

Results for instances from collection
TeamFormation-QKP-1

File Bibsonomy.txt

Property of graph	Value
Nodes (n)	9,269
Density (Δ)	0.1 %
Edges (m)	30,711

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	673.1	0.07	132.45	—	—	0.00	3.59	0.82	120.2	120.0	120.0	5.9	120.0
5.0	973.0	0.01	94.33	—	—	0.00	0.00	0.57	120.0	120.0	120.0	3.1	7.0
10.0	1,407.1	0.00	94.53	—	—	0.00	3.74	0.56	120.0	120.0	120.0	6.5	120.0
25.0	2,284.4	0.00	56.56	—	—	0.00	0.32	0.99	121.1	120.0	120.0	5.4	120.0
50.0	3,221.1	0.05	38.24	—	—	0.00	0.00	1.70	120.9	120.0	120.0	4.8	13.0
75.0	3,780.2	0.01	25.30	—	—	0.00	0.34	1.98	122.7	120.0	120.0	2.8	120.0
90.0	3,957.9	0.00	11.23	—	—	0.00	0.09	2.21	122.0	120.0	120.0	1.7	120.0
95.0	3,986.5	0.00	3.51	—	—	0.00	0.02	2.10	124.7	120.0	120.0	1.4	120.0
Avg		0.02	57.02	—	—	0.00	1.01	1.37	121.5	120.0	120.0	3.9	92.5
Min		0.00	3.51	—	—	0.00	0.00	0.56	120.0	120.0	120.0	1.4	7.0
Max		0.07	132.45	—	—	0.00	3.74	2.21	124.7	120.0	120.0	6.5	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	120
Running time in seconds for writing input file (t^{write})	26.9
Running time in seconds for executing parametric cut procedure (t^{cut})	3.0
Running time in seconds for reading result file (t^{read})	0.1

File DBLP.txt

Property of graph	Value
Nodes (n)	7,159
Density (Δ)	0.1 %
Edges (m)	15,281

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	240.5	0.05	138.27	—	—	0.00	0.00	0.44	120.0	120.0	120.0	1.1	51.0
5.0	393.1	0.02	111.95	—	—	0.00	0.00	0.42	120.1	120.0	120.0	1.3	86.0
10.0	635.7	0.00	75.86	—	—	0.00	0.00	0.34	120.4	120.0	120.0	1.5	8.0
25.0	1,168.6	0.00	46.15	—	—	0.00	0.01	0.52	120.5	120.0	120.0	1.0	6.0
50.0	1,762.3	0.00	25.82	—	—	0.00	0.00	0.93	121.5	120.0	120.0	1.7	13.0
75.0	2,140.2	0.00	21.57	—	—	0.00	0.00	0.86	120.4	120.0	120.0	0.8	108.0
90.0	2,270.3	0.00	11.62	—	—	0.00	0.01	1.12	122.0	120.0	120.0	0.6	69.0
95.0	2,294.8	0.00	5.42	—	—	0.00	0.04	1.16	122.6	120.0	120.0	0.5	120.0
Avg		0.01	54.58	—	—	0.00	0.01	0.72	120.9	120.0	120.0	1.1	57.6
Min		0.00	5.42	—	—	0.00	0.00	0.34	120.0	120.0	120.0	0.5	6.0
Max		0.05	138.27	—	—	0.00	0.04	1.16	122.6	120.0	120.0	1.7	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	200
Running time in seconds for writing input file (t^{write})	20.5
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1

File IMDB.txt

Property of graph	Value
Nodes (n)	1,021
Density (Δ)	2.1 %
Edges (m)	11,224

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	21.6	0.17	0.17	—	—	0.00	0.00	0.02	2.4	120.0	120.0	5.2	46.0
5.0	43.4	0.66	5.31	—	—	0.00	0.00	0.01	4.4	120.0	120.0	1.7	18.0
10.0	82.4	0.00	36.60	—	—	0.00	0.00	0.00	9.2	120.0	120.0	1.6	2.0
25.0	169.8	0.00	40.31	—	—	0.00	0.00	0.01	22.5	120.0	120.0	2.9	29.0
50.0	257.0	0.01	6.45	—	—	0.00	0.01	0.01	45.1	120.0	120.0	1.8	24.0
75.0	292.5	0.00	3.07	—	—	0.00	0.01	0.01	64.4	120.0	120.0	0.6	4.0
90.0	296.6	0.00	1.79	—	—	0.00	0.00	0.01	73.2	120.0	120.0	0.3	1.0
95.0	297.1	0.00	1.66	—	—	0.00	0.00	0.01	75.1	120.0	120.0	0.3	1.0
Avg		0.11	11.92	—	—	0.00	0.00	0.01	37.0	120.0	120.0	1.8	15.6
Min		0.00	0.17	—	—	0.00	0.00	0.00	2.4	120.0	120.0	0.3	1.0
Max		0.66	40.31	—	—	0.00	0.01	0.02	75.1	120.0	120.0	5.2	46.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	148
Running time in seconds for writing input file (t^{write})	3.0
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4
Running time in seconds for reading result file (t^{read})	0.0

