Results for instances from collection `QKPGroupII`

File 1000_100_1.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
25.6	6,243,494.0	0.13	0.11	**0.00**	—	—	—	273.87	3.89	**0.07**	25.7	25.1	120.0	120.0	120.0	128.3	121.0
Avg		0.13	0.11	**0.00**	—	—	—	273.87	3.89	**0.07**	25.7	25.1	120.0	120.0	120.0	128.3	121.0
Min		0.13	0.11	**0.00**	—	—	—	273.87	3.89	**0.07**	25.7	25.1	120.0	120.0	120.0	128.3	121.0
Max		0.13	0.11	**0.00**	—	—	—	273.87	3.89	**0.07**	25.7	25.1	120.0	120.0	120.0	128.3	121.0

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})	0.8019
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1720
Running time in seconds for reading result file (t^{read})	0.0115

File 1000_100_10.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
5.6	1,334,494.0	0.36	0.25	**0.00**	—	—	—	1,574.96	5.00	**0.06**	11.9	8.5	120.0	120.0	120.0	120.3	121.0
Avg		0.36	0.25	**0.00**	—	—	—	1,574.96	5.00	**0.06**	11.9	8.5	120.0	120.0	120.0	120.3	121.0
Min		0.36	0.25	**0.00**	—	—	—	1,574.96	5.00	**0.06**	11.9	8.5	120.0	120.0	120.0	120.3	121.0
Max		0.36	0.25	**0.00**	—	—	—	1,574.96	5.00	**0.06**	11.9	8.5	120.0	120.0	120.0	120.3	121.0

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})	0.8266
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1570
Running time in seconds for reading result file (t^{read})	0.0117

File 1000_100_2.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
19.2	4,854,086.0	0.22	0.18	**0.00**	—	—	—	404.99	4.22	**0.06**	23.1	27.5	120.0	120.0	120.0	120.3	121.0
Avg		0.22	0.18	**0.00**	—	—	—	404.99	4.22	**0.06**	23.1	27.5	120.0	120.0	120.0	120.3	121.0
Min		0.22	0.18	**0.00**	—	—	—	404.99	4.22	**0.06**	23.1	27.5	120.0	120.0	120.0	120.3	121.0
Max		0.22	0.18	**0.00**	—	—	—	404.99	4.22	**0.06**	23.1	27.5	120.0	120.0	120.0	120.3	121.0

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})	0.7939
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1560
Running time in seconds for reading result file (t^{read})	0.0107

File 1000_100_3.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
13.5	3,172,022.0	0.28	0.19	**0.00**	—	—	—	533.24	4.24	**0.07**	19.4	21.5	120.0	120.0	120.0	122.9	120.0
Avg		0.28	0.19	**0.00**	—	—	—	533.24	4.24	**0.07**	19.4	21.5	120.0	120.0	120.0	122.9	120.0
Min		0.28	0.19	**0.00**	—	—	—	533.24	4.24	**0.07**	19.4	21.5	120.0	120.0	120.0	122.9	120.0
Max		0.28	0.19	**0.00**	—	—	—	533.24	4.24	**0.07**	19.4	21.5	120.0	120.0	120.0	122.9	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})	0.8299
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1570
Running time in seconds for reading result file (t^{read})	0.0102

File 1000_100_4.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
3.2	754,727.0	0.52	0.37	**0.00**	—	—	—	2,112.04	5.19	**0.05**	9.0	13.5	120.0	120.0	120.0	120.3	120.0
Avg		0.52	0.37	**0.00**	—	—	—	2,112.04	5.19	**0.05**	9.0	13.5	120.0	120.0	120.0	120.3	120.0
Min		0.52	0.37	**0.00**	—	—	—	2,112.04	5.19	**0.05**	9.0	13.5	120.0	120.0	120.0	120.3	120.0
Max		0.52	0.37	**0.00**	—	—	—	2,112.04	5.19	**0.05**	9.0	13.5	120.0	120.0	120.0	120.3	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})	0.8243
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1570
Running time in seconds for reading result file (t^{read})	0.0107

File 1000_100_5.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
74.1	18,646,607.0	0.08	0.07	**0.00**	—	—	—	33.48	2.84	**0.07**	44.1	10.6	120.0	120.0	120.0	127.3	120.0
Avg		0.08	0.07	**0.00**	—	—	—	33.48	2.84	**0.07**	44.1	10.6	120.0	120.0	120.0	127.3	120.0
Min		0.08	0.07	**0.00**	—	—	—	33.48	2.84	**0.07**	44.1	10.6	120.0	120.0	120.0	127.3	120.0
Max		0.08	0.07	**0.00**	—	—	—	33.48	2.84	**0.07**	44.1	10.6	120.0	120.0	120.0	127.3	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})	0.8025
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1560
Running time in seconds for reading result file (t^{read})	0.0106

File 1000_100_6.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
63.7	16,020,232.0	0.09	0.07	**0.00**	—	—	—	56.61	3.48	**0.07**	38.5	12.2	120.0	120.0	120.0	123.4	121.0
Avg		0.09	0.07	**0.00**	—	—	—	56.61	3.48	**0.07**	38.5	12.2	120.0	120.0	120.0	123.4	121.0
Min		0.09	0.07	**0.00**	—	—	—	56.61	3.48	**0.07**	38.5	12.2	120.0	120.0	120.0	123.4	121.0
Max		0.09	0.07	**0.00**	—	—	—	56.61	3.48	**0.07**	38.5	12.2	120.0	120.0	120.0	123.4	121.0

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})	0.7950
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1720
Running time in seconds for reading result file (t^{read})	0.0105

File 1000_100_7.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
52.4	12,936,205.0	0.03	0.01	**0.00**	—	—	—	83.68	4.19	**0.08**	35.8	10.0	120.0	120.0	120.0	125.9	121.0
Avg		0.03	0.01	**0.00**	—	—	—	83.68	4.19	**0.08**	35.8	10.0	120.0	120.0	120.0	125.9	121.0
Min		0.03	0.01	**0.00**	—	—	—	83.68	4.19	**0.08**	35.8	10.0	120.0	120.0	120.0	125.9	121.0
Max		0.03	0.01	**0.00**	—	—	—	83.68	4.19	**0.08**	35.8	10.0	120.0	120.0	120.0	125.9	121.0

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})	0.8267
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1570
Running time in seconds for reading result file (t^{read})	0.0110

File 1000_100_8.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
27.8	6,927,738.0	0.11	0.09	**0.00**	—	—	—	238.03	4.27	**0.07**	27.4	17.5	120.0	120.0	120.0	123.2	121.0
Avg		0.11	0.09	**0.00**	—	—	—	238.03	4.27	**0.07**	27.4	17.5	120.0	120.0	120.0	123.2	121.0
Min		0.11	0.09	**0.00**	—	—	—	238.03	4.27	**0.07**	27.4	17.5	120.0	120.0	120.0	123.2	121.0
Max		0.11	0.09	**0.00**	—	—	—	238.03	4.27	**0.07**	27.4	17.5	120.0	120.0	120.0	123.2	121.0

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})	0.8360
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1560
Running time in seconds for reading result file (t^{read})	0.0108

File 1000_100_9.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	100.0 %
Edges (m)	500,500

		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
15.7	3,874,959.0	0.02	**0.00**	**0.00**	—	—	—	518.65	4.73	**0.07**	20.1	24.2	120.0	120.0	120.0	120.3	121.0
Avg		0.02	**0.00**	**0.00**	—	—	—	518.65	4.73	**0.07**	20.1	24.2	120.0	120.0	120.0	120.3	121.0
Min		0.02	**0.00**	**0.00**	—	—	—	518.65	4.73	**0.07**	20.1	24.2	120.0	120.0	120.0	120.3	121.0
Max		0.02	**0.00**	**0.00**	—	—	—	518.65	4.73	**0.07**	20.1	24.2	120.0	120.0	120.0	120.3	121.0

