Results for instances from collection QKPGroupIII

File 5000_100_1.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	100.0 %
Edges (m)	12,502,500

		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
34.6	214,425,886.0	0.02	0.02	**0.00**	—	—	—	—	28.45	**2.42**	120.5	161.8	120.0	120.0	120.0	122.5	120.0
Avg		0.02	0.02	**0.00**	—	—	—	—	28.45	**2.42**	120.5	161.8	120.0	120.0	120.0	122.5	120.0
Min		0.02	0.02	**0.00**	—	—	—	—	28.45	**2.42**	120.5	161.8	120.0	120.0	120.0	122.5	120.0
Max		0.02	0.02	**0.00**	—	—	—	—	28.45	**2.42**	120.5	161.8	120.0	120.0	120.0	122.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	21.3783
Running time in seconds for executing parametric cut procedure (t^{cut})	3.8750
Running time in seconds for reading result file (t^{read})	0.0220

File 5000_100_2.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	100.0 %
Edges (m)	12,502,500

		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
3.3	18,783,132.0	0.05	0.03	**0.00**	—	—	—	—	20.97	**1.79**	120.2	161.5	120.0	120.0	120.0	122.5	120.0
Avg		0.05	0.03	**0.00**	—	—	—	—	20.97	**1.79**	120.2	161.5	120.0	120.0	120.0	122.5	120.0
Min		0.05	0.03	**0.00**	—	—	—	—	20.97	**1.79**	120.2	161.5	120.0	120.0	120.0	122.5	120.0
Max		0.05	0.03	**0.00**	—	—	—	—	20.97	**1.79**	120.2	161.5	120.0	120.0	120.0	122.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	23.5301
Running time in seconds for executing parametric cut procedure (t^{cut})	4.9370
Running time in seconds for reading result file (t^{read})	0.0234

File 5000_100_3.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	100.0 %
Edges (m)	12,502,500

		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
2.0	10,784,650.0	**0.00**	**0.00**	**0.00**	—	—	—	—	21.98	**1.81**	120.1	161.1	120.0	120.0	120.0	122.5	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	21.98	**1.81**	120.1	161.1	120.0	120.0	120.0	122.5	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	21.98	**1.81**	120.1	161.1	120.0	120.0	120.0	122.5	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	21.98	**1.81**	120.1	161.1	120.0	120.0	120.0	122.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	22.5997
Running time in seconds for executing parametric cut procedure (t^{cut})	4.0630
Running time in seconds for reading result file (t^{read})	0.0227

File 5000_100_4.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	100.0 %
Edges (m)	12,502,500

		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
25.3	160,539,947.0	0.02	0.01	**0.00**	—	—	—	—	27.84	**2.03**	120.2	161.5	120.0	120.0	120.0	122.5	125.0
Avg		0.02	0.01	**0.00**	—	—	—	—	27.84	**2.03**	120.2	161.5	120.0	120.0	120.0	122.5	125.0
Min		0.02	0.01	**0.00**	—	—	—	—	27.84	**2.03**	120.2	161.5	120.0	120.0	120.0	122.5	125.0
Max		0.02	0.01	**0.00**	—	—	—	—	27.84	**2.03**	120.2	161.5	120.0	120.0	120.0	122.5	125.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	21.8441
Running time in seconds for executing parametric cut procedure (t^{cut})	3.8910
Running time in seconds for reading result file (t^{read})	0.0229

File 5000_100_5.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	100.0 %
Edges (m)	12,502,500

		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
5.8	33,166,430.0	0.04	0.03	**0.00**	—	—	—	—	23.48	**1.82**	120.3	160.9	120.0	120.0	120.0	122.2	120.0
Avg		0.04	0.03	**0.00**	—	—	—	—	23.48	**1.82**	120.3	160.9	120.0	120.0	120.0	122.2	120.0
Min		0.04	0.03	**0.00**	—	—	—	—	23.48	**1.82**	120.3	160.9	120.0	120.0	120.0	122.2	120.0
Max		0.04	0.03	**0.00**	—	—	—	—	23.48	**1.82**	120.3	160.9	120.0	120.0	120.0	122.2	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	22.5170
Running time in seconds for executing parametric cut procedure (t^{cut})	3.7810
Running time in seconds for reading result file (t^{read})	0.0221

