

# PUBLICATIONS

## 1 Articles à paraître

1. A. Kamgaing Kuiteing, P. Marcotte and G. Savard  
“Network pricing of congestion-free networks: the elastic and linear demand case”  
à paraître dans *Transportation Science*

## 2 Articles parus dans des revues avec comité d’arbitrage

1. F. Gilbert, M. Anjos, P. Marcotte and G. Savard  
“Optimal design of bilateral contracts for energy procurement”  
*European Journal of Operations Research* **246** (2015) 641–650
2. M. Hosseinalifam, P. Marcotte and G. Savard  
“Network capacity control under a nonparametric demand choice model”  
*Operations Research Letters* **43** (2015) 461–466
3. M. Nasri, F. Bastin and P. Marcotte  
“Quantifying the social welfare loss in moral hazard models”  
*EJOR* **245** (2015) 226–235
4. 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
5. F. Gilbert, P. Marcotte and G. Savard  
“A numerical study of the logit network pricing problem”  
*Transportation Science* **43** (2015) 706–719
6. 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
7. J. Guérin, P. Marcotte and G. Savard  
“ $L^p$  Approximation of Univariate Concave Functions”  
*JOTA* **161** (2014) 490–505
8. F. Gilbert, P. Marcotte and G. Savard  
“Logit network pricing”  
*Computers and Operations Research* **41** (2014) 291–298
9. F. Gilbert, P. Marcotte and G. Savard  
“Mixed-logit network pricing”  
*Computational Optimization and Applications* **57** (2014) 105–127
10. S. Mirza Alizadeh, P. Marcotte and G. Savard  
“Two-stage stochastic bilevel programming over a transportation network”  
*Transportation Research B* **58** (2013) 92–105
11. 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

12. 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
13. 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
14. L. Brotcorne, F. Cirinei, P. Marcotte and G. Savard  
 “An Exact Algorithm for the Network Pricing Problem”  
*Discrete Optimization* **8** (2011) 246–258
15. 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
16. G. Heilporn, M. Labbé, P. Marcotte et G. Savard, “Valid inequalities and Branch-and-Cut for the Clique Pricing Problem”  
*Discrete Optimization* **8** (2011) 246–258.
17. 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
18. 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
19. 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
20. P. Marcotte, A. Mercier, G. Savard and V. Verter  
 “Toll Policies for Mitigating Hazardous Materials Transport Risk”  
*Transportation Science* **43** (2009) 228–243
21. P. Marcotte and D.L. Zhu  
 “Existence and computation of optimal tolls in multiclass network equilibrium problems”  
*Operations Research Letters* **37** (2009) 211–214
22. P. Marcotte, G. Savard and D.L. Zhu  
 “Mathematical structure of a bilevel strategic pricing model”  
*EJOR* **193** (2009) 552–566
23. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
 “Joint Design and Pricing on a Network”  
*Operations Research* **56** (2008) 1104–1115
24. L. Brotcorne, G. Savard and P. Marcotte  
 “Bilevel Programming: The Montreal School”  
*INFOR* **46** (2008) 231–246
25. 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