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})	0.8279
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1560
Running time in seconds for reading result file (t^{read})	0.0110

File 1000_25_1.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	125,139

		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
97.4	6,172,407.0	0.16	**0.00**	0.11	—	—	—	**0.00**	0.11	**0.01**	48.6	6.1	120.0	120.0	120.0	82.5	120.0
Avg		0.16	**0.00**	0.11	—	—	—	**0.00**	0.11	**0.01**	48.6	6.1	120.0	120.0	120.0	82.5	120.0
Min		0.16	**0.00**	0.11	—	—	—	**0.00**	0.11	**0.01**	48.6	6.1	120.0	120.0	120.0	82.5	120.0
Max		0.16	**0.00**	0.11	—	—	—	**0.00**	0.11	**0.01**	48.6	6.1	120.0	120.0	120.0	82.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.1990
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0106

File 1000_25_10.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	125,854

		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
18.4	1,173,792.0	0.24	0.09	**0.00**	—	—	—	439.56	0.83	**0.05**	22.7	25.7	120.0	120.0	120.0	120.1	120.0
Avg		0.24	0.09	**0.00**	—	—	—	439.56	0.83	**0.05**	22.7	25.7	120.0	120.0	120.0	120.1	120.0
Min		0.24	0.09	**0.00**	—	—	—	439.56	0.83	**0.05**	22.7	25.7	120.0	120.0	120.0	120.1	120.0
Max		0.24	0.09	**0.00**	—	—	—	439.56	0.83	**0.05**	22.7	25.7	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	7
Running time in seconds for writing input file (t^{write})	0.1997
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0104

File 1000_25_2.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,973

		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
3.8	229,941.0	**0.00**	0.06	**0.00**	—	—	—	1,880.03	0.42	**0.05**	9.7	6.8	120.0	120.0	120.0	120.1	120.0
Avg		**0.00**	0.06	**0.00**	—	—	—	1,880.03	0.42	**0.05**	9.7	6.8	120.0	120.0	120.0	120.1	120.0
Min		**0.00**	0.06	**0.00**	—	—	—	1,880.03	0.42	**0.05**	9.7	6.8	120.0	120.0	120.0	120.1	120.0
Max		**0.00**	0.06	**0.00**	—	—	—	1,880.03	0.42	**0.05**	9.7	6.8	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.1970
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0102

File 1000_25_3.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	125,479

		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
2.8	172,418.0	0.04	**0.00**	**0.00**	—	—	—	1.77	0.41	**0.05**	8.7	11.9	120.0	120.0	120.0	120.1	120.0
Avg		0.04	**0.00**	**0.00**	—	—	—	1.77	0.41	**0.05**	8.7	11.9	120.0	120.0	120.0	120.1	120.0
Min		0.04	**0.00**	**0.00**	—	—	—	1.77	0.41	**0.05**	8.7	11.9	120.0	120.0	120.0	120.1	120.0
Max		0.04	**0.00**	**0.00**	—	—	—	1.77	0.41	**0.05**	8.7	11.9	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.2020
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0104

File 1000_25_4.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,919

		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
6.0	367,426.0	**0.00**	**0.00**	**0.00**	—	—	—	1,205.94	0.89	**0.06**	12.0	7.4	120.0	120.0	120.0	120.1	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	1,205.94	0.89	**0.06**	12.0	7.4	120.0	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	1,205.94	0.89	**0.06**	12.0	7.4	120.0	120.0	120.0	120.1	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	1,205.94	0.89	**0.06**	12.0	7.4	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.2056
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0108

File 1000_25_5.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,190

		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
77.4	4,885,573.0	0.15	**0.00**	**0.00**	—	—	—	29.67	1.26	**0.04**	42.1	8.2	120.0	120.0	120.0	120.1	120.0
Avg		0.15	**0.00**	**0.00**	—	—	—	29.67	1.26	**0.04**	42.1	8.2	120.0	120.0	120.0	120.1	120.0
Min		0.15	**0.00**	**0.00**	—	—	—	29.67	1.26	**0.04**	42.1	8.2	120.0	120.0	120.0	120.1	120.0
Max		0.15	**0.00**	**0.00**	—	—	—	29.67	1.26	**0.04**	42.1	8.2	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.1956
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1090
Running time in seconds for reading result file (t^{read})	0.0105

File 1000_25_6.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,938

		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
0.4	15,689.0	1.27	**0.00**	**0.00**	—	—	—	1,620.29	**0.00**	**0.04**	2.1	5.7	120.0	120.0	120.0	120.1	120.0
Avg		1.27	**0.00**	**0.00**	—	—	—	1,620.29	**0.00**	**0.04**	2.1	5.7	120.0	120.0	120.0	120.1	120.0
Min		1.27	**0.00**	**0.00**	—	—	—	1,620.29	**0.00**	**0.04**	2.1	5.7	120.0	120.0	120.0	120.1	120.0
Max		1.27	**0.00**	**0.00**	—	—	—	1,620.29	**0.00**	**0.04**	2.1	5.7	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	7
Running time in seconds for writing input file (t^{write})	0.1983
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0104

File 1000_25_7.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	125,155

		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
78.3	4,945,658.0	0.13	0.02	**0.00**	—	—	—	28.26	1.25	**0.05**	42.2	8.6	120.0	120.0	120.0	120.1	120.0
Avg		0.13	0.02	**0.00**	—	—	—	28.26	1.25	**0.05**	42.2	8.6	120.0	120.0	120.0	120.1	120.0
Min		0.13	0.02	**0.00**	—	—	—	28.26	1.25	**0.05**	42.2	8.6	120.0	120.0	120.0	120.1	120.0
Max		0.13	0.02	**0.00**	—	—	—	28.26	1.25	**0.05**	42.2	8.6	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.1967
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0930
Running time in seconds for reading result file (t^{read})	0.0107

File 1000_25_8.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	124,822

		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
26.2	1,710,198.0	0.10	0.05	**0.00**	—	—	—	0.58	1.51	**0.06**	28.4	13.0	120.0	120.0	120.0	120.1	120.0
Avg		0.10	0.05	**0.00**	—	—	—	0.58	1.51	**0.06**	28.4	13.0	120.0	120.0	120.0	120.1	120.0
Min		0.10	0.05	**0.00**	—	—	—	0.58	1.51	**0.06**	28.4	13.0	120.0	120.0	120.0	120.1	120.0
Max		0.10	0.05	**0.00**	—	—	—	0.58	1.51	**0.06**	28.4	13.0	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.1969
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1100
Running time in seconds for reading result file (t^{read})	0.0105

File 1000_25_9.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	25.0 %
Edges (m)	125,259

		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
8.0	496,315.0	**0.00**	**0.00**	**0.00**	—	—	—	906.74	0.89	**0.07**	14.7	20.3	120.0	120.0	120.0	120.1	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	906.74	0.89	**0.07**	14.7	20.3	120.0	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	906.74	0.89	**0.07**	14.7	20.3	120.0	120.0	120.0	120.1	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	906.74	0.89	**0.07**	14.7	20.3	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.1972
Running time in seconds for executing parametric cut procedure (t^{cut})	0.0940
Running time in seconds for reading result file (t^{read})	0.0108

File 1000_50_1.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,709

		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
45.4	5,663,590.0	0.02	**0.00**	**0.00**	—	—	—	124.10	2.36	**0.05**	33.1	11.0	120.0	120.0	120.0	120.1	120.0
Avg		0.02	**0.00**	**0.00**	—	—	—	124.10	2.36	**0.05**	33.1	11.0	120.0	120.0	120.0	120.1	120.0
Min		0.02	**0.00**	**0.00**	—	—	—	124.10	2.36	**0.05**	33.1	11.0	120.0	120.0	120.0	120.1	120.0
Max		0.02	**0.00**	**0.00**	—	—	—	124.10	2.36	**0.05**	33.1	11.0	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.3983
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0110