File 5000_25_1.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	25.0 %
Edges (m)	3,125,543

		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
15.4	23,667,450.0	0.01	**0.00**	**0.00**	—	—	—	—	9.45	**1.98**	120.4	144.3	120.0	120.0	120.0	120.5	120.0
Avg		0.01	**0.00**	**0.00**	—	—	—	—	9.45	**1.98**	120.4	144.3	120.0	120.0	120.0	120.5	120.0
Min		0.01	**0.00**	**0.00**	—	—	—	—	9.45	**1.98**	120.4	144.3	120.0	120.0	120.0	120.5	120.0
Max		0.01	**0.00**	**0.00**	—	—	—	—	9.45	**1.98**	120.4	144.3	120.0	120.0	120.0	120.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	5.5710
Running time in seconds for executing parametric cut procedure (t^{cut})	1.2810
Running time in seconds for reading result file (t^{read})	0.0236

File 5000_25_2.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	25.0 %
Edges (m)	3,125,009

		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
24.8	37,914,560.0	0.03	0.02	**0.00**	—	—	—	—	9.76	**2.02**	120.6	144.6	120.0	120.0	120.0	120.5	120.0
Avg		0.03	0.02	**0.00**	—	—	—	—	9.76	**2.02**	120.6	144.6	120.0	120.0	120.0	120.5	120.0
Min		0.03	0.02	**0.00**	—	—	—	—	9.76	**2.02**	120.6	144.6	120.0	120.0	120.0	120.5	120.0
Max		0.03	0.02	**0.00**	—	—	—	—	9.76	**2.02**	120.6	144.6	120.0	120.0	120.0	120.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	5.3461
Running time in seconds for executing parametric cut procedure (t^{cut})	1.2820
Running time in seconds for reading result file (t^{read})	0.0244

File 5000_25_3.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	25.0 %
Edges (m)	3,124,942

		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
44.0	68,295,820.0	**0.00**	**0.00**	**0.00**	—	—	—	—	8.75	**2.05**	120.8	147.6	120.0	120.0	120.0	120.5	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	8.75	**2.05**	120.8	147.6	120.0	120.0	120.0	120.5	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	8.75	**2.05**	120.8	147.6	120.0	120.0	120.0	120.5	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	8.75	**2.05**	120.8	147.6	120.0	120.0	120.0	120.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	5.2438
Running time in seconds for executing parametric cut procedure (t^{cut})	1.2190
Running time in seconds for reading result file (t^{read})	0.0220

File 5000_25_4.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	25.0 %
Edges (m)	3,122,245

		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
22.0	33,866,053.0	0.02	0.01	**0.00**	—	—	—	—	9.97	**1.97**	120.3	146.1	120.0	120.0	120.0	120.5	120.0
Avg		0.02	0.01	**0.00**	—	—	—	—	9.97	**1.97**	120.3	146.1	120.0	120.0	120.0	120.5	120.0
Min		0.02	0.01	**0.00**	—	—	—	—	9.97	**1.97**	120.3	146.1	120.0	120.0	120.0	120.5	120.0
Max		0.02	0.01	**0.00**	—	—	—	—	9.97	**1.97**	120.3	146.1	120.0	120.0	120.0	120.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	6.1559
Running time in seconds for executing parametric cut procedure (t^{cut})	1.2650
Running time in seconds for reading result file (t^{read})	0.0255

File 5000_25_5.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	25.0 %
Edges (m)	3,123,843

		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
6.4	9,533,115.0	0.08	0.05	**0.00**	—	—	—	—	8.72	**1.91**	120.3	144.8	120.0	120.0	120.0	120.5	120.0
Avg		0.08	0.05	**0.00**	—	—	—	—	8.72	**1.91**	120.3	144.8	120.0	120.0	120.0	120.5	120.0
Min		0.08	0.05	**0.00**	—	—	—	—	8.72	**1.91**	120.3	144.8	120.0	120.0	120.0	120.5	120.0
Max		0.08	0.05	**0.00**	—	—	—	—	8.72	**1.91**	120.3	144.8	120.0	120.0	120.0	120.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	5.3498
Running time in seconds for executing parametric cut procedure (t^{cut})	1.2820
Running time in seconds for reading result file (t^{read})	0.0240

