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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	661.9	0.01	143.16	173.35	—	—	—	**0.00**	2.56	**0.60**	120.1	177.9	120.0	120.0	120.0	2.4	120.0
5.0	956.2	**0.00**	133.43	105.33	—	—	—	**0.00**	3.85	**0.56**	120.1	177.3	120.0	120.0	120.0	3.1	120.0
10.0	1,386.0	**0.00**	89.46	96.28	—	—	—	0.01	0.01	**0.54**	120.0	176.6	120.0	120.0	120.0	3.3	12.0
25.0	2,284.9	**0.00**	58.92	56.15	—	—	—	**0.00**	**0.00**	**1.03**	121.1	180.5	120.0	120.0	120.0	5.3	15.0
50.0	3,227.8	**0.00**	36.94	35.47	—	—	—	0.01	1.00	**1.64**	122.1	175.7	120.0	120.0	120.0	4.4	120.0
75.0	3,786.6	**0.00**	24.51	13.56	—	—	—	**0.00**	**0.00**	**1.94**	120.3	197.2	120.0	120.0	120.0	2.6	7.0
Avg		**0.00**	81.07	80.02	—	—	—	0.00	1.24	**1.05**	120.6	180.9	120.0	120.0	120.0	3.5	65.7
Min		**0.00**	24.51	13.56	—	—	—	**0.00**	**0.00**	**0.54**	120.0	175.7	120.0	120.0	120.0	2.4	7.0
Max		**0.01**	143.16	173.35	—	—	—	**0.01**	3.85	**1.94**	122.1	197.2	120.0	120.0	120.0	5.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	133
Running time in seconds for writing input file (t^{write})	0.0605
Running time in seconds for executing parametric cut procedure (t^{cut})	0.8280
Running time in seconds for reading result file (t^{read})	0.0357

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	245.9	**0.00**	97.15	85.88	—	—	—	**0.00**	**0.00**	**0.01**	120.1	152.7	120.0	120.0	120.0	1.0	2.0
5.0	399.2	0.01	75.54	77.45	—	—	—	**0.00**	**0.00**	**0.47**	120.1	153.8	120.0	120.0	120.0	1.8	58.0
10.0	641.0	**0.00**	57.81	54.00	—	—	—	**0.00**	**0.00**	**0.44**	120.2	153.2	120.0	120.0	120.0	1.5	9.0
25.0	1,176.0	0.03	39.23	35.99	—	—	—	**0.00**	0.01	**0.56**	120.7	156.5	120.0	120.0	120.0	1.4	7.0
50.0	1,768.2	**0.00**	25.15	22.56	—	—	—	**0.00**	0.01	**0.88**	121.4	154.0	120.0	120.0	120.0	1.8	6.0
75.0	2,142.0	**0.00**	21.41	18.85	—	—	—	**0.00**	**0.00**	1.05	120.7	155.8	120.0	120.0	120.0	**0.8**	4.0
Avg		0.01	52.72	49.12	—	—	—	**0.00**	0.00	**0.57**	120.5	154.3	120.0	120.0	120.0	1.4	14.3
Min		**0.00**	21.41	18.85	—	—	—	**0.00**	**0.00**	**0.01**	120.1	152.7	120.0	120.0	120.0	0.8	2.0
Max		0.03	97.15	85.88	—	—	—	**0.00**	0.01	**1.05**	121.4	156.5	120.0	120.0	120.0	1.8	58.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	153
Running time in seconds for writing input file (t^{write})	0.0572
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0287