File 1000_50_10.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,272

		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
18.3	2,340,724.0	0.21	0.11	**0.00**	—	—	—	412.80	2.10	**0.04**	22.4	24.0	120.0	120.0	120.0	120.2	120.0
Avg		0.21	0.11	**0.00**	—	—	—	412.80	2.10	**0.04**	22.4	24.0	120.0	120.0	120.0	120.2	120.0
Min		0.21	0.11	**0.00**	—	—	—	412.80	2.10	**0.04**	22.4	24.0	120.0	120.0	120.0	120.2	120.0
Max		0.21	0.11	**0.00**	—	—	—	412.80	2.10	**0.04**	22.4	24.0	120.0	120.0	120.0	120.2	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.4175
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0108

File 1000_50_2.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,561

		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	180,831.0	**0.00**	**0.00**	**0.00**	—	—	—	2,954.06	2.45	**0.05**	6.1	6.4	120.0	120.0	120.0	120.1	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	2,954.06	2.45	**0.05**	6.1	6.4	120.0	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	2,954.06	2.45	**0.05**	6.1	6.4	120.0	120.0	120.0	120.1	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	2,954.06	2.45	**0.05**	6.1	6.4	120.0	120.0	120.0	120.1	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})	0.4000
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1090
Running time in seconds for reading result file (t^{read})	0.0110

File 1000_50_3.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,511

		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
90.4	11,384,283.0	0.01	0.01	**0.00**	—	—	—	10.44	0.43	**0.07**	44.0	7.9	120.0	120.0	120.0	120.1	120.0
Avg		0.01	0.01	**0.00**	—	—	—	10.44	0.43	**0.07**	44.0	7.9	120.0	120.0	120.0	120.1	120.0
Min		0.01	0.01	**0.00**	—	—	—	10.44	0.43	**0.07**	44.0	7.9	120.0	120.0	120.0	120.1	120.0
Max		0.01	0.01	**0.00**	—	—	—	10.44	0.43	**0.07**	44.0	7.9	120.0	120.0	120.0	120.1	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})	0.3998
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1090
Running time in seconds for reading result file (t^{read})	0.0115

File 1000_50_4.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,372

		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
3.1	322,226.0	0.11	0.01	**0.00**	—	—	—	1,623.96	2.53	**0.05**	8.1	12.1	120.0	120.0	120.0	120.1	120.0
Avg		0.11	0.01	**0.00**	—	—	—	1,623.96	2.53	**0.05**	8.1	12.1	120.0	120.0	120.0	120.1	120.0
Min		0.11	0.01	**0.00**	—	—	—	1,623.96	2.53	**0.05**	8.1	12.1	120.0	120.0	120.0	120.1	120.0
Max		0.11	0.01	**0.00**	—	—	—	1,623.96	2.53	**0.05**	8.1	12.1	120.0	120.0	120.0	120.1	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})	0.4000
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1090
Running time in seconds for reading result file (t^{read})	0.0118

File 1000_50_5.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,281

		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
78.6	9,984,219.0	0.08	0.07	**0.00**	—	—	—	0.07	1.60	**0.01**	42.1	8.9	120.0	120.0	120.0	120.1	120.0
Avg		0.08	0.07	**0.00**	—	—	—	0.07	1.60	**0.01**	42.1	8.9	120.0	120.0	120.0	120.1	120.0
Min		0.08	0.07	**0.00**	—	—	—	0.07	1.60	**0.01**	42.1	8.9	120.0	120.0	120.0	120.1	120.0
Max		0.08	0.07	**0.00**	—	—	—	0.07	1.60	**0.01**	42.1	8.9	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.4016
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0114

File 1000_50_6.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,579

		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
31.8	4,106,261.0	0.12	0.05	**0.00**	—	—	—	0.10	2.45	**0.01**	29.0	14.0	120.0	120.0	120.0	120.1	120.0
Avg		0.12	0.05	**0.00**	—	—	—	0.10	2.45	**0.01**	29.0	14.0	120.0	120.0	120.0	120.1	120.0
Min		0.12	0.05	**0.00**	—	—	—	0.10	2.45	**0.01**	29.0	14.0	120.0	120.0	120.0	120.1	120.0
Max		0.12	0.05	**0.00**	—	—	—	0.10	2.45	**0.01**	29.0	14.0	120.0	120.0	120.0	120.1	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.3989
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0107

File 1000_50_7.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	249,783

		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
82.7	10,498,370.0	0.03	0.01	**0.00**	—	—	—	**0.00**	1.61	**0.01**	42.7	8.8	120.0	120.0	120.0	85.7	120.0
Avg		0.03	0.01	**0.00**	—	—	—	**0.00**	1.61	**0.01**	42.7	8.8	120.0	120.0	120.0	85.7	120.0
Min		0.03	0.01	**0.00**	—	—	—	**0.00**	1.61	**0.01**	42.7	8.8	120.0	120.0	120.0	85.7	120.0
Max		0.03	0.01	**0.00**	—	—	—	**0.00**	1.61	**0.01**	42.7	8.8	120.0	120.0	120.0	85.7	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	6
Running time in seconds for writing input file (t^{write})	0.3974
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1090
Running time in seconds for reading result file (t^{read})	0.0109

File 1000_50_8.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,805

		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
41.1	4,980,251.0	0.14	0.10	**0.00**	—	—	—	149.52	2.74	**0.07**	32.7	14.8	120.0	120.0	120.0	120.1	120.0
Avg		0.14	0.10	**0.00**	—	—	—	149.52	2.74	**0.07**	32.7	14.8	120.0	120.0	120.0	120.1	120.0
Min		0.14	0.10	**0.00**	—	—	—	149.52	2.74	**0.07**	32.7	14.8	120.0	120.0	120.0	120.1	120.0
Max		0.14	0.10	**0.00**	—	—	—	149.52	2.74	**0.07**	32.7	14.8	120.0	120.0	120.0	120.1	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})	0.4153
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0114

File 1000_50_9.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	50.0 %
Edges (m)	250,544

		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
14.2	1,727,861.0	**0.00**	**0.00**	**0.00**	—	—	—	559.68	2.04	**0.07**	19.6	28.9	120.0	120.0	120.0	120.1	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	559.68	2.04	**0.07**	19.6	28.9	120.0	120.0	120.0	120.1	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	559.68	2.04	**0.07**	19.6	28.9	120.0	120.0	120.0	120.1	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	559.68	2.04	**0.07**	19.6	28.9	120.0	120.0	120.0	120.1	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})	0.4146
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0107

File 1000_75_1.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,585

		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
61.9	11,570,056.0	0.08	0.05	**0.00**	—	—	—	60.44	3.40	**0.08**	39.3	11.7	120.0	120.0	120.0	120.4	120.0
Avg		0.08	0.05	**0.00**	—	—	—	60.44	3.40	**0.08**	39.3	11.7	120.0	120.0	120.0	120.4	120.0
Min		0.08	0.05	**0.00**	—	—	—	60.44	3.40	**0.08**	39.3	11.7	120.0	120.0	120.0	120.4	120.0
Max		0.08	0.05	**0.00**	—	—	—	60.44	3.40	**0.08**	39.3	11.7	120.0	120.0	120.0	120.4	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})	0.6127
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1410
Running time in seconds for reading result file (t^{read})	0.0113

