

# PUBLICATIONS

## 1 Articles acceptés ou parus dans des revues avec comité d'arbitrage

1. T. Dan, A. Lodi and P. Marcotte  
“An exact algorithmic framework for a class of mixed-integer programs with equilibrium constraints”  
*Forthcoming, SIAM Journal on Optimization*
2. M. Zimmermann, E. Frejinger and P. Marcotte  
“A strategic Markovian traffic equilibrium model for capacitated networks”  
*Forthcoming, Transportation Science*
3. T. Dan, A. Lodi and P. Marcotte  
“Joint location and pricing within a user-optimized environment”  
*EURO Journal on Computational Optimization* **8** (2020) 61–84
4. T. Dan and P. Marcotte  
“Competitive facility location with selfish users and queues”  
*Operations Research* **67** (2019) 479–497
5. A. Kamgaing Kuiteing, P. Marcotte and G. Savard  
“Pricing and revenue maximization over a multicommodity transportation network: the nonlinear demand case”  
*Computational Optimization and Applications* **71** (2018) 641–671
6. M. Carvalho, A. Lodi and P. Marcotte  
“A polynomial algorithm for a continuous bilevel knapsack problem”  
*Operations Research Letters* **46** (2018) 185–188
7. M. Hosseinalifam, P. Marcotte and G. Savard  
“A new bid price approach to dynamic resource allocation in network revenue management”  
*European Journal of Operations Research* **255** (2016) 142–150
8. A. Kamgaing Kuiteing, P. Marcotte and G. Savard  
“Network pricing of congestion-free networks: the elastic and linear demand case”  
*Transportation Science* **51** (2016) 791–806
9. S. Afsar, L. Brotcorne, P. Marcotte and G. Savard  
“Achieving an optimal trade-off between revenue and energy peak within a smart grid environment”  
*Renewable Energy* **91** (2016) 293–301
10. M. Hosseinalifam, G. Savard and P. Marcotte  
“Computing booking limits under a non-parametric demand model: A mathematical programming approach”  
*Journal of Revenue and Pricing Management* **15** (2016) 170–184
11. F. Gilbert, M. Anjos, P. Marcotte and G. Savard  
“Optimal design of bilateral contracts for energy procurement”  
*European Journal of Operational Research* **246** (2015) 641–650
12. M. Hosseinalifam, P. Marcotte and G. Savard  
“Network capacity control under a nonparametric demand choice model”  
*Operations Research Letters* **43** (2015) 461–466

13. M. Nasri, F. Bastin and P. Marcotte  
 “Quantifying the social welfare loss in moral hazard models”  
*European Journal of Operational Research* **245** (2015) 226–235
14. S. Sharif Azadeh, P. Marcotte and G. Savard  
 “A Non-Parametric Approach to Demand Forecasting in Revenue Management”  
*Computers and Operations Research* **63** (2015) 23–31
15. F. Gilbert, P. Marcotte and G. Savard  
 “A numerical study of the logit network pricing problem”  
*Transportation Science* **43** (2015) 706–719
16. S. Sharif Azadeh, P. Marcotte and G. Savard  
 “A taxonomy of demand uncensoring methods in revenue management”  
*Journal of Revenue and Pricing Management* **13** (2014) 440–456
17. J. Gu erin, P. Marcotte and G. Savard  
 “ $L^p$  Approximation of Univariate Concave Functions”  
*JOTA* **161** (2014) 490–505
18. F. Gilbert, P. Marcotte and G. Savard  
 “Logit network pricing”  
*Computers and Operations Research* **41** (2014) 291–298
19. F. Gilbert, P. Marcotte and G. Savard  
 “Mixed-logit network pricing”  
*Computational Optimization and Applications* **57** (2014) 105–127
20. S. Mirza Alizadeh, P. Marcotte and G. Savard  
 “Two-stage stochastic bilevel programming over a transportation network”  
*Transportation Research B* **58** (2013) 92–105
21. P. Marcotte, G. Savard and A. Schoeb  
 “A hybrid approach to the solution of a pricing model with continuous demand segmentation”  
*EURO Journal on Computational Optimization* **1** (2013) 117–142
22. C.O. Pieume, P. Marcotte, L.P. Fotso and P. Siarry  
 “Generating Efficient Solutions in Bilevel Multi-Objective Programming Problems”  
*American Journal of Operations Research* **3** (2013) 289–298
23. L. Brotcorne, F. Cirinei, P. Marcotte and G. Savard  
 “A Tabu search algorithm for the network pricing problem”  
*Computers and Operations Research* **39** (2012) 2603–2611
24. L. Brotcorne, F. Cirinei, P. Marcotte and G. Savard  
 “An Exact Algorithm for the Network Pricing Problem”  
*Discrete Optimization* **8** (2011) 246–258
25. C.O. Pieume, P. Marcotte, L. P. Fotso and P. Siarry  
 “Solving Bilevel Linear Multiobjective Programming Problems”  
*American Journal of Operations Research* **1** (2011) 214–219
26. G. Heilporn, M. Labb e, P. Marcotte et G. Savard, “Valid inequalities and Branch-and-Cut for the Clique Pricing Problem”  
*Discrete Optimization* **8** (2011) 246–258.