File 5000_50_1.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	50.0 %
Edges (m)	6,250,303

		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
15.0	45,194,685.0	0.03	0.02	**0.00**	—	—	—	—	12.69	**1.89**	120.5	150.9	120.0	120.0	120.0	121.0	120.0
Avg		0.03	0.02	**0.00**	—	—	—	—	12.69	**1.89**	120.5	150.9	120.0	120.0	120.0	121.0	120.0
Min		0.03	0.02	**0.00**	—	—	—	—	12.69	**1.89**	120.5	150.9	120.0	120.0	120.0	121.0	120.0
Max		0.03	0.02	**0.00**	—	—	—	—	12.69	**1.89**	120.5	150.9	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	10.6583
Running time in seconds for executing parametric cut procedure (t^{cut})	2.0940
Running time in seconds for reading result file (t^{read})	0.0221

File 5000_50_2.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	50.0 %
Edges (m)	6,252,576

		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
28.4	88,355,678.0	0.01	0.01	**0.00**	—	—	—	—	14.74	**2.06**	120.1	151.6	120.0	120.0	120.0	121.0	120.0
Avg		0.01	0.01	**0.00**	—	—	—	—	14.74	**2.06**	120.1	151.6	120.0	120.0	120.0	121.0	120.0
Min		0.01	0.01	**0.00**	—	—	—	—	14.74	**2.06**	120.1	151.6	120.0	120.0	120.0	121.0	120.0
Max		0.01	0.01	**0.00**	—	—	—	—	14.74	**2.06**	120.1	151.6	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	10.7666
Running time in seconds for executing parametric cut procedure (t^{cut})	2.1880
Running time in seconds for reading result file (t^{read})	0.0223

File 5000_50_3.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	50.0 %
Edges (m)	6,251,983

		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
48.3	152,447,303.0	0.02	0.01	**0.00**	—	—	—	—	12.42	**2.02**	121.0	152.0	120.0	120.0	120.0	121.0	120.0
Avg		0.02	0.01	**0.00**	—	—	—	—	12.42	**2.02**	121.0	152.0	120.0	120.0	120.0	121.0	120.0
Min		0.02	0.01	**0.00**	—	—	—	—	12.42	**2.02**	121.0	152.0	120.0	120.0	120.0	121.0	120.0
Max		0.02	0.01	**0.00**	—	—	—	—	12.42	**2.02**	121.0	152.0	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	11.4350
Running time in seconds for executing parametric cut procedure (t^{cut})	2.1090
Running time in seconds for reading result file (t^{read})	0.0234

File 5000_50_4.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	50.0 %
Edges (m)	6,251,140

		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
54.7	171,000,228.0	0.02	0.02	**0.00**	—	—	—	—	11.63	**2.08**	120.6	152.5	120.0	120.0	120.0	121.0	120.0
Avg		0.02	0.02	**0.00**	—	—	—	—	11.63	**2.08**	120.6	152.5	120.0	120.0	120.0	121.0	120.0
Min		0.02	0.02	**0.00**	—	—	—	—	11.63	**2.08**	120.6	152.5	120.0	120.0	120.0	121.0	120.0
Max		0.02	0.02	**0.00**	—	—	—	—	11.63	**2.08**	120.6	152.5	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	10.5055
Running time in seconds for executing parametric cut procedure (t^{cut})	2.2030
Running time in seconds for reading result file (t^{read})	0.0224

File 5000_50_5.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	50.0 %
Edges (m)	6,251,334

		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
0.5	1,187,339.0	**0.00**	**0.00**	**0.00**	—	—	—	—	13.47	**1.92**	120.0	151.1	120.0	120.0	120.0	121.0	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	13.47	**1.92**	120.0	151.1	120.0	120.0	120.0	121.0	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	13.47	**1.92**	120.0	151.1	120.0	120.0	120.0	121.0	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	13.47	**1.92**	120.0	151.1	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	11.9541
Running time in seconds for executing parametric cut procedure (t^{cut})	2.0780
Running time in seconds for reading result file (t^{read})	0.0265

File 5000_75_1.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	75.0 %
Edges (m)	9,380,302