File 1000_75_10.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,141

		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	2,507,677.0	0.05	**0.00**	**0.00**	—	—	—	550.30	3.46	**0.06**	18.9	23.4	120.0	120.0	120.0	122.4	120.0
Avg		0.05	**0.00**	**0.00**	—	—	—	550.30	3.46	**0.06**	18.9	23.4	120.0	120.0	120.0	122.4	120.0
Min		0.05	**0.00**	**0.00**	—	—	—	550.30	3.46	**0.06**	18.9	23.4	120.0	120.0	120.0	122.4	120.0
Max		0.05	**0.00**	**0.00**	—	—	—	550.30	3.46	**0.06**	18.9	23.4	120.0	120.0	120.0	122.4	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})	0.5857
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1410
Running time in seconds for reading result file (t^{read})	0.0105

File 1000_75_2.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,350

		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
10.2	1,901,389.0	0.13	0.06	**0.00**	—	—	—	741.55	4.23	**0.06**	16.4	19.2	120.0	120.0	120.0	121.4	120.0
Avg		0.13	0.06	**0.00**	—	—	—	741.55	4.23	**0.06**	16.4	19.2	120.0	120.0	120.0	121.4	120.0
Min		0.13	0.06	**0.00**	—	—	—	741.55	4.23	**0.06**	16.4	19.2	120.0	120.0	120.0	121.4	120.0
Max		0.13	0.06	**0.00**	—	—	—	741.55	4.23	**0.06**	16.4	19.2	120.0	120.0	120.0	121.4	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})	0.6003
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1400
Running time in seconds for reading result file (t^{read})	0.0111

File 1000_75_3.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,416

		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
11.4	2,096,485.0	0.54	**0.00**	**0.00**	—	—	—	716.41	2.45	**0.06**	17.2	16.6	120.0	120.0	120.0	121.0	120.0
Avg		0.54	**0.00**	**0.00**	—	—	—	716.41	2.45	**0.06**	17.2	16.6	120.0	120.0	120.0	121.0	120.0
Min		0.54	**0.00**	**0.00**	—	—	—	716.41	2.45	**0.06**	17.2	16.6	120.0	120.0	120.0	121.0	120.0
Max		0.54	**0.00**	**0.00**	—	—	—	716.41	2.45	**0.06**	17.2	16.6	120.0	120.0	120.0	121.0	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	0.5955
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0104

File 1000_75_4.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,413

		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
39.8	7,305,321.0	0.09	0.06	**0.00**	—	—	—	143.06	4.09	**0.07**	31.4	12.3	120.0	120.0	120.0	121.4	120.0
Avg		0.09	0.06	**0.00**	—	—	—	143.06	4.09	**0.07**	31.4	12.3	120.0	120.0	120.0	121.4	120.0
Min		0.09	0.06	**0.00**	—	—	—	143.06	4.09	**0.07**	31.4	12.3	120.0	120.0	120.0	121.4	120.0
Max		0.09	0.06	**0.00**	—	—	—	143.06	4.09	**0.07**	31.4	12.3	120.0	120.0	120.0	121.4	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})	0.5953
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1410
Running time in seconds for reading result file (t^{read})	0.0110

File 1000_75_5.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,301

		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
73.8	13,970,240.0	0.14	0.11	**0.00**	—	—	—	37.11	2.58	**0.07**	41.0	11.3	120.0	120.0	120.0	124.0	120.0
Avg		0.14	0.11	**0.00**	—	—	—	37.11	2.58	**0.07**	41.0	11.3	120.0	120.0	120.0	124.0	120.0
Min		0.14	0.11	**0.00**	—	—	—	37.11	2.58	**0.07**	41.0	11.3	120.0	120.0	120.0	124.0	120.0
Max		0.14	0.11	**0.00**	—	—	—	37.11	2.58	**0.07**	41.0	11.3	120.0	120.0	120.0	124.0	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})	0.5992
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1410
Running time in seconds for reading result file (t^{read})	0.0109

File 1000_75_6.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,869

		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
65.4	12,288,738.0	0.06	0.01	**0.00**	—	—	—	48.56	3.13	**0.07**	39.5	10.4	120.0	120.0	120.0	122.3	120.0
Avg		0.06	0.01	**0.00**	—	—	—	48.56	3.13	**0.07**	39.5	10.4	120.0	120.0	120.0	122.3	120.0
Min		0.06	0.01	**0.00**	—	—	—	48.56	3.13	**0.07**	39.5	10.4	120.0	120.0	120.0	122.3	120.0
Max		0.06	0.01	**0.00**	—	—	—	48.56	3.13	**0.07**	39.5	10.4	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})	0.5997
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1400
Running time in seconds for reading result file (t^{read})	0.0113

File 1000_75_7.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,172

		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
5.7	1,095,837.0	0.69	**0.00**	**0.00**	—	—	—	1,400.82	3.59	**0.04**	12.6	29.9	120.0	120.0	120.0	120.2	120.0
Avg		0.69	**0.00**	**0.00**	—	—	—	1,400.82	3.59	**0.04**	12.6	29.9	120.0	120.0	120.0	120.2	120.0
Min		0.69	**0.00**	**0.00**	—	—	—	1,400.82	3.59	**0.04**	12.6	29.9	120.0	120.0	120.0	120.2	120.0
Max		0.69	**0.00**	**0.00**	—	—	—	1,400.82	3.59	**0.04**	12.6	29.9	120.0	120.0	120.0	120.2	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.6245
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1400
Running time in seconds for reading result file (t^{read})	0.0115

File 1000_75_8.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,583

		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
29.5	5,575,813.0	0.12	0.07	**0.00**	—	—	—	247.32	3.11	**0.07**	28.8	13.6	120.0	120.0	120.0	120.2	120.0
Avg		0.12	0.07	**0.00**	—	—	—	247.32	3.11	**0.07**	28.8	13.6	120.0	120.0	120.0	120.2	120.0
Min		0.12	0.07	**0.00**	—	—	—	247.32	3.11	**0.07**	28.8	13.6	120.0	120.0	120.0	120.2	120.0
Max		0.12	0.07	**0.00**	—	—	—	247.32	3.11	**0.07**	28.8	13.6	120.0	120.0	120.0	120.2	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})	0.6284
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1250
Running time in seconds for reading result file (t^{read})	0.0113

File 1000_75_9.txt

Property of graph	Value
Nodes (n)	1,000
Density (Δ)	75.0 %
Edges (m)	375,002

		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
4.3	695,774.0	0.42	0.21	**0.00**	—	—	—	1,910.33	3.42	**0.06**	10.1	7.8	120.0	120.0	120.0	122.5	120.0
Avg		0.42	0.21	**0.00**	—	—	—	1,910.33	3.42	**0.06**	10.1	7.8	120.0	120.0	120.0	122.5	120.0
Min		0.42	0.21	**0.00**	—	—	—	1,910.33	3.42	**0.06**	10.1	7.8	120.0	120.0	120.0	122.5	120.0
Max		0.42	0.21	**0.00**	—	—	—	1,910.33	3.42	**0.06**	10.1	7.8	120.0	120.0	120.0	122.5	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	2
Running time in seconds for writing input file (t^{write})	0.6147
Running time in seconds for executing parametric cut procedure (t^{cut})	0.1410
Running time in seconds for reading result file (t^{read})	0.0107

File 2000_100_1.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
38.6	37,929,909.0	0.02	0.01	**0.00**	—	—	—	155.76	9.12	**0.32**	120.1	46.0	120.0	120.0	120.0	122.6	120.0
Avg		0.02	0.01	**0.00**	—	—	—	155.76	9.12	**0.32**	120.1	46.0	120.0	120.0	120.0	122.6	120.0
Min		0.02	0.01	**0.00**	—	—	—	155.76	9.12	**0.32**	120.1	46.0	120.0	120.0	120.0	122.6	120.0
Max		0.02	0.01	**0.00**	—	—	—	155.76	9.12	**0.32**	120.1	46.0	120.0	120.0	120.0	122.6	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})	3.3970
Running time in seconds for executing parametric cut procedure (t^{cut})	0.8280
Running time in seconds for reading result file (t^{read})	0.0130