27. G. Heilporn, M. Labbé, P. Marcotte and G. Savard  
 “A Polyhedral Study of the Network Pricing Problem with Connected Toll Arcs”  
*Networks* **55** (2010) 234–246
28. Y. Zhang, O. Berman, P. Marcotte and V. Verter  
 “A Bilevel Model for Preventive Healthcare Facility Network Design with Congestion”  
*IIE Transactions* **42** (2010) 865–880
29. G. Heilporn, P. Marcotte and G. Savard  
 “A Parallel Between Two Classes of Pricing Problems in Transportation and Economics”  
*Journal of Revenue and Pricing Management* **9** (2010) 110–125
30. P. Marcotte, A. Mercier, G. Savard and V. Verter  
 “Toll Policies for Mitigating Hazardous Materials Transport Risk”  
*Transportation Science* **43** (2009) 228–243
31. P. Marcotte and D.L. Zhu  
 “Existence and computation of optimal tolls in multiclass network equilibrium problems”  
*Operations Research Letters* **37** (2009) 211–214
32. P. Marcotte, G. Savard and D.L. Zhu  
 “Mathematical structure of a bilevel strategic pricing model”  
*European Journal of Operational Research* **193** (2009) 552–566
33. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
 “Joint Design and Pricing on a Network”  
*Operations Research* **56** (2008) 1104–1115
34. L. Brotcorne, G. Savard and P. Marcotte  
 “Bilevel Programming: The Montreal School”  
*INFOR* **46** (2008) 231–246
35. S. Dewez, M. Labbé, P. Marcotte and G. Savard  
 “New formulations and valid inequalities for a bilevel pricing problem”  
*Operations Research Letters* **36** (2008) 141–149
36. B. Colson, P. Marcotte and G. Savard  
 “An overview of bilevel optimization”  
*Annals of Operations Research* **153** (2007) 235–256
37. P. Marcotte and G. Savard  
 “A Bilevel Approach to Optimal Pricing”  
*Zurich Intelligencer* (2007) 36–37
38. J. Guérin, P. Marcotte and G. Savard  
 “An optimal adaptive algorithm for the approximation of concave functions”  
*Mathematical Programming A* **107** (2006) 357–366
39. J.-P. Dussault, P. Marcotte, S. Roch and G. Savard  
 “A smoothing heuristic for a class of bilinear bilevel programs”  
*European Journal of Operational Research* **174** (2006) 1396–1413.
40. S. Roch, G. Savard and P. Marcotte  
 “An approximation algorithm for Stackelberg network pricing”  
*Networks* **46** (2005) 57–67