Property of graph	Value
Nodes (n)	8,834
Density (Δ)	0.2 %
Edges (m)	62,277

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	111.4	0.00	0.98	—	—	1.83	1.23	0.71	120.2	120.0	120.0	120.1	120.0
5.0	214.9	0.03	0.59	—	—	0.00	0.96	0.44	120.3	120.0	120.0	15.3	120.0
10.0	384.2	0.04	1.01	—	—	0.00	0.88	0.53	120.7	120.0	120.0	27.6	120.0
25.0	721.5	0.00	0.87	—	—	0.00	0.00	0.78	120.7	120.0	120.0	9.9	68.0
50.0	1,005.9	0.01	1.46	—	—	0.00	0.00	1.56	120.1	120.0	120.0	8.5	34.0
75.0	1,131.1	0.00	1.29	—	—	0.00	0.36	1.69	122.3	120.0	120.0	3.5	120.0
90.0	1,158.2	0.00	1.27	—	—	0.00	0.00	2.15	122.6	120.0	120.0	2.9	5.0
95.0	1,161.7	0.00	1.22	—	—	0.00	0.01	2.13	124.0	120.0	120.0	3.0	36.0
Avg		0.01	1.09	—	—	0.23	0.43	1.25	121.4	120.0	120.0	23.9	77.9
Min		0.00	0.59	—	—	0.00	0.00	0.44	120.1	120.0	120.0	2.9	5.0
Max		0.04	1.46	—	—	1.83	1.23	2.15	124.0	120.0	120.0	120.1	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	87
Running time in seconds for writing input file (t^{write})	25.7
Running time in seconds for executing parametric cut procedure (t^{cut})	2.9
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_01.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	37,120

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	251.0	0.07	83.57	—	—	0.00	0.09	0.29	120.1	120.0	120.0	4.9	120.0
5.0	414.5	0.00	72.06	—	—	0.00	6.58	0.30	120.1	120.0	120.0	4.5	120.0
10.0	667.6	0.01	62.87	—	—	0.00	0.00	0.33	120.3	120.0	120.0	3.4	26.0
25.0	1,205.6	0.00	34.44	—	—	0.00	1.29	0.56	120.5	120.0	120.0	8.7	120.0
50.0	1,816.6	0.02	12.71	—	—	0.00	0.00	0.75	120.1	120.0	120.0	8.9	34.0
75.0	2,220.2	0.00	3.70	—	—	0.01	0.01	0.96	121.1	120.0	120.0	4.1	19.0
90.0	2,359.3	0.00	0.97	—	—	0.00	0.01	1.04	121.4	120.0	120.0	2.0	120.0
95.0	2,383.5	0.00	0.58	—	—	0.00	0.01	1.06	120.8	120.0	120.0	1.5	120.0
Avg		0.01	33.86	—	—	0.00	1.00	0.66	120.6	120.0	120.0	4.8	84.9
Min		0.00	0.58	—	—	0.00	0.00	0.29	120.1	120.0	120.0	1.5	19.0
Max		0.07	83.57	—	—	0.01	6.58	1.06	121.4	120.0	120.0	8.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	160
Running time in seconds for writing input file (t^{write})	20.1
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_02.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	36,061