File 2000_100_10.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
5.1	4,923,559.0	0.21	0.17	**0.00**	—	—	—	1,647.84	8.98	**0.28**	81.4	69.3	120.0	120.0	120.0	123.7	120.0
Avg		0.21	0.17	**0.00**	—	—	—	1,647.84	8.98	**0.28**	81.4	69.3	120.0	120.0	120.0	123.7	120.0
Min		0.21	0.17	**0.00**	—	—	—	1,647.84	8.98	**0.28**	81.4	69.3	120.0	120.0	120.0	123.7	120.0
Max		0.21	0.17	**0.00**	—	—	—	1,647.84	8.98	**0.28**	81.4	69.3	120.0	120.0	120.0	123.7	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})	3.3938
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6400
Running time in seconds for reading result file (t^{read})	0.0128

File 2000_100_2.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
34.4	33,648,041.0	0.08	0.08	**0.00**	—	—	—	183.13	9.40	**0.36**	120.1	62.2	120.0	120.0	120.0	122.8	120.0
Avg		0.08	0.08	**0.00**	—	—	—	183.13	9.40	**0.36**	120.1	62.2	120.0	120.0	120.0	122.8	120.0
Min		0.08	0.08	**0.00**	—	—	—	183.13	9.40	**0.36**	120.1	62.2	120.0	120.0	120.0	122.8	120.0
Max		0.08	0.08	**0.00**	—	—	—	183.13	9.40	**0.36**	120.1	62.2	120.0	120.0	120.0	122.8	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})	3.2034
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6880
Running time in seconds for reading result file (t^{read})	0.0125

File 2000_100_3.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
30.3	29,952,019.0	0.06	0.05	**0.00**	—	—	—	212.15	9.51	**0.31**	120.0	49.5	120.0	120.0	120.0	122.7	120.0
Avg		0.06	0.05	**0.00**	—	—	—	212.15	9.51	**0.31**	120.0	49.5	120.0	120.0	120.0	122.7	120.0
Min		0.06	0.05	**0.00**	—	—	—	212.15	9.51	**0.31**	120.0	49.5	120.0	120.0	120.0	122.7	120.0
Max		0.06	0.05	**0.00**	—	—	—	212.15	9.51	**0.31**	120.0	49.5	120.0	120.0	120.0	122.7	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})	3.3481
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5780
Running time in seconds for reading result file (t^{read})	0.0121

File 2000_100_4.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
27.0	26,949,268.0	0.05	0.04	**0.00**	—	—	—	297.97	8.77	**0.31**	120.1	70.5	120.0	120.0	120.0	123.2	120.0
Avg		0.05	0.04	**0.00**	—	—	—	297.97	8.77	**0.31**	120.1	70.5	120.0	120.0	120.0	123.2	120.0
Min		0.05	0.04	**0.00**	—	—	—	297.97	8.77	**0.31**	120.1	70.5	120.0	120.0	120.0	123.2	120.0
Max		0.05	0.04	**0.00**	—	—	—	297.97	8.77	**0.31**	120.1	70.5	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})	3.3934
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0128

File 2000_100_5.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
23.1	22,041,715.0	0.11	0.09	**0.00**	—	—	—	305.92	8.62	**0.31**	120.0	78.6	120.0	120.0	120.0	121.0	120.0
Avg		0.11	0.09	**0.00**	—	—	—	305.92	8.62	**0.31**	120.0	78.6	120.0	120.0	120.0	121.0	120.0
Min		0.11	0.09	**0.00**	—	—	—	305.92	8.62	**0.31**	120.0	78.6	120.0	120.0	120.0	121.0	120.0
Max		0.11	0.09	**0.00**	—	—	—	305.92	8.62	**0.31**	120.0	78.6	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})	3.2812
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6560
Running time in seconds for reading result file (t^{read})	0.0129

File 2000_100_6.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
19.5	18,868,887.0	0.06	0.06	**0.00**	—	—	—	366.21	9.91	**0.30**	120.0	75.0	120.0	120.0	120.0	122.1	120.0
Avg		0.06	0.06	**0.00**	—	—	—	366.21	9.91	**0.30**	120.0	75.0	120.0	120.0	120.0	122.1	120.0
Min		0.06	0.06	**0.00**	—	—	—	366.21	9.91	**0.30**	120.0	75.0	120.0	120.0	120.0	122.1	120.0
Max		0.06	0.06	**0.00**	—	—	—	366.21	9.91	**0.30**	120.0	75.0	120.0	120.0	120.0	122.1	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})	3.3656
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0123

File 2000_100_7.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
16.3	15,850,597.0	0.07	0.05	**0.00**	—	—	—	447.37	8.99	**0.30**	120.0	81.4	120.0	120.0	120.0	120.8	120.0
Avg		0.07	0.05	**0.00**	—	—	—	447.37	8.99	**0.30**	120.0	81.4	120.0	120.0	120.0	120.8	120.0
Min		0.07	0.05	**0.00**	—	—	—	447.37	8.99	**0.30**	120.0	81.4	120.0	120.0	120.0	120.8	120.0
Max		0.07	0.05	**0.00**	—	—	—	447.37	8.99	**0.30**	120.0	81.4	120.0	120.0	120.0	120.8	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})	3.2670
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6720
Running time in seconds for reading result file (t^{read})	0.0128

File 2000_100_8.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
13.3	13,628,967.0	0.10	0.08	**0.00**	—	—	—	632.35	8.25	**0.23**	120.1	73.2	120.0	120.0	120.0	122.4	120.0
Avg		0.10	0.08	**0.00**	—	—	—	632.35	8.25	**0.23**	120.1	73.2	120.0	120.0	120.0	122.4	120.0
Min		0.10	0.08	**0.00**	—	—	—	632.35	8.25	**0.23**	120.1	73.2	120.0	120.0	120.0	122.4	120.0
Max		0.10	0.08	**0.00**	—	—	—	632.35	8.25	**0.23**	120.1	73.2	120.0	120.0	120.0	122.4	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})	3.2926
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5620
Running time in seconds for reading result file (t^{read})	0.0132

File 2000_100_9.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	100.0 %
Edges (m)	2,001,000

		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
8.9	8,394,562.0	0.15	0.12	**0.00**	—	—	—	794.37	8.91	**0.29**	110.6	69.6	120.0	120.0	120.0	122.1	120.0
Avg		0.15	0.12	**0.00**	—	—	—	794.37	8.91	**0.29**	110.6	69.6	120.0	120.0	120.0	122.1	120.0
Min		0.15	0.12	**0.00**	—	—	—	794.37	8.91	**0.29**	110.6	69.6	120.0	120.0	120.0	122.1	120.0
Max		0.15	0.12	**0.00**	—	—	—	794.37	8.91	**0.29**	110.6	69.6	120.0	120.0	120.0	122.1	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})	3.2888
Running time in seconds for executing parametric cut procedure (t^{cut})	0.6250
Running time in seconds for reading result file (t^{read})	0.0133

File 2000_25_1.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,703

		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
21.0	5,268,188.0	**0.00**	**0.00**	**0.00**	—	—	—	380.74	3.19	**0.31**	120.1	72.9	120.0	120.0	120.0	126.2	121.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	380.74	3.19	**0.31**	120.1	72.9	120.0	120.0	120.0	126.2	121.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	380.74	3.19	**0.31**	120.1	72.9	120.0	120.0	120.0	126.2	121.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	380.74	3.19	**0.31**	120.1	72.9	120.0	120.0	120.0	126.2	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	5
Running time in seconds for writing input file (t^{write})	0.8478
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2660
Running time in seconds for reading result file (t^{read})	0.0124