41. B. Colson, P. Marcotte and G. Savard  
 “A trust-region method for nonlinear bilevel programming: algorithm and computational experience”  
*Computational Optimization and Applications* **30** (2005) 211–227
42. B. Colson, P. Marcotte and G. Savard  
 “Bilevel programming: A survey”  
*4OR* **3** (2005) 87–107
43. P. Marcotte, S. Nguyen and A. Schoeb  
 “A strategic model of traffic assignment in static capacitated networks”  
*Operations Research* **52** (2004) 191–212
44. P. Marcotte and L. Wynter  
 “A new look at the multi-class network equilibrium problem”  
*Transportation Science* **8** (2004) 282–292
45. P. Marcotte, G. Savard and F. Semet  
 “A bilevel programming approach to the travelling salesman problem”  
*Operations Research Letters* **32** (2004) 240–248
46. Y. Hamdouch, P. Marcotte and S. Nguyen  
 “Capacitated transit assignment with loading priorities”  
*Mathematical Programming B* **101** (2004) 205–230
47. Y. Hamdouch, P. Marcotte and S. Nguyen  
 “A strategic model for dynamic traffic assignment”  
*Networks and Spatial Economics* **4** (2004) 291–315
48. J.-P. Côté, P. Marcotte and G. Savard  
 “A bilevel modeling approach to pricing and fare optimization in the airline industry”  
*Journal of Revenue and Pricing Management* **2** (2003) 23–36
49. P. Marcotte and D. Zhu  
 “A cutting plane for quasimonotone variational inequalities”  
*Computational Optimization and Applications* **20** (2001) 317–324
50. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
 “A bilevel model and algorithm for a freight tariff setting problem”  
*Transportation Science* **35** (2001) 1–14
51. P. Marcotte, G. Savard and D. L. Zhu  
 “A trust region algorithm for nonlinear bilevel programming”  
*Operations Research Letters* **29** (2001) 171–179
52. S. Dubuc, I. Kagabo and P. Marcotte  
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53. P. Marcotte and D. L. Zhu  
 “On the existence of solutions to the dynamic user equilibrium problem”  
*Transportation Science* **34** (2000) 402–414
54. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
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*Transportation Science* **34** (2000) 289–302

55. J.-P. Crouzeix, P. Marcotte and Daoli Zhu  
 “Conditions ensuring the applicability of cutting-plane methods for solving monotone variational inequalities”  
*Mathematical Programming A* **88** (2000) 521–539
56. Y.W. Xu, J.H. Wu, M. Florian and P. Marcotte  
 “Advances in the continuous dynamic network loading problem”  
*Transportation Science* **33** (1999) 341–353
57. S. Dubuc, I. Kagabo and P. Marcotte  
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*INFOR* **37** (1999) 141–148
58. P. Marcotte and D. L. Zhu  
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*SIAM Journal on Optimization* **9** (1999) 179–189
59. S.Q. Wu, Y. Chen and P. Marcotte  
 “A cutting plane method for linear bilevel programs”  
*Systems Sciences and Mathematical Sciences* **2** (1998) 125–133
60. P. Marcotte and D. L. Zhu  
 “Convergence properties of feasible descent algorithms for solving variational inequalities in Banach spaces”  
*Computational Optimization and Applications* **10** (1998) 36–49
61. M. Labbé, P. Marcotte and G. Savard  
 “A bilevel model of taxation and its application to optimal highway pricing”  
*Management Science* **44** (1998) 1608–1622
62. J.-L. Goffin, P. Marcotte and D. L. Zhu  
 “An analytic center cutting-plane method for pseudomonotone variational inequalities”  
*Operations Research Letters* **20** (1997) 1–6
63. R. Séguin, J.-Y. Potvin, M. Gendreau, T. G. Crainic, and P. Marcotte  
 “Real-time decision problems: An operational research perspective”  
*Journal of the Operational Research Society* **48** (1997) 162–174
64. P. Marcotte and S.Q. Wu  
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*Journal of Computational Mathematics* **15** (1997) 327–334
65. P. Marcotte and D. L. Zhu  
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*Mathematical Programming A* **74** (1996) 141–157
66. D. L. Zhu and P. Marcotte  
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*SIAM Journal on Optimization* **6** (1996) 714–726
67. M. Gendreau, P. Marcotte and G. Savard  
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*Journal of Global Optimization* **8** (1996) 217–232