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	23.1	1.95	12.66	4.13	—	—	—	**0.00**	**0.00**	**0.01**	1.7	5.3	120.0	120.0	120.0	4.0	16.0
5.0	44.2	0.09	12.23	2.59	—	—	—	**0.00**	**0.00**	**0.01**	3.1	8.8	120.0	120.0	120.0	1.9	48.0
10.0	81.6	**0.00**	31.94	0.89	—	—	—	**0.00**	**0.00**	**0.00**	5.9	6.3	120.0	120.0	120.0	1.7	1.0
25.0	167.3	0.10	34.29	0.97	—	—	—	**0.00**	**0.00**	**0.01**	14.1	12.2	120.0	120.0	120.0	4.6	23.0
50.0	253.2	0.03	19.51	1.98	—	—	—	**0.00**	**0.00**	**0.01**	27.4	19.3	120.0	120.0	120.0	1.3	14.0
75.0	291.6	**0.00**	4.17	0.80	—	—	—	0.01	**0.00**	**0.01**	39.2	9.2	120.0	120.0	120.0	0.6	2.0
Avg		0.36	19.13	1.89	—	—	—	0.00	**0.00**	**0.01**	15.2	10.2	120.0	120.0	120.0	2.3	17.3
Min		**0.00**	4.17	0.80	—	—	—	**0.00**	**0.00**	**0.00**	1.7	5.3	120.0	120.0	120.0	0.6	1.0
Max		1.95	34.29	4.13	—	—	—	0.01	**0.00**	**0.01**	39.2	19.3	120.0	120.0	120.0	4.6	48.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	124
Running time in seconds for writing input file (t^{write})	0.0361
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0110

File StackOverflow.txt

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	117.2	0.04	0.54	0.44	—	—	—	**0.00**	0.60	**0.62**	120.0	172.5	120.0	120.0	120.0	46.7	120.0
5.0	223.8	**0.00**	0.67	0.44	—	—	—	**0.00**	0.58	**0.40**	120.3	172.9	120.0	120.0	120.0	22.2	120.0
10.0	398.6	**0.00**	0.41	0.32	—	—	—	**0.00**	0.44	**0.86**	120.0	174.0	120.0	120.0	120.0	11.8	120.0
25.0	729.9	**0.00**	1.00	0.85	—	—	—	**0.00**	0.01	**0.84**	120.2	173.4	120.0	120.0	120.0	10.8	79.0
50.0	1,006.4	0.03	1.22	1.17	—	—	—	**0.00**	**0.00**	**1.34**	121.5	170.9	120.0	120.0	120.0	8.1	28.0
75.0	1,130.9	**0.00**	1.41	1.40	—	—	—	**0.00**	0.23	**1.76**	122.7	177.0	120.0	120.0	120.0	3.4	120.0
Avg		0.01	0.88	0.77	—	—	—	**0.00**	0.31	**0.97**	120.8	173.4	120.0	120.0	120.0	17.2	97.8
Min		**0.00**	0.41	0.32	—	—	—	**0.00**	**0.00**	**0.40**	120.0	170.9	120.0	120.0	120.0	3.4	28.0
Max		0.04	1.41	1.40	—	—	—	**0.00**	0.60	**1.76**	122.7	177.0	120.0	120.0	120.0	46.7	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	65
Running time in seconds for writing input file (t^{write})	0.1047
Running time in seconds for executing parametric cut procedure (t^{cut})	0.7970
Running time in seconds for reading result file (t^{read})	0.0333

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	247.0	**0.00**	88.71	94.63	—	—	—	**0.00**	0.09	**0.19**	120.1	153.1	120.0	120.0	120.0	3.1	120.0
5.0	408.3	0.05	75.71	64.62	—	—	—	**0.00**	**0.00**	**0.36**	120.0	152.7	120.0	120.0	120.0	4.6	6.0
10.0	662.7	0.01	56.51	50.66	—	—	—	**0.00**	**0.00**	**0.35**	120.3	152.7	120.0	120.0	120.0	4.5	11.0
25.0	1,209.5	0.03	34.93	27.26	—	—	—	**0.00**	2.04	**0.49**	120.5	154.6	120.0	120.0	120.0	10.0	120.0
50.0	1,820.6	0.01	14.17	8.95	—	—	—	**0.00**	0.01	**0.76**	120.8	152.0	120.0	120.0	120.0	9.6	33.0
75.0	2,216.2	0.01	4.31	2.19	—	—	—	**0.00**	**0.00**	**0.99**	121.2	152.7	120.0	120.0	120.0	3.9	21.0
Avg		0.02	45.72	41.38	—	—	—	**0.00**	0.36	**0.52**	120.5	153.0	120.0	120.0	120.0	6.0	51.8
Min		**0.00**	4.31	2.19	—	—	—	**0.00**	**0.00**	**0.19**	120.0	152.0	120.0	120.0	120.0	3.1	6.0
Max		0.05	88.71	94.63	—	—	—	**0.00**	2.04	**0.99**	121.2	154.6	120.0	120.0	120.0	10.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	110
Running time in seconds for writing input file (t^{write})	0.0805
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6560
Running time in seconds for reading result file (t^{read})	0.0283