File 2000_25_10.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,435

		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
0.6	139,236.0	**0.00**	**0.00**	**0.00**	—	—	—	4,264.76	1.01	**0.25**	23.6	25.5	120.0	120.0	120.0	120.6	121.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	4,264.76	1.01	**0.25**	23.6	25.5	120.0	120.0	120.0	120.6	121.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	4,264.76	1.01	**0.25**	23.6	25.5	120.0	120.0	120.0	120.6	121.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	4,264.76	1.01	**0.25**	23.6	25.5	120.0	120.0	120.0	120.6	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.8358
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2650
Running time in seconds for reading result file (t^{read})	0.0161

File 2000_25_2.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	501,096

		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
52.3	13,293,836.0	0.11	**0.00**	0.01	—	—	—	86.53	3.28	**0.13**	120.0	42.0	120.0	120.0	120.0	120.2	121.0
Avg		0.11	**0.00**	0.01	—	—	—	86.53	3.28	**0.13**	120.0	42.0	120.0	120.0	120.0	120.2	121.0
Min		0.11	**0.00**	0.01	—	—	—	86.53	3.28	**0.13**	120.0	42.0	120.0	120.0	120.0	120.2	121.0
Max		0.11	**0.00**	0.01	—	—	—	86.53	3.28	**0.13**	120.0	42.0	120.0	120.0	120.0	120.2	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.8476
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2660
Running time in seconds for reading result file (t^{read})	0.0131

File 2000_25_3.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	499,850

		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
22.2	5,500,433.0	0.12	**0.00**	**0.00**	—	—	—	288.58	3.44	**0.31**	120.0	55.3	120.0	120.0	120.0	120.3	121.0
Avg		0.12	**0.00**	**0.00**	—	—	—	288.58	3.44	**0.31**	120.0	55.3	120.0	120.0	120.0	120.3	121.0
Min		0.12	**0.00**	**0.00**	—	—	—	288.58	3.44	**0.31**	120.0	55.3	120.0	120.0	120.0	120.3	121.0
Max		0.12	**0.00**	**0.00**	—	—	—	288.58	3.44	**0.31**	120.0	55.3	120.0	120.0	120.0	120.3	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.8353
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2810
Running time in seconds for reading result file (t^{read})	0.0127

File 2000_25_4.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	501,171

		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
58.1	14,625,118.0	0.01	**0.00**	**0.00**	—	—	—	65.69	3.66	**0.32**	120.0	42.6	120.0	120.0	120.0	122.7	121.0
Avg		0.01	**0.00**	**0.00**	—	—	—	65.69	3.66	**0.32**	120.0	42.6	120.0	120.0	120.0	122.7	121.0
Min		0.01	**0.00**	**0.00**	—	—	—	65.69	3.66	**0.32**	120.0	42.6	120.0	120.0	120.0	122.7	121.0
Max		0.01	**0.00**	**0.00**	—	—	—	65.69	3.66	**0.32**	120.0	42.6	120.0	120.0	120.0	122.7	121.0

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})	0.8376
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2810
Running time in seconds for reading result file (t^{read})	0.0131

File 2000_25_5.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	502,126

		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
24.2	5,975,751.0	0.15	**0.00**	**0.00**	—	—	—	300.40	4.10	**0.29**	120.0	56.2	120.0	120.0	120.0	121.9	121.0
Avg		0.15	**0.00**	**0.00**	—	—	—	300.40	4.10	**0.29**	120.0	56.2	120.0	120.0	120.0	121.9	121.0
Min		0.15	**0.00**	**0.00**	—	—	—	300.40	4.10	**0.29**	120.0	56.2	120.0	120.0	120.0	121.9	121.0
Max		0.15	**0.00**	**0.00**	—	—	—	300.40	4.10	**0.29**	120.0	56.2	120.0	120.0	120.0	121.9	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.8230
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2810
Running time in seconds for reading result file (t^{read})	0.0142

File 2000_25_6.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,200

		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
17.9	4,491,691.0	**0.00**	**0.00**	**0.00**	—	—	—	434.19	2.45	**0.29**	120.0	50.4	120.0	120.0	120.0	122.5	120.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	434.19	2.45	**0.29**	120.0	50.4	120.0	120.0	120.0	122.5	120.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	434.19	2.45	**0.29**	120.0	50.4	120.0	120.0	120.0	122.5	120.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	434.19	2.45	**0.29**	120.0	50.4	120.0	120.0	120.0	122.5	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})	0.8130
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2650
Running time in seconds for reading result file (t^{read})	0.0119

File 2000_25_7.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,571

		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	6,388,756.0	0.01	**0.00**	**0.00**	—	—	—	295.00	3.27	**0.21**	120.0	42.0	120.0	120.0	120.0	120.4	121.0
Avg		0.01	**0.00**	**0.00**	—	—	—	295.00	3.27	**0.21**	120.0	42.0	120.0	120.0	120.0	120.4	121.0
Min		0.01	**0.00**	**0.00**	—	—	—	295.00	3.27	**0.21**	120.0	42.0	120.0	120.0	120.0	120.4	121.0
Max		0.01	**0.00**	**0.00**	—	—	—	295.00	3.27	**0.21**	120.0	42.0	120.0	120.0	120.0	120.4	121.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	4
Running time in seconds for writing input file (t^{write})	0.8146
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2500
Running time in seconds for reading result file (t^{read})	0.0122

File 2000_25_8.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	499,664

		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
47.6	11,769,866.0	**0.00**	**0.00**	**0.00**	—	—	—	97.34	4.07	**0.32**	120.0	44.0	120.0	120.0	120.0	120.4	121.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	97.34	4.07	**0.32**	120.0	44.0	120.0	120.0	120.0	120.4	121.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	97.34	4.07	**0.32**	120.0	44.0	120.0	120.0	120.0	120.4	121.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	97.34	4.07	**0.32**	120.0	44.0	120.0	120.0	120.0	120.4	121.0

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})	0.8488
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2660
Running time in seconds for reading result file (t^{read})	0.0132

File 2000_25_9.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	25.0 %
Edges (m)	500,165

		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	10,960,313.0	**0.00**	**0.00**	**0.00**	—	—	—	129.47	3.94	**0.31**	120.1	44.1	120.0	120.0	120.0	126.3	121.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	129.47	3.94	**0.31**	120.1	44.1	120.0	120.0	120.0	126.3	121.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	129.47	3.94	**0.31**	120.1	44.1	120.0	120.0	120.0	126.3	121.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	129.47	3.94	**0.31**	120.1	44.1	120.0	120.0	120.0	126.3	121.0

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})	0.8183
Running time in seconds for executing parametric cut procedure (t^{cut})	0.2650
Running time in seconds for reading result file (t^{read})	0.0123

File 2000_50_1.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,916

		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
15.1	7,070,736.0	0.19	0.16	**0.00**	—	—	—	481.80	5.65	**0.29**	120.0	55.6	120.0	120.0	120.0	121.9	122.0
Avg		0.19	0.16	**0.00**	—	—	—	481.80	5.65	**0.29**	120.0	55.6	120.0	120.0	120.0	121.9	122.0
Min		0.19	0.16	**0.00**	—	—	—	481.80	5.65	**0.29**	120.0	55.6	120.0	120.0	120.0	121.9	122.0
Max		0.19	0.16	**0.00**	—	—	—	481.80	5.65	**0.29**	120.0	55.6	120.0	120.0	120.0	121.9	122.0

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})	1.6399
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4060
Running time in seconds for reading result file (t^{read})	0.0121