68. P. Marcotte and D. L. Zhu  
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*Computational Optimization and Applications* **4** (1995) 127–138
69. D. L. Zhu and P. Marcotte  
 “Coupling the auxiliary problem principle with descent methods of pseudoconvex programming”  
*European Journal of Operational Research* **83** (1995) 670–685
70. P. Marcotte and G. Savard  
 “A new implicit enumeration scheme for the discriminant analysis problem”  
*Computers and Operations Research* **22** (1995) 625–639
71. M. Desrochers, P. Marcotte and M. Stan  
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*Location Science* **3** (1995) 9–23
72. P. Marcotte and J. H. Wu  
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*JOTA* **85** (1995) 347–362
73. D. L. Zhu and P. Marcotte  
 “New classes of generalized monotonicity”  
*JOTA* **87** (1995) 457–471
74. J. H. Wu, M. Florian and P. Marcotte  
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*Transportation Science* **28** (1994) 193–203
75. D. L. Zhu and P. Marcotte  
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*JOTA* **80** (1994) 353–369
76. J.E. Fernández, P. Marcotte, S. Mondschein, J. Vera and A. Weintraub  
 “Solution approaches to the bus operator problem”  
*Transportation Research B* **27B** (1993) 1–12
77. P. Marcotte and D. L. Zhu  
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*Operations Research Letters* **14** (1993) 111–120
78. J. H. Wu, M. Florian and P. Marcotte  
 “A general descent framework for the monotone variational inequality problem”  
*Mathematical Programming A* **61** (1993) 281–300
79. P. Marcotte and G. Marquis  
 “Efficient implementation of heuristics for the continuous network design problem”  
*Annals of Operations Research* **34** (1992) 163–176
80. P. Marcotte, L. Zubieta and G. Marquis  
 “A Newton-SOR method for solving the spatial price equilibrium problem”  
*Transportation Science* **26** (1992) 36–47
81. E. Fernández and P. Marcotte  
 “Operators-Users Equilibrium Model in a Partially Regulated Transit System”  
*Transportation Science* **26** (1992) 93–105

82. P. Marcotte and Gilles Savard  
 “Novel approaches to the discrimination problem”  
*Zeitschrift für Operations Research (Theory)* **36** (1992) 517–545
83. P. Marcotte  
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*INFOR* **29** (1991) 258–270
84. P. Marcotte and G. Savard  
 “A note on the Pareto-optimality of solutions to the linear bilevel programming problem”  
*Computers and Operations Research* **18** (1991) 355–359
85. P. Marcotte, O. Drissi-Kaitouni and L. Zubieta  
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*Transportation Research B* **24B** (1990) 45–55
86. P. Marcotte  
 “To serve or not to serve: A badminton dilemma”  
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88. J.-P. Dussault and P. Marcotte  
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*R.A.I.R.O. Recherche Opérationnelle* **23** (1989) 1–16
89. P. Marcotte  
 “A note on a bilevel programming algorithm by LeBlanc and Boyce”  
*Transportation Research B* **22B** (1988) 233–237
90. P. Marcotte and J. Guélat  
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*Transportation Science* **22** (1988) 112–124
91. P. Marcotte  
 “Un algorithme général de calcul de l’état d’équilibre d’un oligopole”  
*R.A.I.R.O. Recherche Opérationnelle* **22** (1988) 225–241
92. P. Marcotte  
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*Journal of the Operational Research Society* **38** (1987) 1051–1065.
93. P. Marcotte and J.-P. Dussault  
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*Operations Research Letters* **6** (1987) 35–42
94. P. Marcotte  
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*Journal of Economic Dynamics and Control* **11** (1987) 457–459
95. A. Haurie and P. Marcotte  
 “A game theoretic approach to network equilibrium”  
*Mathematical Programming Study* **26** (1986) 252–255

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*Mathematical Programming* **34** (1986) 142–162
97. J. Guélat and P. Marcotte  
 “Some comments on Wolfe’s “Away Step””  
*Mathematical Programming* **35** (1986) 110–119
98. P. Marcotte  
 “A new algorithm for solving variational inequalities, with application to the traffic assignment problem”  
*Mathematical Programming* **33** (1985) 339–351
99. A. Haurie and P. Marcotte  
 “On the relationship between Nash-Cournot and Wardrop equilibria”  
*NETWORKS* **15** (1985) 295–308
100. P. Marcotte  
 “Quelques notes et résultats nouveaux sur le problème d’équilibre d’un oligopole”  
*R.A.I.R.O. Recherche Opérationnelle* **18** (1984) 147–171
101. P. Marcotte  
 “Network optimization with continuous control parameters”  
*Transportation Science* **17** (1983) 181–197