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	292.9	0.01	111.79	109.85	—	—	—	**0.00**	**0.00**	**0.44**	120.0	153.0	120.0	120.0	120.0	1.7	13.0
5.0	485.9	**0.00**	104.31	83.29	—	—	—	**0.00**	0.07	**0.21**	120.1	152.2	120.0	120.0	120.0	5.1	120.0
10.0	789.2	0.04	76.57	46.27	—	—	—	**0.00**	**0.00**	**0.41**	120.0	153.7	120.0	120.0	120.0	12.3	21.0
25.0	1,412.8	0.01	43.84	30.21	—	—	—	**0.00**	0.29	**0.53**	120.4	157.0	120.0	120.0	120.0	11.3	120.0
50.0	2,069.3	0.05	17.06	9.49	—	—	—	**0.00**	0.01	**0.81**	120.1	156.0	120.0	120.0	120.0	9.0	24.0
75.0	2,488.1	**0.00**	4.75	3.03	—	—	—	0.01	0.05	**1.00**	121.4	157.1	120.0	120.0	120.0	4.2	120.0
Avg		0.02	59.72	47.02	—	—	—	**0.00**	0.07	**0.57**	120.3	154.8	120.0	120.0	120.0	7.3	69.7
Min		**0.00**	4.75	3.03	—	—	—	**0.00**	**0.00**	**0.21**	120.0	152.2	120.0	120.0	120.0	1.7	13.0
Max		0.05	111.79	109.85	—	—	—	**0.01**	0.29	**1.00**	121.4	157.1	120.0	120.0	120.0	12.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	112
Running time in seconds for writing input file (t^{write})	0.0794
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6100
Running time in seconds for reading result file (t^{read})	0.0282

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	258.8	0.01	128.21	102.78	—	—	—	**0.00**	0.16	**0.45**	120.1	153.3	120.0	120.0	120.0	4.3	120.0
5.0	437.3	0.01	100.21	72.12	—	—	—	**0.00**	0.01	**0.24**	120.2	153.6	120.0	120.0	120.0	4.5	28.0
10.0	714.8	0.01	68.24	56.20	—	—	—	**0.00**	0.02	**0.34**	120.2	152.3	120.0	120.0	120.0	9.3	120.0
25.0	1,292.3	0.01	31.78	22.05	—	—	—	**0.00**	**0.00**	**0.63**	120.8	153.1	120.0	120.0	120.0	14.5	45.0
50.0	1,922.2	0.02	13.86	10.14	—	—	—	**0.00**	**0.00**	**0.76**	120.4	153.9	120.0	120.0	120.0	8.6	20.0
75.0	2,338.7	**0.00**	4.59	2.52	—	—	—	**0.00**	**0.00**	**0.97**	122.0	155.4	120.0	120.0	120.0	3.8	16.0
Avg		0.01	57.82	44.30	—	—	—	**0.00**	0.03	**0.57**	120.6	153.6	120.0	120.0	120.0	7.5	58.2
Min		**0.00**	4.59	2.52	—	—	—	**0.00**	**0.00**	**0.24**	120.1	152.3	120.0	120.0	120.0	3.8	16.0
Max		0.02	128.21	102.78	—	—	—	**0.00**	0.16	**0.97**	122.0	155.4	120.0	120.0	120.0	14.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	134
Running time in seconds for writing input file (t^{write})	0.0795
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0273