File 2000_50_10.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,850

		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
49.0	24,747,047.0	**0.00**	**0.00**	**0.00**	—	—	—	102.68	5.77	**0.32**	120.0	45.3	120.0	120.0	120.0	124.2	122.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	102.68	5.77	**0.32**	120.0	45.3	120.0	120.0	120.0	124.2	122.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	102.68	5.77	**0.32**	120.0	45.3	120.0	120.0	120.0	124.2	122.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	102.68	5.77	**0.32**	120.0	45.3	120.0	120.0	120.0	124.2	122.0

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})	1.6945
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3590
Running time in seconds for reading result file (t^{read})	0.0133

File 2000_50_2.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,567

		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
25.2	12,587,545.0	0.05	0.02	**0.00**	—	—	—	269.01	6.02	**0.30**	120.1	80.0	120.0	120.0	120.0	121.2	122.0
Avg		0.05	0.02	**0.00**	—	—	—	269.01	6.02	**0.30**	120.1	80.0	120.0	120.0	120.0	121.2	122.0
Min		0.05	0.02	**0.00**	—	—	—	269.01	6.02	**0.30**	120.1	80.0	120.0	120.0	120.0	121.2	122.0
Max		0.05	0.02	**0.00**	—	—	—	269.01	6.02	**0.30**	120.1	80.0	120.0	120.0	120.0	121.2	122.0

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})	1.6326
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3750
Running time in seconds for reading result file (t^{read})	0.0127

File 2000_50_3.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,729

		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
53.6	27,268,336.0	**0.00**	**0.00**	**0.00**	—	—	—	79.32	5.34	**0.15**	120.0	44.3	120.0	120.0	120.0	120.5	122.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	79.32	5.34	**0.15**	120.0	44.3	120.0	120.0	120.0	120.5	122.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	79.32	5.34	**0.15**	120.0	44.3	120.0	120.0	120.0	120.5	122.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	79.32	5.34	**0.15**	120.0	44.3	120.0	120.0	120.0	120.5	122.0

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})	1.6968
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3590
Running time in seconds for reading result file (t^{read})	0.0138

File 2000_50_4.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	999,768

		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
35.2	17,754,434.0	0.08	0.06	**0.00**	—	—	—	176.14	5.19	**0.30**	120.1	53.0	120.0	120.0	120.0	122.0	122.0
Avg		0.08	0.06	**0.00**	—	—	—	176.14	5.19	**0.30**	120.1	53.0	120.0	120.0	120.0	122.0	122.0
Min		0.08	0.06	**0.00**	—	—	—	176.14	5.19	**0.30**	120.1	53.0	120.0	120.0	120.0	122.0	122.0
Max		0.08	0.06	**0.00**	—	—	—	176.14	5.19	**0.30**	120.1	53.0	120.0	120.0	120.0	122.0	122.0

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})	1.6383
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4530
Running time in seconds for reading result file (t^{read})	0.0126

File 2000_50_5.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,197

		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
33.8	16,805,225.0	0.10	0.09	**0.00**	—	—	—	195.98	6.54	**0.32**	120.1	57.1	120.0	120.0	120.0	124.1	122.0
Avg		0.10	0.09	**0.00**	—	—	—	195.98	6.54	**0.32**	120.1	57.1	120.0	120.0	120.0	124.1	122.0
Min		0.10	0.09	**0.00**	—	—	—	195.98	6.54	**0.32**	120.1	57.1	120.0	120.0	120.0	124.1	122.0
Max		0.10	0.09	**0.00**	—	—	—	195.98	6.54	**0.32**	120.1	57.1	120.0	120.0	120.0	124.1	122.0

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})	1.6924
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3910
Running time in seconds for reading result file (t^{read})	0.0134

File 2000_50_6.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	998,486

		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
45.8	23,076,155.0	0.05	0.04	**0.00**	—	—	—	128.37	5.87	**0.30**	120.1	45.8	120.0	120.0	120.0	121.2	122.0
Avg		0.05	0.04	**0.00**	—	—	—	128.37	5.87	**0.30**	120.1	45.8	120.0	120.0	120.0	121.2	122.0
Min		0.05	0.04	**0.00**	—	—	—	128.37	5.87	**0.30**	120.1	45.8	120.0	120.0	120.0	121.2	122.0
Max		0.05	0.04	**0.00**	—	—	—	128.37	5.87	**0.30**	120.1	45.8	120.0	120.0	120.0	121.2	122.0

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})	1.6302
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3600
Running time in seconds for reading result file (t^{read})	0.0125

File 2000_50_7.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,654

		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
56.9	28,757,800.0	0.08	0.06	**0.00**	—	—	—	72.55	5.26	**0.31**	120.1	40.9	120.0	120.0	120.0	121.3	122.0
Avg		0.08	0.06	**0.00**	—	—	—	72.55	5.26	**0.31**	120.1	40.9	120.0	120.0	120.0	121.3	122.0
Min		0.08	0.06	**0.00**	—	—	—	72.55	5.26	**0.31**	120.1	40.9	120.0	120.0	120.0	121.3	122.0
Max		0.08	0.06	**0.00**	—	—	—	72.55	5.26	**0.31**	120.1	40.9	120.0	120.0	120.0	121.3	122.0

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})	1.6739
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3750
Running time in seconds for reading result file (t^{read})	0.0120

File 2000_50_8.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,079

		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
3.3	1,580,242.0	0.12	0.01	**0.00**	—	—	—	2,599.75	5.03	**0.28**	64.1	40.9	120.0	120.0	120.0	120.4	122.0
Avg		0.12	0.01	**0.00**	—	—	—	2,599.75	5.03	**0.28**	64.1	40.9	120.0	120.0	120.0	120.4	122.0
Min		0.12	0.01	**0.00**	—	—	—	2,599.75	5.03	**0.28**	64.1	40.9	120.0	120.0	120.0	120.4	122.0
Max		0.12	0.01	**0.00**	—	—	—	2,599.75	5.03	**0.28**	64.1	40.9	120.0	120.0	120.0	120.4	122.0

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})	1.6956
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3590
Running time in seconds for reading result file (t^{read})	0.0131

File 2000_50_9.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	50.0 %
Edges (m)	1,000,626

		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
52.9	26,523,791.0	0.04	0.02	**0.00**	—	—	—	84.23	6.22	**0.31**	120.0	41.8	120.0	120.0	120.0	123.1	122.0
Avg		0.04	0.02	**0.00**	—	—	—	84.23	6.22	**0.31**	120.0	41.8	120.0	120.0	120.0	123.1	122.0
Min		0.04	0.02	**0.00**	—	—	—	84.23	6.22	**0.31**	120.0	41.8	120.0	120.0	120.0	123.1	122.0
Max		0.04	0.02	**0.00**	—	—	—	84.23	6.22	**0.31**	120.0	41.8	120.0	120.0	120.0	123.1	122.0

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})	1.6589
Running time in seconds for executing parametric cut procedure (t^{cut})	0.3590
Running time in seconds for reading result file (t^{read})	0.0130

File 2000_75_1.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,501,595

		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
33.9	25,121,998.0	0.06	0.05	**0.00**	—	—	—	190.86	8.21	**0.30**	120.0	47.3	120.0	120.0	120.0	121.4	123.0
Avg		0.06	0.05	**0.00**	—	—	—	190.86	8.21	**0.30**	120.0	47.3	120.0	120.0	120.0	121.4	123.0
Min		0.06	0.05	**0.00**	—	—	—	190.86	8.21	**0.30**	120.0	47.3	120.0	120.0	120.0	121.4	123.0
Max		0.06	0.05	**0.00**	—	—	—	190.86	8.21	**0.30**	120.0	47.3	120.0	120.0	120.0	121.4	123.0