## 2 Actes de conférences avec comité d’arbitrage

1. Y. Bengio, N. Le Roux, P. Vincent, O. Delalleau and P. Marcotte  
 “Convex Neural Networks”  
 Advances in Neural Information Processing Systems (NIPS 2005), December 5–8 2005, Vancouver, British Columbia, Canada
2. M. Fortin, P. Marcotte and G. Savard  
 “Pricing a segmented market subject to congestion”  
 Proceedings of TRISTAN V (Triennial Symposium on Transportation Analysis) Le Gosier, Guadeloupe, July 13–18 2004
3. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
 “A bilevel model for a network design and tariff setting problem”  
 Proceedings of TRISTAN V (Triennial Symposium on Transportation Analysis) Le Gosier, Guadeloupe, July 13–18 2004
4. P. Marcotte, S. Nguyen and K. Tanguay  
 “Implementation of an efficient algorithm for the multiclass traffic assignment problem”  
 Proceedings of the 13th International Symposium on Transportation and Traffic Theory, Lyon, July 24–26 1996, Jean-Baptiste Lesort ed., Pergamon (1996) 217–226
5. P. Marcotte and D. L. Zhu  
 “An efficient algorithm for a bicriterion traffic assignment problem”  
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### 3 Chapitres de livre

1. P. Marcotte, A. Mercier., G. Savard et V. Verter  
“Gestion du risque lié au transport des matières dangereuses : une approche basé sur la tarification”  
Stratégies logistiques et matières dangereuses, N. de Marcellis-Warin, M. Trépanier et I. Peignier eds., Presses Internationales Polytechnique (2013) 157–172.
2. P. Marcotte and M. Patriksson  
“Traffic Equilibrium”  
Transportation. Handbooks in Operations Research and Management Science, C. Barnhardt and G. Laporte eds., North-Holland (2007) 623–714
3. M. Didi-Biha, P. Marcotte and G. Savard  
“Path-based Formulations of a Bilevel Toll Setting Problem”  
Optimization with Multivalued Mappings Theory: Theory, Applications and Algorithms, S. Dempe and V. Kalashnikov eds., Springer (2006) 29–50
4. P. Marcotte and G. Savard  
“Bilevel Programming: A combinatorial perspective”  
Essays and Surveys in Global Optimization, D. Avis, A. Hertz and O. Marcotte, eds., Springer (2005) 191–217
5. P. Marcotte and G. Savard  
“A bilevel programming approach to Price Setting”  
Decision and Control in Management Science. Essays in Honor of Alain Haurie, Georges Zaccour ed., Kluwer (2002) 97–117
6. P. Marcotte and G. Savard  
“Bilevel Programming: Formulation”, “Bilevel Programming: Applications” and “Bilevel Programming: Algorithms”  
The Encyclopedia of Optimization, C. Floudas and P. Pardalos, eds., Kluwer (1999) 155–159
7. M. Labbé, P. Marcotte and G. Savard  
“On a class of bilevel programs”  
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8. P. Marcotte  
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9. P. Marcotte and S. Nguyen  
“Hyperpath formulations of traffic assignment problems”  
Equilibrium and Advanced Transportation Modelling, P. Marcotte and S. Nguyen eds., Kluwer (1998) 175–200
10. P. Marcotte and D. L. Zhu  
“Equilibria with infinitely many differentiated classes of customers”  
Complementarity and variational problems. State of the art, J-S Pang and M. Ferris eds., SIAM (1997) 234–258
11. P. Marcotte  
“Advantages and drawbacks of variational inequality formulations”  
Variational Inequalities and Network Equilibrium Problems, F. Giannessi and A. Maugeri eds., Plenum Press (1995) 179–194

12. P. Marcotte and M. Blain  
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## 4 Livres

1. M. Gendreau and P. Marcotte, eds.  
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Kluwer (2002)
2. P. Marcotte and S. Nguyen, eds.  
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## 5 Autres

1. P. Marcotte et F. Soumis  
Tous les chemins mènent aux maths  
Québec Science (2000)
2. P. Marcotte  
Design optimal d'un rseau de transport en prsence d'effets de congestion  
Thse de doctorat (Ph.D.), Universié de Montréal (1981)
3. P. Marcotte  
Application de la transforme de Laplace l'interpolation par des sommes d'exponentielles  
Mmoire de matrise (M.Sc.), Université de Montréal (1975)

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