		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
6.2	28,170,819.0	0.07	0.06	**0.00**	—	—	—	—	16.62	**2.33**	120.0	156.6	120.0	120.0	120.0	121.8	120.0
Avg		0.07	0.06	**0.00**	—	—	—	—	16.62	**2.33**	120.0	156.6	120.0	120.0	120.0	121.8	120.0
Min		0.07	0.06	**0.00**	—	—	—	—	16.62	**2.33**	120.0	156.6	120.0	120.0	120.0	121.8	120.0
Max		0.07	0.06	**0.00**	—	—	—	—	16.62	**2.33**	120.0	156.6	120.0	120.0	120.0	121.8	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	17.1091
Running time in seconds for executing parametric cut procedure (t^{cut})	3.0630
Running time in seconds for reading result file (t^{read})	0.0234

File 5000_75_2.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	75.0 %
Edges (m)	9,374,347

		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
41.7	195,434,758.0	0.01	0.01	**0.00**	—	—	—	—	19.74	**2.08**	120.2	157.2	120.0	120.0	120.0	121.6	120.0
Avg		0.01	0.01	**0.00**	—	—	—	—	19.74	**2.08**	120.2	157.2	120.0	120.0	120.0	121.6	120.0
Min		0.01	0.01	**0.00**	—	—	—	—	19.74	**2.08**	120.2	157.2	120.0	120.0	120.0	121.6	120.0
Max		0.01	0.01	**0.00**	—	—	—	—	19.74	**2.08**	120.2	157.2	120.0	120.0	120.0	121.6	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	17.2032
Running time in seconds for executing parametric cut procedure (t^{cut})	2.9530
Running time in seconds for reading result file (t^{read})	0.0233

File 5000_75_3.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	75.0 %
Edges (m)	9,378,119

		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
14.1	64,324,704.0	0.04	0.03	**0.00**	—	—	—	—	18.51	**2.17**	120.2	156.8	120.0	120.0	120.0	121.6	120.0
Avg		0.04	0.03	**0.00**	—	—	—	—	18.51	**2.17**	120.2	156.8	120.0	120.0	120.0	121.6	120.0
Min		0.04	0.03	**0.00**	—	—	—	—	18.51	**2.17**	120.2	156.8	120.0	120.0	120.0	121.6	120.0
Max		0.04	0.03	**0.00**	—	—	—	—	18.51	**2.17**	120.2	156.8	120.0	120.0	120.0	121.6	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	16.8487
Running time in seconds for executing parametric cut procedure (t^{cut})	3.0780
Running time in seconds for reading result file (t^{read})	0.0231

File 5000_75_4.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	75.0 %
Edges (m)	9,374,448

		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
53.0	247,348,595.0	**0.00**	0.01	**0.00**	—	—	—	—	17.98	**2.14**	120.4	156.6	120.0	120.0	120.0	121.9	120.0
Avg		**0.00**	0.01	**0.00**	—	—	—	—	17.98	**2.14**	120.4	156.6	120.0	120.0	120.0	121.9	120.0
Min		**0.00**	0.01	**0.00**	—	—	—	—	17.98	**2.14**	120.4	156.6	120.0	120.0	120.0	121.9	120.0
Max		**0.00**	0.01	**0.00**	—	—	—	—	17.98	**2.14**	120.4	156.6	120.0	120.0	120.0	121.9	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	17.3749
Running time in seconds for executing parametric cut procedure (t^{cut})	3.1880
Running time in seconds for reading result file (t^{read})	0.0222

File 5000_75_5.txt

Property of graph	Value
Nodes (n)	5,000
Density (Δ)	75.0 %
Edges (m)	9,376,079

		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
10.0	46,462,740.0	0.07	0.07	**0.00**	—	—	—	—	19.07	**2.06**	120.3	157.9	120.0	120.0	120.0	121.9	120.0
Avg		0.07	0.07	**0.00**	—	—	—	—	19.07	**2.06**	120.3	157.9	120.0	120.0	120.0	121.9	120.0
Min		0.07	0.07	**0.00**	—	—	—	—	19.07	**2.06**	120.3	157.9	120.0	120.0	120.0	121.9	120.0
Max		0.07	0.07	**0.00**	—	—	—	—	19.07	**2.06**	120.3	157.9	120.0	120.0	120.0	121.9	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	17.1617
Running time in seconds for executing parametric cut procedure (t^{cut})	3.5310
Running time in seconds for reading result file (t^{read})	0.0221