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})	2.4317
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5310
Running time in seconds for reading result file (t^{read})	0.0128

File 2000_75_10.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,501,269

		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
11.3	7,815,755.0	0.14	0.12	**0.00**	—	—	—	669.36	7.34	**0.29**	119.3	61.2	120.0	120.0	120.0	121.3	120.0
Avg		0.14	0.12	**0.00**	—	—	—	669.36	7.34	**0.29**	119.3	61.2	120.0	120.0	120.0	121.3	120.0
Min		0.14	0.12	**0.00**	—	—	—	669.36	7.34	**0.29**	119.3	61.2	120.0	120.0	120.0	121.3	120.0
Max		0.14	0.12	**0.00**	—	—	—	669.36	7.34	**0.29**	119.3	61.2	120.0	120.0	120.0	121.3	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})	2.5461
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5320
Running time in seconds for reading result file (t^{read})	0.0124

File 2000_75_2.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,785

		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
17.3	12,664,670.0	0.08	0.06	**0.00**	—	—	—	405.56	7.42	**0.29**	120.1	67.1	120.0	120.0	120.0	122.1	120.0
Avg		0.08	0.06	**0.00**	—	—	—	405.56	7.42	**0.29**	120.1	67.1	120.0	120.0	120.0	122.1	120.0
Min		0.08	0.06	**0.00**	—	—	—	405.56	7.42	**0.29**	120.1	67.1	120.0	120.0	120.0	122.1	120.0
Max		0.08	0.06	**0.00**	—	—	—	405.56	7.42	**0.29**	120.1	67.1	120.0	120.0	120.0	122.1	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})	2.4359
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5000
Running time in seconds for reading result file (t^{read})	0.0124

File 2000_75_3.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,484

		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
58.8	43,943,994.0	0.02	0.01	**0.00**	—	—	—	71.70	6.36	**0.31**	120.1	41.2	120.0	120.0	120.0	122.2	120.0
Avg		0.02	0.01	**0.00**	—	—	—	71.70	6.36	**0.31**	120.1	41.2	120.0	120.0	120.0	122.2	120.0
Min		0.02	0.01	**0.00**	—	—	—	71.70	6.36	**0.31**	120.1	41.2	120.0	120.0	120.0	122.2	120.0
Max		0.02	0.01	**0.00**	—	—	—	71.70	6.36	**0.31**	120.1	41.2	120.0	120.0	120.0	122.2	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})	2.4321
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5470
Running time in seconds for reading result file (t^{read})	0.0123

File 2000_75_4.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,758

		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
49.3	37,496,613.0	0.03	0.01	**0.00**	—	—	—	98.63	7.40	**0.31**	120.1	40.7	120.0	120.0	120.0	120.7	120.0
Avg		0.03	0.01	**0.00**	—	—	—	98.63	7.40	**0.31**	120.1	40.7	120.0	120.0	120.0	120.7	120.0
Min		0.03	0.01	**0.00**	—	—	—	98.63	7.40	**0.31**	120.1	40.7	120.0	120.0	120.0	120.7	120.0
Max		0.03	0.01	**0.00**	—	—	—	98.63	7.40	**0.31**	120.1	40.7	120.0	120.0	120.0	120.7	120.0

QKBP is the contribution in this paper

QKBP-specific information	Value
Number of breakpoints	3
Running time in seconds for writing input file (t^{write})	2.5309
Running time in seconds for executing parametric cut procedure (t^{cut})	0.4690
Running time in seconds for reading result file (t^{read})	0.0140

File 2000_75_5.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,518

		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
32.8	24,834,948.0	0.10	0.07	**0.00**	—	—	—	204.69	8.17	**0.29**	120.1	64.8	120.0	120.0	120.0	122.6	122.0
Avg		0.10	0.07	**0.00**	—	—	—	204.69	8.17	**0.29**	120.1	64.8	120.0	120.0	120.0	122.6	122.0
Min		0.10	0.07	**0.00**	—	—	—	204.69	8.17	**0.29**	120.1	64.8	120.0	120.0	120.0	122.6	122.0
Max		0.10	0.07	**0.00**	—	—	—	204.69	8.17	**0.29**	120.1	64.8	120.0	120.0	120.0	122.6	122.0

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})	2.4351
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5630
Running time in seconds for reading result file (t^{read})	0.0122

File 2000_75_6.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,499,898

		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
59.9	45,137,758.0	**0.00**	**0.00**	**0.00**	—	—	—	69.60	5.63	**0.31**	120.0	45.4	120.0	120.0	120.0	121.5	122.0
Avg		**0.00**	**0.00**	**0.00**	—	—	—	69.60	5.63	**0.31**	120.0	45.4	120.0	120.0	120.0	121.5	122.0
Min		**0.00**	**0.00**	**0.00**	—	—	—	69.60	5.63	**0.31**	120.0	45.4	120.0	120.0	120.0	121.5	122.0
Max		**0.00**	**0.00**	**0.00**	—	—	—	69.60	5.63	**0.31**	120.0	45.4	120.0	120.0	120.0	121.5	122.0

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})	2.4396
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5000
Running time in seconds for reading result file (t^{read})	0.0121

File 2000_75_7.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,407

		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
33.8	25,502,608.0	0.03	0.01	**0.00**	—	—	—	179.08	8.33	**0.31**	120.1	41.4	120.0	120.0	120.0	121.2	122.0
Avg		0.03	0.01	**0.00**	—	—	—	179.08	8.33	**0.31**	120.1	41.4	120.0	120.0	120.0	121.2	122.0
Min		0.03	0.01	**0.00**	—	—	—	179.08	8.33	**0.31**	120.1	41.4	120.0	120.0	120.0	121.2	122.0
Max		0.03	0.01	**0.00**	—	—	—	179.08	8.33	**0.31**	120.1	41.4	120.0	120.0	120.0	121.2	122.0

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})	2.4551
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5000
Running time in seconds for reading result file (t^{read})	0.0129

File 2000_75_8.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,500,569

		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
13.7	10,067,892.0	0.04	0.01	**0.00**	—	—	—	655.28	7.54	**0.29**	120.0	74.7	120.0	120.0	120.0	121.4	120.0
Avg		0.04	0.01	**0.00**	—	—	—	655.28	7.54	**0.29**	120.0	74.7	120.0	120.0	120.0	121.4	120.0
Min		0.04	0.01	**0.00**	—	—	—	655.28	7.54	**0.29**	120.0	74.7	120.0	120.0	120.0	121.4	120.0
Max		0.04	0.01	**0.00**	—	—	—	655.28	7.54	**0.29**	120.0	74.7	120.0	120.0	120.0	121.4	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})	2.4237
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5160
Running time in seconds for reading result file (t^{read})	0.0126

File 2000_75_9.txt

Property of graph	Value
Nodes (n)	2,000
Density (Δ)	75.0 %
Edges (m)	1,501,125

		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
19.3	14,177,079.0	0.16	0.11	**0.00**	—	—	—	401.50	7.44	**0.30**	120.1	118.6	120.0	120.0	120.0	120.7	120.0
Avg		0.16	0.11	**0.00**	—	—	—	401.50	7.44	**0.30**	120.1	118.6	120.0	120.0	120.0	120.7	120.0
Min		0.16	0.11	**0.00**	—	—	—	401.50	7.44	**0.30**	120.1	118.6	120.0	120.0	120.0	120.7	120.0
Max		0.16	0.11	**0.00**	—	—	—	401.50	7.44	**0.30**	120.1	118.6	120.0	120.0	120.0	120.7	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})	2.4366
Running time in seconds for executing parametric cut procedure (t^{cut})	0.5310
Running time in seconds for reading result file (t^{read})	0.0127