SAV	Opt	Best	EMbest	t (s)	t <sub>tot</sub> (s)	iter <sub>LS</sub>
instance						
10–20	16	16	16	0.0017	0.03675	2335.4
10–50	29	29	29	0.00505	0.06695	2511.3
10–100	50	50	50	0.01515	0.13505	2901.3
11–20	14	14	14	0.0014	0.0325	2138.4
11–50	33	33	33	0.02135	0.0968	3765.4
11–100	55	55	55	0.0137	0.16275	3505.4
12–20	17	17	17	0.0056	0.0415	2843.6
12–50	34	34	34	0.02605	0.106	4111.5
12–100	56	56	56	0.0366	0.20255	4153.8
15–30	26	26	26	0.01965	0.0805	4272
15–70	=	46	46	0.04615	0.1978	5493.4
15–200	=	106	106	0.21425	0.71025	7139.9
20–40	37	37	37	0.0478	0.16255	6424.5
20–100	=	67	67	0.22035	0.5486	9759.6
20–200	=	116	116	0.38635	1.2053	10
30–60	55	55	54	0.14755	0.4432	11
30–150	_	111	111	0.6347	1.58475	16
30–300	_	185	185	1.3495	3.82755	19
50–100	=	87	87	0.65595	1.7709	20
50–200	_	153	153	2.0437	4.9498	29
50–400	-	265	259	4.32465	12.205	34
50–1000	_	536	536	67.0349	133.796	141

Table 1 — Results of EM in the first experiment

SAV instance	CPLEX		GA			GA+LS			EM		
instance	sol	t(s)	best	avg	t(s)	best	avg	t(s)	best	avg	t(s)
10–20	16	0.437	16	15.75	0.194	16	15.8	0.088	16	16	0.037
10–50	29	7203.8	29	28.95	0.195	29	29	0.09	29	29	0.067
10–100	42	7201.6	50	48.79	0.652	50	48.75	0.116	50	0.135	
11–20	14	2.125	14	13.65	0.2	14	13.65	0.089	14	14	0.032
11–50	33	7203.6	33	32.25	0.214	33	32.25	0.095	33	33	0.097
11–100	55	7201.7	55	53.55	0.243	55	53.55	0.115	55	55	0.163
12–20	17	1.156	17	16.6	0.197	17	16.7	0.09	17	17	0.042
12–50	32	7203.8	33	32	0.228	33	32	0.104	34	33.95	0.106
12–100	54	7202.2	56	54.25	0.246	56	54.35	0.119	56	56	0.203
15–30	26	3.172	25	22.75	0.217	25	22.9	0.101	26	24.75	0.08
15–70	45	7202.8	46	43.95	0.231	46	44.15	0.11	46	46	0.198
15–200	98	7201.4	105	102.85	0.289	105	102.85	0.149	106	105.6	0.71
20–40	37	1.625	36	32.3	0.34	37	32.8	0.171	37	35.45	0.163
20–100	63	7201.8	65	62.1	0.398	66	62.9	0.268	67	66.3	0.549
20–200	111	7201.1	113	111.6	0.4	114	111.9	0.225	116	115.05	1.205
30–60	55	7201.8	51	47.75	0.538	53	48.7	0.341	54	52.01	0.443
30–150	105	7200.8	102	95.65	0.627	111	98.5	0.598	111	104.6	1.585
30–300	165	7200.6	173	164.7	0.749	179	167.7	1.002	185	178.1	3.828
50–100	84	7200.9	84	78	1.147	86	81.25	1.163	87	85.45	1.771
50–200	154	7200.4	140	132.1	1.385	151	143.75	3.837	153	147.2	4.95
50–400	225	7200.3	240	230.15	1.535	265	248	7.8	259	252.25	12.2
50–1000	420	7200.2	504	482.9	2.169	532	514.15	19.86	536	524	133.8

Table 2 - Comparative results and running times in the first experiment

REAL instance	Opt	Best	EM (best)	t(s)	$t_{tot}(s)$	iter <sub>LS</sub>
15–120	118	118	118	0.0042	0.11485	7220.3
16–142	142	142	142	0.00585	0.1682	8537.3
19–187	176	176	176	0.00985	0.2644	9375.1
20–259	257	257	257	0.01765	0.4302	13690.8
24–436	427	427	427	0.0492	1.2161	18088.9
25–305	305	305	305	0.04765	0.85925	17904.3
25–478	477	477	477	0.09525	1.40615	20204.5
33–1310	_	1285	1285	0.6533	8.48835	40408.1
47–2888	_	2785	2785	7.06745	54.7091	77093.6

Table 3 - Results of the EM method in the second experiment