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	279.4	0.00	113.35	—	—	0.00	0.00	0.32	120.0	120.0	120.0	4.8	120.0
5.0	471.4	0.00	100.93	—	—	0.00	6.69	0.42	120.1	120.0	120.0	4.6	120.0
10.0	776.2	0.01	78.58	—	—	0.00	3.00	0.37	120.1	120.0	120.0	5.2	120.0
25.0	1,407.8	0.01	43.83	—	—	0.00	0.01	0.69	120.2	120.0	120.0	8.1	39.0
50.0	2,068.3	0.01	16.03	—	—	0.00	0.00	0.74	121.1	120.0	120.0	7.0	25.0
75.0	2,482.8	0.00	5.21	—	—	0.01	0.06	0.97	120.1	120.0	120.0	4.2	120.0
90.0	2,628.3	0.00	1.98	—	—	0.00	0.01	1.02	120.9	120.0	120.0	2.2	120.0
95.0	2,653.4	0.00	1.03	—	—	0.00	0.01	1.06	120.3	120.0	120.0	1.5	13.0
Avg		0.00	45.12	—	—	0.00	1.22	0.70	120.3	120.0	120.0	4.7	84.6
Min		0.00	1.03	—	—	0.00	0.00	0.32	120.0	120.0	120.0	1.5	13.0
Max		0.01	113.35	—	—	0.01	6.69	1.06	121.1	120.0	120.0	8.1	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	160
Running time in seconds for writing input file (t^{write})	20.0
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_03.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	35,714

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	278.0	0.01	100.79	—	—	0.00	0.00	0.41	120.0	120.0	120.0	2.6	14.0
5.0	457.3	0.02	75.56	—	—	0.00	0.00	0.26	120.2	120.0	120.0	5.0	5.0
10.0	735.4	0.00	52.95	—	—	0.01	0.00	0.40	120.2	120.0	120.0	5.7	23.0
25.0	1,309.5	0.00	32.97	—	—	0.00	0.01	0.47	120.2	120.0	120.0	8.1	32.0
50.0	1,922.7	0.00	15.41	—	—	0.01	0.01	0.81	120.3	120.0	120.0	8.8	28.0
75.0	2,335.4	0.00	5.11	—	—	0.00	0.00	0.98	121.5	120.0	120.0	3.9	23.0
90.0	2,478.1	0.00	2.02	—	—	0.00	0.02	1.03	121.7	120.0	120.0	2.1	120.0
95.0	2,501.3	0.00	1.15	—	—	0.01	0.01	1.05	120.2	120.0	120.0	1.4	11.0
Avg		0.00	35.75	—	—	0.00	0.01	0.67	120.5	120.0	120.0	4.7	32.0
Min		0.00	1.15	—	—	0.00	0.00	0.26	120.0	120.0	120.0	1.4	5.0
Max		0.02	100.79	—	—	0.01	0.02	1.05	121.7	120.0	120.0	8.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	197
Running time in seconds for writing input file (t^{write})	20.2
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_04.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	35,232

		Deviation from best OFV (%)							Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly		QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	239.7	0.03	85.25	—	—	0.00	0.07		0.32	120.0	120.0	120.0	4.6	120.0
5.0	419.4	0.00	83.86	—	—	0.00	0.00		0.01	120.0	120.0	120.0	3.9	6.0
10.0	695.5	0.01	68.17	—	—	0.00	4.33		0.34	120.2	120.0	120.0	5.5	120.0
25.0	1,264.1	0.00	33.95	—	—	0.00	0.00		0.48	120.6	120.0	120.0	7.9	27.0
50.0	1,872.0	0.00	13.70	—	—	0.00	0.49		0.80	120.8	120.0	120.0	7.9	120.0
75.0	2,266.2	0.00	5.61	—	—	0.00	0.00		0.88	120.5	120.0	120.0	3.7	21.0
90.0	2,402.1	0.00	1.12	—	—	0.00	0.01		0.97	120.7	120.0	120.0	2.2	25.0
95.0	2,423.7	0.00	0.33	—	—	0.00	0.01		1.01	120.4	120.0	120.0	1.4	9.0
Avg		0.01	36.50	—	—	0.00	0.61		0.60	120.4	120.0	120.0	4.6	56.0
Min		0.00	0.33	—	—	0.00	0.00		0.01	120.0	120.0	120.0	1.4	6.0
Max		0.03	85.25	—	—	0.00	4.33		1.01	120.8	120.0	120.0	7.9	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	174
Running time in seconds for writing input file (t^{write})	20.2
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_05.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	37,894