File 6000_100_1.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	100.0 %
Edges (m)	18,003,000

		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
32.3	292,257,056.0	0.01	0.01	**0.00**	—	—	—	—	43.65	**3.23**	120.4	181.0	120.0	120.0	120.0	123.4	120.0
Avg		0.01	0.01	**0.00**	—	—	—	—	43.65	**3.23**	120.4	181.0	120.0	120.0	120.0	123.4	120.0
Min		0.01	0.01	**0.00**	—	—	—	—	43.65	**3.23**	120.4	181.0	120.0	120.0	120.0	123.4	120.0
Max		0.01	0.01	**0.00**	—	—	—	—	43.65	**3.23**	120.4	181.0	120.0	120.0	120.0	123.4	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	33.8271
Running time in seconds for executing parametric cut procedure (t^{cut})	5.5470
Running time in seconds for reading result file (t^{read})	0.0261

File 6000_100_2.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	100.0 %
Edges (m)	18,003,000

		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
24.9	219,787,724.0	0.03	0.03	**0.00**	—	—	—	—	40.86	**2.89**	120.7	178.0	120.0	120.0	120.0	123.1	120.0
Avg		0.03	0.03	**0.00**	—	—	—	—	40.86	**2.89**	120.7	178.0	120.0	120.0	120.0	123.1	120.0
Min		0.03	0.03	**0.00**	—	—	—	—	40.86	**2.89**	120.7	178.0	120.0	120.0	120.0	123.1	120.0
Max		0.03	0.03	**0.00**	—	—	—	—	40.86	**2.89**	120.7	178.0	120.0	120.0	120.0	123.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	34.3525
Running time in seconds for executing parametric cut procedure (t^{cut})	5.4380
Running time in seconds for reading result file (t^{read})	0.0261

File 6000_100_3.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	100.0 %
Edges (m)	18,003,000

		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
41.8	376,967,122.0	0.02	0.02	**0.00**	—	—	—	—	42.15	**2.78**	121.1	179.5	120.0	120.0	120.0	123.7	120.0
Avg		0.02	0.02	**0.00**	—	—	—	—	42.15	**2.78**	121.1	179.5	120.0	120.0	120.0	123.7	120.0
Min		0.02	0.02	**0.00**	—	—	—	—	42.15	**2.78**	121.1	179.5	120.0	120.0	120.0	123.7	120.0
Max		0.02	0.02	**0.00**	—	—	—	—	42.15	**2.78**	121.1	179.5	120.0	120.0	120.0	123.7	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	35.8545
Running time in seconds for executing parametric cut procedure (t^{cut})	5.6720
Running time in seconds for reading result file (t^{read})	0.0248

File 6000_100_4.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	100.0 %
Edges (m)	18,003,000

		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
39.6	355,609,720.0	**0.00**	**0.00**	**0.00**	—	—	—	—	41.77	**2.90**	120.5	183.7	120.0	120.0	120.0	123.2	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	41.77	**2.90**	120.5	183.7	120.0	120.0	120.0	123.2	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	41.77	**2.90**	120.5	183.7	120.0	120.0	120.0	123.2	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	41.77	**2.90**	120.5	183.7	120.0	120.0	120.0	123.2	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	33.9983
Running time in seconds for executing parametric cut procedure (t^{cut})	7.8910
Running time in seconds for reading result file (t^{read})	0.0250

File 6000_100_5.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	100.0 %
Edges (m)	18,003,000

		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
75.8	686,364,195.0	0.01	0.01	**0.00**	—	—	—	—	30.08	**2.75**	121.5	180.0	120.0	120.0	120.0	123.1	120.0
Avg		0.01	0.01	**0.00**	—	—	—	—	30.08	**2.75**	121.5	180.0	120.0	120.0	120.0	123.1	120.0
Min		0.01	0.01	**0.00**	—	—	—	—	30.08	**2.75**	121.5	180.0	120.0	120.0	120.0	123.1	120.0
Max		0.01	0.01	**0.00**	—	—	—	—	30.08	**2.75**	121.5	180.0	120.0	120.0	120.0	123.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	32.9167
Running time in seconds for executing parametric cut procedure (t^{cut})	7.1100
Running time in seconds for reading result file (t^{read})	0.0245