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	235.9	**0.00**	79.88	48.31	—	—	—	**0.00**	**0.00**	**0.36**	120.0	152.4	120.0	120.0	120.0	3.7	4.0
5.0	420.0	**0.00**	80.48	37.82	—	—	—	**0.00**	4.10	**0.16**	120.2	153.8	120.0	120.0	120.0	4.0	120.0
10.0	705.6	**0.00**	63.81	41.33	—	—	—	0.01	**0.00**	**0.33**	120.3	152.9	120.0	120.0	120.0	12.0	9.0
25.0	1,282.8	**0.00**	32.44	20.17	—	—	—	**0.00**	0.01	**0.49**	120.8	157.7	120.0	120.0	120.0	13.6	46.0
50.0	1,885.7	0.03	14.84	10.85	—	—	—	**0.00**	0.01	**0.84**	122.5	155.0	120.0	120.0	120.0	7.9	24.0
75.0	2,270.5	**0.00**	4.90	3.18	—	—	—	**0.00**	**0.00**	**1.01**	123.2	158.9	120.0	120.0	120.0	3.5	18.0
Avg		0.01	46.06	26.94	—	—	—	**0.00**	0.69	**0.53**	121.2	155.1	120.0	120.0	120.0	7.4	36.8
Min		**0.00**	4.90	3.18	—	—	—	**0.00**	**0.00**	**0.16**	120.0	152.4	120.0	120.0	120.0	3.5	4.0
Max		0.03	80.48	48.31	—	—	—	**0.01**	4.10	**1.01**	123.2	158.9	120.0	120.0	120.0	13.6	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	101
Running time in seconds for writing input file (t^{write})	0.0810
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0324

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	263.4	0.02	107.63	76.11	—	—	—	**0.00**	0.20	**0.32**	120.0	152.6	120.0	120.0	120.0	3.1	120.0
5.0	451.4	**0.00**	100.73	66.96	—	—	—	**0.00**	3.26	**0.32**	120.0	154.0	120.0	120.0	120.0	2.6	120.0
10.0	728.2	0.02	71.28	48.80	—	—	—	**0.00**	0.05	**0.28**	120.3	152.7	120.0	120.0	120.0	5.3	120.0
25.0	1,297.9	**0.00**	35.17	27.19	—	—	—	**0.00**	0.01	**0.60**	120.2	152.5	120.0	120.0	120.0	9.0	31.0
50.0	1,914.2	0.01	12.29	7.29	—	—	—	**0.00**	**0.00**	**0.75**	120.6	156.6	120.0	120.0	120.0	8.5	43.0
75.0	2,315.3	**0.00**	5.02	2.58	—	—	—	**0.00**	0.07	**0.96**	121.8	154.4	120.0	120.0	120.0	4.1	120.0
Avg		0.01	55.35	38.16	—	—	—	**0.00**	0.60	**0.54**	120.5	153.8	120.0	120.0	120.0	5.4	92.3
Min		**0.00**	5.02	2.58	—	—	—	**0.00**	**0.00**	**0.28**	120.0	152.5	120.0	120.0	120.0	2.6	31.0
Max		0.02	107.63	76.11	—	—	—	**0.00**	3.26	**0.96**	121.8	156.6	120.0	120.0	120.0	9.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	177
Running time in seconds for writing input file (t^{write})	0.0824
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0276

