.9	213788.6	13170074.4	16303.5	29430.7	123292111.0	718787.1	472841.5	337347.8	326378.2
	dev.	429670.8	1412.7	1837.9	956.8	82435.0	36.0	201.0	647637.0	4006.7	3730.1	2198.0	1620.6
NHBSA <sub>WT</sub>	avg.	63563323.6	216918.9	355904.9	237649.6	14469161.0	16719.0	32112.3	138085738.9	770647.0	528402.4	376685.6	366321.3
	dev.	2635.6	17.9	133.1	46.2	3.6	0.0	15.5	54302.9	16499.7	26.6	30.9	47.1
NHBSA <sub>WO</sub>	avg.	63526547.5	216604.2	355235.0	237433.1	14457190.1	16718.2	32075.1	137927427.5	767842.2	528287.7	376144.2	366131.8
	dev.	40076.2	185.0	282.0	173.5	8740.5	1.1	12.7	36896.4	356.5	183.4	260.4	53.4
REDA <sub>UMDA</sub>	avg.	61395200.0	209679.3	332107.8	226279.2	13983860.0	15821.4	30231.6	132584400.0	738010.4	509683.0	352831.5	356322.4
	dev.	608160.0	1326.6	2442.0	2955.0	68440.0	60.3	220.8	671920.0	3107.8	6233.2	2340.0	3010.4
REDA <sub>MIMIC</sub>	avg.	58210080.0	196987.1	324124.2	217404.7	13313610.0	16117.5	30203.3	125750300.0	718485.1	489704.4	346453.5	328312.1
	dev.	453756.0	1955.7	2488.9	1158.8	88612.0	65.7	151.9	887560.0	5283.1	6033.3	4336.9	2675.1
OmeGA	avg.	53974293.9	177705.0	293642.6	189928.8	12400137.3	16045.4	26841.5	113108197.7	643250.3	431993.4	303457.5	295880.8
	dev.	1013775.1	2879.0	3530.5	3058.0	165168.8	150.0	400.3	3104612.4	9370.7	12056.9	4406.9	7408.4
Best Known Solutions		72664466.0	254568.0	411733.0	283971.0	16389651.0	18359.0	38814.0	166052789.0	865650.0	623411.0	450774.0	438235.0

Table 2: Average and standard deviation of the fitness value for the LOP instances Part 2.

EDA		<i>be75eec</i>	<i>be75mp</i>	<i>be75oi</i>	<i>be75tot</i>	<i>tiw56n54</i>	<i>tiw56n58</i>	<i>tiw56n62</i>	<i>tiw56n66</i>	<i>stabu70</i>	<i>stabu74</i>	<i>stabu75</i>	<i>usa70</i>
UMDA	avg.	232839.2	713228.8	110227.0	971941.3	90594.2	124553.0	174406.1	224642.6	354318.3	530142.8	543194.4	1775187.0
	dev.	1054.2	1665.4	331.0	2513.0	630.8	269.2	927.9	988.5	1175.4	1954.4	3399.9	7361.0
MIMIC	avg.	233415.6	710296.2	110430.0	963623.3	89656.0	122940.3	173457.6	222882.3	356317.7	531025.9	540214.0	1779630.0
	dev.	506.1	2083.2	197.4	4153.4	440.2	371.5	772.6	545.9	960.1	1276.7	1573.4	6576.0
EBNA <sub>BIC</sub>	avg.	233576.8	711958.9	110055.5	969247.5	90458.4	124305.9	174415.1	223524.2	356230.9	531077.1	540983.5	1781383.0
	dev.	318.0	2590.7	292.9	4827.0	693.6	323.5	1663.4	1183.2	1916.7	1392.3	4881.0	4879.0
TREE	avg.	226551.0	693237.8	108584.7	933269.7	87485.3	11910.0	168987.7	216375.9	346426.9	517401.5	528731.1	1712062.0
	dev.	2075.2	3176.6	469.9	11194.7	568.4	1236.6	1538.6	2259.1	2022.1	2467.0	3538.5	8538.4
UMDA <sub>c</sub>	avg.	171779.9	528949.0	91976.1	717881.0	66833.6	90569.9	130616.2	167589.3	269125.1	410959.9	423926.7	1343541.0
	dev.	3610.5	14289.8	5544.9	9963.2	1249.9	2536.9	2088.3	2072.4	4675.1	7957.7	9335.1	125137.6
EGNA <sub>ee</sub>	avg.	174670.3	528798.3	89905.6	714499.6	66689.0	93051.7	129694.2	166012.7	273002.8	404920.0	427045.0	1372007.0
	dev.	4825.3	13811.7	1647.1	13833.7	1430.6	3053.0	1890.8	4920.1	6421.4	5465.6	8936.8	17535.0
IDEA-ICE	avg.	224636.6	694163.3	107582.0	934763.4	87889.7	120574.1	170350.8	217378.1	343091.3	516127.3	524099.3	1701034.4
	dev.	2634.3	7873.4	342.8	6587.0	906.2	2255.5	1725.0	1613.5	3788.9	4274.9	3882.7	16715.8
EHBSA <sub>WT</sub>	avg.	235665.4	716816.1	110997.1	979609.6	91510.2	125164.1	176594.6	226402.6	360799.2	538676.4	550339.1	1802704.2
	dev.	231.7	75.7	49.3	350.9	9.8	25.9	69.9	68.0	301.6	383.6	505.3	1908.3
EHBSA <sub>WO</sub>	avg.	213107.0	644297.8	105619.4	855464.8	80375.5	109458.4	155400.9	199839.0	319674.0	477817.2	490070.3	1574519.0
	dev.	2189.0	4335.0	532.9	5758.2	497.8	896.1	952.1	1255.0	1197.6	1898.0	2291.5	9980.4
NHBSA <sub>WT</sub>	avg.	236097.1	716799.8	111138.6	979439.4	91411.8	125119.5	176624.0	226363.5	362053.6	540506.5	552026.1	1808833.9
	dev.	39.7	45.8	16.2	407.8	7.4	12.2	34.8	40.9	54.6	119.1	96.5	407.3
NHBSA <sub>WO</sub>	avg.	235733.7	716395.8	110963.8	978361.8	91358.8	125044.6	176462.1	226040.7	361763.2	540238.2	551981.7	1807803.4
	dev.	193.4	278.2	14.2	490.8	27.0	38.0	70.1	211.3	306.8	261.6	125.2	912.7
REDA <sub>UMDA</sub>	avg.	217835.5	649867.6	103679.3	869368.8	87926.6	119708.5	163477.5	213854.9	272948.4	405251.8	420131.1	1341470.0
	dev.	3554.6	10507.8	545.2	14248.2	1154.8	2623.1	2077.4	2018.3	3816.7	9127.2	5329.3	13356.0
REDA <sub>MLMIC</sub>	avg.	173175.9	541302.8	90079.3	716788.7	66444.5	91040.0	131409.5	167283.9	273383.8	398796.0	426238.5	1341316.0
	dev.	1323.0	10076.9	1723.6	11481.0	1146.6	1564.0	2273.3	1716.9	5420.2	6809.0	5968.9	9061.6
OmeGA	avg.	210022.6	501186.0	96929.2	737967.7	54915.0	79868.9	110462.5	137804.5	261991.6	372444.1	376835.3	1219020.7
	dev.	1517.8	3806.2	733.0	3773.6	433.0	675.1	1121.5	1010.1	2297.0	2462.7	3666.3	13171.4
Best Known Solutions		264940.0	790966.0	118159.0	1127387.0	112767.0	154440.0	217499.0	277593.0	422088.0	627929.0	642050.0	1813986.0