File 6000_25_1.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	25.0 %
Edges (m)	4,499,169

		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
31.3	69,832,542.0	**0.00**	**0.00**	**0.00**	—	—	—	—	12.21	**2.74**	120.8	156.5	120.0	120.0	120.0	120.8	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	12.21	**2.74**	120.8	156.5	120.0	120.0	120.0	120.8	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	12.21	**2.74**	120.8	156.5	120.0	120.0	120.0	120.8	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	12.21	**2.74**	120.8	156.5	120.0	120.0	120.0	120.8	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	7.7736
Running time in seconds for executing parametric cut procedure (t^{cut})	1.7660
Running time in seconds for reading result file (t^{read})	0.0237

File 6000_25_2.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	25.0 %
Edges (m)	4,500,583

		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
1.8	3,697,236.0	0.20	0.10	**0.00**	—	—	—	—	10.66	**2.87**	120.0	157.5	120.0	120.0	120.0	120.8	120.0
Avg		0.20	0.10	**0.00**	—	—	—	—	10.66	**2.87**	120.0	157.5	120.0	120.0	120.0	120.8	120.0
Min		0.20	0.10	**0.00**	—	—	—	—	10.66	**2.87**	120.0	157.5	120.0	120.0	120.0	120.8	120.0
Max		0.20	0.10	**0.00**	—	—	—	—	10.66	**2.87**	120.0	157.5	120.0	120.0	120.0	120.8	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	8.0732
Running time in seconds for executing parametric cut procedure (t^{cut})	1.7190
Running time in seconds for reading result file (t^{read})	0.0245

File 6000_25_3.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	25.0 %
Edges (m)	4,499,027

		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
35.6	79,300,092.0	**0.00**	**0.00**	**0.00**	—	—	—	—	12.32	**3.29**	120.3	158.3	120.0	120.0	120.0	120.8	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	12.32	**3.29**	120.3	158.3	120.0	120.0	120.0	120.8	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	12.32	**3.29**	120.3	158.3	120.0	120.0	120.0	120.8	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	12.32	**3.29**	120.3	158.3	120.0	120.0	120.0	120.8	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	8.0256
Running time in seconds for executing parametric cut procedure (t^{cut})	1.7500
Running time in seconds for reading result file (t^{read})	0.0244

File 6000_25_4.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	25.0 %
Edges (m)	4,498,972

		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
84.4	191,531,304.0	0.02	0.02	**0.00**	—	—	—	—	2.83	**2.98**	121.2	157.0	120.0	120.0	120.0	120.8	120.0
Avg		0.02	0.02	**0.00**	—	—	—	—	2.83	**2.98**	121.2	157.0	120.0	120.0	120.0	120.8	120.0
Min		0.02	0.02	**0.00**	—	—	—	—	2.83	**2.98**	121.2	157.0	120.0	120.0	120.0	120.8	120.0
Max		0.02	0.02	**0.00**	—	—	—	—	2.83	**2.98**	121.2	157.0	120.0	120.0	120.0	120.8	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	8.0331
Running time in seconds for executing parametric cut procedure (t^{cut})	1.7660
Running time in seconds for reading result file (t^{read})	0.0242

File 6000_25_5.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	25.0 %
Edges (m)	4,498,349

		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
16.1	36,121,510.0	0.03	0.02	**0.00**	—	—	—	—	10.67	**3.07**	120.7	159.7	120.0	120.0	120.0	120.7	120.0
Avg		0.03	0.02	**0.00**	—	—	—	—	10.67	**3.07**	120.7	159.7	120.0	120.0	120.0	120.7	120.0
Min		0.03	0.02	**0.00**	—	—	—	—	10.67	**3.07**	120.7	159.7	120.0	120.0	120.0	120.7	120.0
Max		0.03	0.02	**0.00**	—	—	—	—	10.67	**3.07**	120.7	159.7	120.0	120.0	120.0	120.7	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	8.0049
Running time in seconds for executing parametric cut procedure (t^{cut})	1.7030
Running time in seconds for reading result file (t^{read})	0.0252