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	248.9	0.04	105.49	69.88	—	—	—	**0.00**	5.16	**0.39**	120.0	152.8	120.0	120.0	120.0	3.7	120.0
5.0	419.1	0.07	78.23	52.19	—	—	—	**0.00**	0.01	**0.38**	120.0	152.3	120.0	120.0	120.0	3.8	8.0
10.0	685.9	**0.00**	63.36	41.36	—	—	—	**0.00**	**0.00**	**0.42**	120.2	153.6	120.0	120.0	120.0	9.6	22.0
25.0	1,249.7	0.01	34.71	26.18	—	—	—	**0.00**	**0.00**	**0.60**	120.8	156.3	120.0	120.0	120.0	12.9	22.0
50.0	1,861.7	0.01	11.50	9.91	—	—	—	**0.00**	0.01	**0.73**	121.3	152.4	120.0	120.0	120.0	9.0	33.0
75.0	2,250.0	**0.00**	4.18	2.18	—	—	—	0.01	0.06	**0.93**	120.3	156.3	120.0	120.0	120.0	3.4	120.0
Avg		0.02	49.58	33.62	—	—	—	**0.00**	0.87	**0.58**	120.4	153.9	120.0	120.0	120.0	7.1	54.2
Min		**0.00**	4.18	2.18	—	—	—	**0.00**	**0.00**	**0.38**	120.0	152.3	120.0	120.0	120.0	3.4	8.0
Max		0.07	105.49	69.88	—	—	—	**0.01**	5.16	**0.93**	121.3	156.3	120.0	120.0	120.0	12.9	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	143
Running time in seconds for writing input file (t^{write})	0.0781
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6100
Running time in seconds for reading result file (t^{read})	0.0285

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	291.6	0.04	135.38	156.20	—	—	—	**0.00**	0.02	**0.37**	120.1	153.3	120.0	120.0	120.0	2.3	120.0
5.0	490.2	0.01	110.26	84.40	—	—	—	**0.00**	4.14	**0.24**	120.2	154.3	120.0	120.0	120.0	4.3	120.0
10.0	788.4	**0.00**	83.76	53.60	—	—	—	**0.00**	0.01	**0.28**	120.0	153.6	120.0	120.0	120.0	3.3	66.0
25.0	1,389.5	**0.00**	35.75	29.38	—	—	—	**0.00**	0.01	**0.48**	120.1	156.3	120.0	120.0	120.0	9.0	29.0
50.0	2,026.6	**0.00**	14.60	10.52	—	—	—	**0.00**	0.41	**0.97**	122.8	153.7	120.0	120.0	120.0	9.2	120.0
75.0	2,429.5	**0.00**	5.55	3.33	—	—	—	**0.00**	**0.00**	**1.06**	120.1	157.5	120.0	120.0	120.0	4.3	36.0
Avg		0.01	64.22	56.24	—	—	—	**0.00**	0.76	**0.57**	120.6	154.8	120.0	120.0	120.0	5.4	81.8
Min		**0.00**	5.55	3.33	—	—	—	**0.00**	**0.00**	**0.24**	120.0	153.3	120.0	120.0	120.0	2.3	29.0
Max		0.04	135.38	156.20	—	—	—	**0.00**	4.14	**1.06**	122.8	157.5	120.0	120.0	120.0	9.2	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	133
Running time in seconds for writing input file (t^{write})	0.0832
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6100
Running time in seconds for reading result file (t^{read})	0.0290

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	242.1	0.07	83.76	102.69	—	—	—	**0.00**	15.66	**0.37**	120.1	153.1	120.0	120.0	120.0	2.3	120.0
5.0	419.8	**0.00**	69.22	73.43	—	—	—	**0.00**	7.54	**0.30**	120.0	153.0	120.0	120.0	120.0	3.4	120.0
10.0	698.1	**0.00**	55.56	37.36	—	—	—	**0.00**	0.01	**0.35**	120.3	153.1	120.0	120.0	120.0	5.2	13.0
25.0	1,275.0	**0.00**	29.79	20.29	—	—	—	0.01	0.01	**0.54**	120.2	153.9	120.0	120.0	120.0	9.0	33.0
50.0	1,896.6	0.01	13.50	9.16	—	—	—	**0.00**	0.01	**0.81**	121.3	153.9	120.0	120.0	120.0	10.1	32.0
75.0	2,293.9	**0.00**	3.82	2.55	—	—	—	**0.00**	0.07	**0.96**	120.6	155.4	120.0	120.0	120.0	4.0	120.0
Avg		0.01	42.61	40.91	—	—	—	**0.00**	3.88	**0.55**	120.4	153.7	120.0	120.0	120.0	5.7	73.0
Min		**0.00**	3.82	2.55	—	—	—	**0.00**	0.01	**0.30**	120.0	153.0	120.0	120.0	120.0	2.3	13.0
Max		0.07	83.76	102.69	—	—	—	**0.01**	15.66	**0.96**	121.3	155.4	120.0	120.0	120.0	10.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	123
Running time in seconds for writing input file (t^{write})	0.0841
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6090
Running time in seconds for reading result file (t^{read})	0.0286