		Deviation from best OFV (%)							Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly		QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	274.4	0.02	85.24	—	—	0.00	7.40		0.14	120.1	120.0	120.0	3.2	120.0
5.0	457.4	0.00	68.77	—	—	0.00	0.07		0.30	120.1	120.0	120.0	5.8	120.0
10.0	728.0	0.01	52.85	—	—	0.00	0.00		0.38	120.2	120.0	120.0	4.8	32.0
25.0	1,306.8	0.00	26.41	—	—	0.00	0.00		0.46	121.0	120.0	120.0	8.8	64.0
50.0	1,915.7	0.01	10.91	—	—	0.00	0.24		0.91	120.4	120.0	120.0	7.8	120.0
75.0	2,315.2	0.00	4.42	—	—	0.01	0.00		0.97	121.4	120.0	120.0	3.9	41.0
90.0	2,452.8	0.00	1.86	—	—	0.00	0.00		1.06	120.4	120.0	120.0	2.0	8.0
95.0	2,475.4	0.00	0.16	—	—	0.00	0.01		1.07	122.2	120.0	120.0	1.5	120.0
Avg		0.01	31.33	—	—	0.00	0.97		0.66	120.7	120.0	120.0	4.7	78.1
Min		0.00	0.16	—	—	0.00	0.00		0.14	120.1	120.0	120.0	1.5	8.0
Max		0.02	85.24	—	—	0.01	7.40		1.07	122.2	120.0	120.0	8.8	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	189
Running time in seconds for writing input file (t^{write})	19.9
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_06.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	35,072

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	240.1	0.04	126.27	—	—	0.00	8.73	0.35	120.1	120.0	120.0	2.8	120.0
5.0	409.7	0.01	108.23	—	—	0.00	7.98	0.36	120.1	120.0	120.0	4.4	120.0
10.0	673.7	0.00	78.86	—	—	0.00	0.00	0.50	120.1	120.0	120.0	4.1	25.0
25.0	1,237.8	0.00	43.13	—	—	0.01	0.00	0.59	120.5	120.0	120.0	8.6	72.0
50.0	1,851.3	0.00	14.86	—	—	0.00	0.01	0.75	121.2	120.0	120.0	6.6	60.0
75.0	2,242.1	0.00	4.75	—	—	0.00	0.00	0.94	121.0	120.0	120.0	3.5	21.0
90.0	2,376.1	0.00	1.35	—	—	0.00	0.01	1.02	121.1	120.0	120.0	1.8	104.0
95.0	2,397.8	0.00	0.09	—	—	0.00	0.00	1.06	121.0	120.0	120.0	1.2	3.0
Avg		0.01	47.19	—	—	0.00	2.09	0.70	120.6	120.0	120.0	4.1	65.6
Min		0.00	0.09	—	—	0.00	0.00	0.35	120.1	120.0	120.0	1.2	3.0
Max		0.04	126.27	—	—	0.01	8.73	1.06	121.2	120.0	120.0	8.6	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	184
Running time in seconds for writing input file (t^{write})	19.8
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_07.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	36,840

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	285.5	0.00	107.65	—	—	0.00	0.04	0.32	120.0	120.0	120.0	3.2	120.0
5.0	481.0	0.01	103.40	—	—	0.00	3.82	0.32	120.0	120.0	120.0	4.1	120.0
10.0	777.4	0.02	67.03	—	—	0.00	0.01	0.34	120.3	120.0	120.0	4.3	120.0
25.0	1,386.8	0.00	38.95	—	—	0.00	0.00	0.55	120.2	120.0	120.0	7.1	36.0
50.0	2,022.2	0.00	15.48	—	—	0.00	0.01	0.73	121.4	120.0	120.0	10.2	63.0
75.0	2,429.1	0.00	5.03	—	—	0.00	0.00	0.95	121.3	120.0	120.0	3.9	23.0
90.0	2,571.3	0.00	0.49	—	—	0.00	0.01	1.02	120.3	120.0	120.0	2.3	120.0
95.0	2,595.0	0.00	0.12	—	—	0.00	0.00	1.05	120.6	120.0	120.0	1.4	4.0
Avg		0.00	42.27	—	—	0.00	0.49	0.66	120.5	120.0	120.0	4.6	75.8
Min		0.00	0.12	—	—	0.00	0.00	0.32	120.0	120.0	120.0	1.4	4.0
Max		0.02	107.65	—	—	0.00	3.82	1.05	121.4	120.0	120.0	10.2	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	173
Running time in seconds for writing input file (t^{write})	19.8
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_08.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.2 %
Edges (m)	38,673