File 6000_50_1.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	50.0 %
Edges (m)	9,001,343

		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
43.5	194,344,567.0	**0.00**	**0.00**	**0.00**	—	—	—	—	17.18	**3.78**	121.5	168.8	120.0	120.0	120.0	121.5	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	17.18	**3.78**	121.5	168.8	120.0	120.0	120.0	121.5	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	17.18	**3.78**	121.5	168.8	120.0	120.0	120.0	121.5	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	17.18	**3.78**	121.5	168.8	120.0	120.0	120.0	121.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	15.7912
Running time in seconds for executing parametric cut procedure (t^{cut})	2.9540
Running time in seconds for reading result file (t^{read})	0.0250

File 6000_50_2.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	50.0 %
Edges (m)	9,003,221

		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
71.4	323,753,804.0	0.02	0.02	**0.00**	—	—	—	—	10.44	**3.06**	121.1	165.0	120.0	120.0	120.0	121.5	120.0
Avg		0.02	0.02	**0.00**	—	—	—	—	10.44	**3.06**	121.1	165.0	120.0	120.0	120.0	121.5	120.0
Min		0.02	0.02	**0.00**	—	—	—	—	10.44	**3.06**	121.1	165.0	120.0	120.0	120.0	121.5	120.0
Max		0.02	0.02	**0.00**	—	—	—	—	10.44	**3.06**	121.1	165.0	120.0	120.0	120.0	121.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	17.7437
Running time in seconds for executing parametric cut procedure (t^{cut})	3.2030
Running time in seconds for reading result file (t^{read})	0.0265

File 6000_50_3.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	50.0 %
Edges (m)	9,000,496

		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
7.3	31,913,824.0	0.11	0.10	**0.00**	—	—	—	—	17.18	**2.94**	120.5	167.9	120.0	120.0	120.0	121.6	120.0
Avg		0.11	0.10	**0.00**	—	—	—	—	17.18	**2.94**	120.5	167.9	120.0	120.0	120.0	121.6	120.0
Min		0.11	0.10	**0.00**	—	—	—	—	17.18	**2.94**	120.5	167.9	120.0	120.0	120.0	121.6	120.0
Max		0.11	0.10	**0.00**	—	—	—	—	17.18	**2.94**	120.5	167.9	120.0	120.0	120.0	121.6	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	17.0649
Running time in seconds for executing parametric cut procedure (t^{cut})	3.2190
Running time in seconds for reading result file (t^{read})	0.0249

File 6000_50_4.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	50.0 %
Edges (m)	9,001,014

		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
50.1	225,556,641.0	**0.00**	**0.00**	**0.00**	—	—	—	—	16.72	**3.21**	121.3	165.5	120.0	120.0	120.0	121.5	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	—	16.72	**3.21**	121.3	165.5	120.0	120.0	120.0	121.5	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	—	16.72	**3.21**	121.3	165.5	120.0	120.0	120.0	121.5	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	—	16.72	**3.21**	121.3	165.5	120.0	120.0	120.0	121.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	17.0315
Running time in seconds for executing parametric cut procedure (t^{cut})	3.1720
Running time in seconds for reading result file (t^{read})	0.0251

File 6000_50_5.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	50.0 %
Edges (m)	9,000,064

		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
9.2	40,931,924.0	0.05	0.05	**0.00**	—	—	—	—	16.14	**3.17**	120.2	163.5	120.0	120.0	120.0	121.5	120.0
Avg		0.05	0.05	**0.00**	—	—	—	—	16.14	**3.17**	120.2	163.5	120.0	120.0	120.0	121.5	120.0
Min		0.05	0.05	**0.00**	—	—	—	—	16.14	**3.17**	120.2	163.5	120.0	120.0	120.0	121.5	120.0
Max		0.05	0.05	**0.00**	—	—	—	—	16.14	**3.17**	120.2	163.5	120.0	120.0	120.0	121.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	15.9288
Running time in seconds for executing parametric cut procedure (t^{cut})	4.2810
Running time in seconds for reading result file (t^{read})	0.0250