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	244.3	0.08	105.69	92.01	—	—	—	**0.00**	0.11	**0.35**	120.1	153.4	120.0	120.0	120.0	4.3	120.0
5.0	427.0	0.02	93.61	54.03	—	—	—	**0.00**	7.65	**0.30**	120.1	153.2	120.0	120.0	120.0	4.2	120.0
10.0	720.9	**0.00**	70.55	51.14	—	—	—	**0.00**	**0.00**	**0.31**	120.1	152.2	120.0	120.0	120.0	3.3	6.0
25.0	1,329.8	0.01	39.13	29.03	—	—	—	**0.00**	**0.00**	**0.65**	120.6	155.0	120.0	120.0	120.0	13.1	18.0
50.0	1,980.0	0.01	14.63	10.94	—	—	—	**0.00**	0.17	**0.98**	120.1	153.7	120.0	120.0	120.0	8.5	120.0
75.0	2,389.4	**0.00**	4.90	3.28	—	—	—	**0.00**	**0.00**	**1.15**	120.7	153.6	120.0	120.0	120.0	3.3	18.0
Avg		0.02	54.75	40.07	—	—	—	**0.00**	1.32	**0.62**	120.3	153.5	120.0	120.0	120.0	6.1	67.0
Min		**0.00**	4.90	3.28	—	—	—	**0.00**	**0.00**	**0.30**	120.1	152.2	120.0	120.0	120.0	3.3	6.0
Max		0.08	105.69	92.01	—	—	—	**0.00**	7.65	**1.15**	120.7	155.0	120.0	120.0	120.0	13.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	128
Running time in seconds for writing input file (t^{write})	0.0829
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0279

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	IHEA	LDP	DP	QK	Gurobi	Hexaly	**QKBP**	RG	IHEA	LDP	DP	QK	Gurobi	Hexaly
2.5	262.7	**0.00**	87.16	80.62	—	—	—	**0.00**	**0.00**	**0.01**	120.1	152.4	120.0	120.0	120.0	1.3	6.0
5.0	447.7	0.04	99.36	54.60	—	—	—	**0.00**	0.09	**0.33**	120.1	152.5	120.0	120.0	120.0	7.7	120.0
10.0	738.8	**0.00**	77.03	43.27	—	—	—	**0.00**	0.01	**0.35**	120.2	154.4	120.0	120.0	120.0	9.6	18.0
25.0	1,319.7	**0.00**	29.99	23.77	—	—	—	**0.00**	0.25	**0.57**	120.8	153.7	120.0	120.0	120.0	9.1	120.0
50.0	1,950.0	**0.00**	11.46	6.57	—	—	—	0.01	0.22	**0.91**	121.7	156.7	120.0	120.0	120.0	8.6	120.0
75.0	2,349.1	**0.00**	3.40	1.98	—	—	—	**0.00**	**0.00**	**0.96**	121.7	154.2	120.0	120.0	120.0	3.9	38.0
Avg		0.01	51.40	35.13	—	—	—	**0.00**	0.09	**0.52**	120.8	154.0	120.0	120.0	120.0	6.7	70.3
Min		**0.00**	3.40	1.98	—	—	—	**0.00**	**0.00**	**0.01**	120.1	152.4	120.0	120.0	120.0	1.3	6.0
Max		0.04	99.36	80.62	—	—	—	**0.01**	0.25	**0.96**	121.7	156.7	120.0	120.0	120.0	9.6	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	151
Running time in seconds for writing input file (t^{write})	0.0916
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6400
Running time in seconds for reading result file (t^{read})	0.0274