Online Supplement to the paper A Branch-and-Bound Algorithm for the Knapsack Problem with Conflict Graph

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	B&C					
	R1		R3		R10	
class	solved	time	solved	time	solved	time
1	90	0.094	90	2.099	90	4.318
2	90	0.604	81	61.900	76	443.211
3	90	6.739	71	136.362	10	21.056
4	90	51.941	54	275.335	8	971.980
5	90	0.012	90	0.122	90	0.148
6	90	0.046	90	2.600	90	4.408
7	90	0.223	83	135.363	83	564.396
8	90	0.920	70	93.791	10	6.897

	B&C					
	C1		C3		C10	
class	solved	time	solved	time	solved	time
1	90	5.299	90	6.038	90	6.629
2	90	4.460	80	152.277	57	737.085
3	88	38.681	50	353.655	5	772.756
4	78	35.190	25	300.689	0	0
5	90	0.024	90	0.213	90	0.266
6	90	0.069	89	10.019	80	7.776
7	90	0.561	55	212.111	43	785.848
8	90	7.131	47	112.361	0	0

Table 1 Branch-and-cut algorithm on the random and correlated datasets. Results aggregated by class.

References

R. Sadykov and F. Vanderbeck. Bin packing with conflicts: a generic branch-and-price algorithm. *INFORMS Journal on Computing*, 25(2):244–255, 2013.

	B&C					
	R1		R3		R10	
density	solved	time	solved	time	solved	time
0.1	80	0.104	80	0.111	78	103.899
0.2	80	0.232	80	0.642	50	145.132
0.3	80	0.378	80	5.978	50	130.858
0.4	80	0.516	80	23.535	50	89.906
0.5	80	0.676	80	99.606	50	145.784
0.6	80	0.912	74	123.787	50	243.683
0.7	80	2.647	70	177.919	50	386.466
0.8	80	8.731	51	210.516	42	401.135
0.9	80	53.955	34	148.749	37	198.372

	B&C					
	C1		C3		C10	
density	solved	time	solved	time	solved	time
0.1	80	0.085	79	1.520	35	121.509
0.2	80	0.208	80	34.695	30	3.213
0.3	80	0.328	76	86.569	39	339.325
0.4	80	0.440	70	92.983	50	296.338
0.5	80	0.777	56	263.788	50	175.402
0.6	80	8.990	42	67.828	50	235.713
0.7	77	7.999	44	84.256	50	522.456
0.8	79	27.649	49	374.732	31	53.813
0.9	70	58.020	30	3.659	30	5.510

Table 2 Branch-and-cut algorithm on the random and correlated datasets. Results aggregated by density.

		RANDOM		CORRELATED	
		Sadykov and Vanderbeck (2013)		Sadykov and Vanderbeck (2013)	
items/cap	density	solved	time	solved	time
500/1000	0.001	10	0.01	10	119.13
	0.002	10	0.10	9	173.89
	0.005	10	3.13	8	505.68
	0.01	10	66.39	6	716.77
	0.02	7	853.44	0	-
	0.05	1	691.04	0	-
500/2000	0.001	10	0.30	8	98.71
	0.002	10	2.59	5	245.84
	0.005	9	141.32	1	1143.41
	0.01	0	-	0	-
	0.02	0	-	0	-
	0.05	0	-	0	-
1000/1000	0.001	10	0.17	5	53.83
	0.002	10	6.44	5	177.96
	0.005	8	265.46	0	-
	0.01	0	-	0	-
	0.02	0	-	0	-
	0.05	0	-	0	-
1000/2000	0.001	9	16.88	2	169.87
	0.002	7	511.99	1	1486.86
	0.005	0	-	0	-
	0.01	0	-	0	-
	0.02	0	-	0	-
	0.05	0	-	0	-

Table 3 **Results obtained by the algorithm proposed in Sadykov and Vanderbeck (2013) on the low density instances.**