

In the name of god

Experimental results for comparison solvers

I run all solvers using GLPK, on a standard Windows 7 PC using an Intel®Core™ i5-2430M with 2.40GHz processor and 4.00 GB RAM. The experimental results are as follows:

1- Trivial Benchmark:

ACO population_size = 1

ACO iteration_size = 1

name	Gen	Solved	Obj	Valid	TimeOut
aco	-1	13	226823.7	TRUE	FALSE
ilp-direct	598	21	226823.7	TRUE	FALSE
ilp-external	0	445	226823.7	TRUE	FALSE
emfer	-1	366	226823.7	TRUE	FALSE
simple	-1	1	226823.7	TRUE	FALSE

2- Small Benchmark:

ACO population_size = 5

ACO iteration_size = 1

name	Gen	Solved	Obj	Valid	TimeOut
aco	-1	20	34620.2	TRUE	FALSE
ilp-direct	59	30	34620.2	TRUE	FALSE
ilp-external	4	307	34620.2	TRUE	FALSE
emfer	-1	326	34620.2	TRUE	FALSE
simple	-1	4	34620.2	TRUE	FALSE

3- Small-many-hw Benchmark:

ACO population_size = 8

ACO iteration_size = 1

name	Gen	Solved	Obj	Valid	TimeOut
aco	-1	31	34620.2	TRUE	FALSE
ilp-direct	68	5	34620.2	TRUE	FALSE
ilp-external	9	316	34620.2	TRUE	FALSE
emfer	-1	336	34620.2	TRUE	FALSE
simple	-1	6	34620.2	TRUE	FALSE

4- Small-complex-sw Benchmark:

ACO population_size = 80

ACO iteration_size = 1

name	Gen	Solved	Obj	Valid	TimeOut
aco	-1	737	974728.2	TRUE	FALSE
ilp-direct	943	72	968744	TRUE	FALSE
ilp-external	146	2152	968744	TRUE	FALSE
emfer	-1	679197	0	FALSE	FALSE
simple	-1	900002	0	FALSE	TRUE

5- Medium Benchmark:

ACO population_size = 50000

ACO iteration_size = 50

name	Gen	Solved	Obj	Valid	TimeOut
aco	-1	113005	8747556	TRUE	FALSE
ilp-direct	4223	722671	4746869	TRUE	FALSE
simple	-1	900172	0	FALSE	TRUE

Emfer: "GC overhead limit exceeded" error!

ilp-externl: "java.lang.NullPointerException" error!