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	272.1	0.01	114.71	—	—	0.00	0.05	0.24	120.1	120.0	120.0	3.9	120.0
5.0	444.2	0.01	91.94	—	—	0.00	0.00	0.33	120.1	120.0	120.0	2.9	19.0
10.0	705.7	0.01	65.56	—	—	0.00	0.01	0.41	120.3	120.0	120.0	10.3	120.0
25.0	1,271.7	0.01	31.97	—	—	0.00	0.00	0.63	120.7	120.0	120.0	7.4	57.0
50.0	1,885.9	0.00	11.56	—	—	0.00	0.28	0.78	121.4	120.0	120.0	8.5	120.0
75.0	2,289.4	0.00	3.79	—	—	0.00	0.01	1.03	120.8	120.0	120.0	4.3	21.0
90.0	2,429.8	0.00	1.12	—	—	0.00	0.01	1.04	120.5	120.0	120.0	2.3	120.0
95.0	2,453.5	0.00	0.68	—	—	0.00	0.01	1.06	121.7	120.0	120.0	1.5	13.0
Avg		0.01	40.17	—	—	0.00	0.05	0.69	120.7	120.0	120.0	5.1	73.8
Min		0.00	0.68	—	—	0.00	0.00	0.24	120.1	120.0	120.0	1.5	13.0
Max		0.01	114.71	—	—	0.00	0.28	1.06	121.7	120.0	120.0	10.3	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	200
Running time in seconds for writing input file (t^{write})	19.8
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_09.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	35,055

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	251.5	0.00	112.81	—	—	0.00	0.00	0.01	120.1	120.0	120.0	3.0	5.0
5.0	429.6	0.00	89.27	—	—	0.00	0.03	0.33	120.1	120.0	120.0	3.7	120.0
10.0	731.4	0.01	68.41	—	—	0.00	4.08	0.42	120.1	120.0	120.0	3.2	120.0
25.0	1,337.4	0.01	36.65	—	—	0.00	0.00	0.60	120.4	120.0	120.0	7.4	24.0
50.0	1,981.9	0.01	17.14	—	—	0.00	0.00	0.97	121.4	120.0	120.0	9.7	45.0
75.0	2,391.2	0.00	6.28	—	—	0.00	0.04	0.98	121.3	120.0	120.0	3.6	120.0
90.0	2,527.0	0.00	1.77	—	—	0.01	0.01	1.04	120.9	120.0	120.0	1.9	120.0
95.0	2,549.7	0.00	0.75	—	—	0.00	0.02	1.06	120.7	120.0	120.0	1.2	120.0
Avg		0.00	41.63	—	—	0.00	0.52	0.67	120.6	120.0	120.0	4.2	84.2
Min		0.00	0.75	—	—	0.00	0.00	0.01	120.1	120.0	120.0	1.2	5.0
Max		0.01	112.81	—	—	0.01	4.08	1.06	121.4	120.0	120.0	9.7	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	183
Running time in seconds for writing input file (t^{write})	20.0
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1

File Synthetic_10.txt

Property of graph	Value
Nodes (n)	7,000
Density (Δ)	0.1 %
Edges (m)	37,554

		Deviation from best OFV (%)						Running time (s)					
γ	Best OFV	QKBP*	RG	DP	QK	Gurobi	Hexaly	QKBP*	RG	DP	QK	Gurobi	Hexaly
2.5	248.5	0.10	106.01	—	—	0.00	0.00	0.31	120.0	120.0	120.0	4.2	35.0
5.0	429.9	0.00	92.65	—	—	0.00	0.00	0.23	120.1	120.0	120.0	3.8	9.0
10.0	715.5	0.00	62.96	—	—	0.00	0.01	0.35	120.3	120.0	120.0	8.2	39.0
25.0	1,306.1	0.00	30.61	—	—	0.01	1.28	0.48	120.5	120.0	120.0	8.4	120.0
50.0	1,940.0	0.00	11.19	—	—	0.00	0.34	0.75	121.3	120.0	120.0	7.8	120.0
75.0	2,344.1	0.00	3.90	—	—	0.00	0.00	0.96	121.7	120.0	120.0	4.2	23.0
90.0	2,485.5	0.00	0.98	—	—	0.00	0.00	1.09	122.0	120.0	120.0	2.4	9.0
95.0	2,509.4	0.00	0.20	—	—	0.01	0.01	1.07	121.5	120.0	120.0	1.5	11.0
Avg		0.01	38.56	—	—	0.00	0.21	0.66	120.9	120.0	120.0	5.1	45.8
Min		0.00	0.20	—	—	0.00	0.00	0.23	120.0	120.0	120.0	1.5	9.0
Max		0.10	106.01	—	—	0.01	1.28	1.09	122.0	120.0	120.0	8.4	120.0

*The contribution in this paper

QKBP-specific information	Value
Number of breakpoints	145
Running time in seconds for writing input file (t^{write})	20.4
Running time in seconds for executing parametric cut procedure (t^{cut})	2.3
Running time in seconds for reading result file (t^{read})	0.1