File 6000_75_1.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	75.0 %
Edges (m)	13,501,777

		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
31.0	204,512,250.0	0.03	0.03	**0.00**	—	—	—	—	26.64	**3.06**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Avg		0.03	0.03	**0.00**	—	—	—	—	26.64	**3.06**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Min		0.03	0.03	**0.00**	—	—	—	—	26.64	**3.06**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Max		0.03	0.03	**0.00**	—	—	—	—	26.64	**3.06**	120.2	171.8	120.0	120.0	120.0	122.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	25.3094
Running time in seconds for executing parametric cut procedure (t^{cut})	6.0780
Running time in seconds for reading result file (t^{read})	0.0251

File 6000_75_2.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	75.0 %
Edges (m)	13,502,598

		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
6.6	42,422,207.0	0.07	0.06	**0.00**	—	—	—	—	21.59	**2.59**	120.4	171.6	120.0	120.0	120.0	122.3	120.0
Avg		0.07	0.06	**0.00**	—	—	—	—	21.59	**2.59**	120.4	171.6	120.0	120.0	120.0	122.3	120.0
Min		0.07	0.06	**0.00**	—	—	—	—	21.59	**2.59**	120.4	171.6	120.0	120.0	120.0	122.3	120.0
Max		0.07	0.06	**0.00**	—	—	—	—	21.59	**2.59**	120.4	171.6	120.0	120.0	120.0	122.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	23.3063
Running time in seconds for executing parametric cut procedure (t^{cut})	5.8750
Running time in seconds for reading result file (t^{read})	0.0252

File 6000_75_3.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	75.0 %
Edges (m)	13,503,777

		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
77.3	524,508,156.0	0.03	0.03	**0.00**	—	—	—	—	18.12	**2.69**	121.4	171.1	120.0	120.0	120.0	122.3	120.0
Avg		0.03	0.03	**0.00**	—	—	—	—	18.12	**2.69**	121.4	171.1	120.0	120.0	120.0	122.3	120.0
Min		0.03	0.03	**0.00**	—	—	—	—	18.12	**2.69**	121.4	171.1	120.0	120.0	120.0	122.3	120.0
Max		0.03	0.03	**0.00**	—	—	—	—	18.12	**2.69**	121.4	171.1	120.0	120.0	120.0	122.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	25.2999
Running time in seconds for executing parametric cut procedure (t^{cut})	4.5470
Running time in seconds for reading result file (t^{read})	0.0241

File 6000_75_4.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	75.0 %
Edges (m)	13,499,481

		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
29.9	197,004,931.0	0.01	0.01	**0.00**	—	—	—	—	29.67	**2.77**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Avg		0.01	0.01	**0.00**	—	—	—	—	29.67	**2.77**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Min		0.01	0.01	**0.00**	—	—	—	—	29.67	**2.77**	120.2	171.8	120.0	120.0	120.0	122.3	120.0
Max		0.01	0.01	**0.00**	—	—	—	—	29.67	**2.77**	120.2	171.8	120.0	120.0	120.0	122.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	1
Running time in seconds for writing input file (t^{write})	25.0858
Running time in seconds for executing parametric cut procedure (t^{cut})	4.5780
Running time in seconds for reading result file (t^{read})	0.0239

File 6000_75_5.txt

Property of graph	Value
Nodes (n)	6,000
Density (Δ)	75.0 %
Edges (m)	13,498,901

		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
10.9	74,350,712.0	0.08	0.08	**0.00**	—	—	—	—	25.03	**3.05**	120.5	176.1	120.0	120.0	120.0	122.3	120.0
Avg		0.08	0.08	**0.00**	—	—	—	—	25.03	**3.05**	120.5	176.1	120.0	120.0	120.0	122.3	120.0
Min		0.08	0.08	**0.00**	—	—	—	—	25.03	**3.05**	120.5	176.1	120.0	120.0	120.0	122.3	120.0
Max		0.08	0.08	**0.00**	—	—	—	—	25.03	**3.05**	120.5	176.1	120.0	120.0	120.0	122.3	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	24.4713
Running time in seconds for executing parametric cut procedure (t^{cut})	4.5160
Running time in seconds for reading result file (t^{read})	0.0257