26. B. Colson, P. Marcotte and G. Savard  
 “An overview of bilevel optimization”  
*Annals of Operations Research* **153** (2007) 235–256
27. P. Marcotte and G. Savard  
 “A Bilevel Approach to Optimal Pricing”  
*Zurich Intelligencer* (2007) 36–37
28. J. Guérin, P. Marcotte and G. Savard  
 “An optimal adaptive algorithm for the approximation of concave functions”  
*Mathematical Programming A* **107** (2006) 357–366
29. J.-P. Dussault, P. Marcotte, S. Roch and G. Savard  
 “A smoothing heuristic for a class of bilinear bilevel programs”  
*European Journal of Operations Research* **174** (2006) 1396–1413.
30. S. Roch, G. Savard and P. Marcotte  
 “An approximation algorithm for Stackelberg network pricing”  
*Networks* **46** (2005) 57–67
31. 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
32. B. Colson, P. Marcotte and G. Savard  
 “Bilevel programming: A survey”  
*4OR* **3** (2005) 87–107
33. P. Marcotte, S. Nguyen and A. Schoeb  
 “A strategic model of traffic assignment in static capacitated networks”  
*Operations Research* **52** (2004) 191–212
34. P. Marcotte and L. Wynter  
 “A new look at the multi-class network equilibrium problem”  
*Transportation Science* **8** (2004) 282–292
35. P. Marcotte, G. Savard and F. Semet  
 “A bilevel programming approach to the travelling salesman problem”  
*Operations Research Letters* **32** (2004) 240–248
36. Y. Hamdouch, P. Marcotte and S. Nguyen  
 “Capacitated transit assignment with loading priorities”  
*Mathematical Programming B* **101** (2004) 205–230
37. Y. Hamdouch, P. Marcotte and S. Nguyen  
 “A strategic model for dynamic traffic assignment”  
*Networks and Spatial Economics* **4** (2004) 291–315
38. 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
39. P. Marcotte and D. Zhu  
 “A cutting plane for quasimonotone variational inequalities”  
*Computational Optimization and Applications* **20** (2001) 317–324

40. 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
41. P. Marcotte, G. Savard and D. L. Zhu  
 “A trust region algorithm for nonlinear bilevel programming”  
*Operations Research Letters* **29** (2001) 171–179
42. S. Dubuc, I. Kagabo and P. Marcotte  
 “Trivial cases for the Kantorovitch problem”  
*RAIRO Recherche Opérationnelle* **34** (2000) 49–59
43. P. Marcotte and D. L. Zhu  
 “On the existence of solutions to the dynamic user equilibrium problem”  
*Transportation Science* **34** (2000) 402–414
44. L. Brotcorne, M. Labbé, P. Marcotte and G. Savard  
 “A bilevel model and algorithm for a freight tariff setting problem”  
*Transportation Science* **34** (2000) 289–302
45. 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
46. 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
47. S. Dubuc, I. Kagabo and P. Marcotte  
 “A note on the uniqueness of solutions to the transportation problem”  
*INFOR* **37** (1999) 141–148
48. P. Marcotte and D. L. Zhu  
 “Weak sharp solution of variational inequalities”  
*SIAM Journal on Optimization* **9** (1999) 179–189
49. 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
50. 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
51. 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
52. 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
53. 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

54. P. Marcotte and S.Q. Wu  
 “Finding the strictly local and  $\epsilon$ -global minimizers of concave minimization with linear constraints”  
*Journal of Computational Mathematics* **15** (1997) 327–334
55. P. Marcotte and D. L. Zhu  
 “Exact and inexact penalty methods for the generalized bilevel programming problem”  
*Mathematical Programming A* **74** (1996) 141–157
56. D. L. Zhu and P. Marcotte  
 “Co-coercivity and its role in the convergence of iterative schemes for solving variational inequalities”  
*SIAM Journal on Optimization* **6** (1996) 714–726
57. M. Gendreau, P. Marcotte and G. Savard  
 “A Hybrid tabu-ascent algorithm for the linear bilevel programming problem”  
*Journal of Global Optimization* **8** (1996) 217–232
58. P. Marcotte and D. L. Zhu  
 “Global convergence of descent processes for solving non strictly monotone variational inequalities”  
*Computational Optimization and Applications* **4** (1995) 127–138
59. D. L. Zhu and P. Marcotte  
 “Coupling the auxiliary problem principle with descent methods of pseudoconvex programming”  
*European Journal of Operations Research* **83** (1995) 670–685
60. P. Marcotte and G. Savard  
 “A new implicit enumeration scheme for the discriminant analysis problem”  
*Computers and Operations Research* **22** (1995) 625–639
61. M. Desrochers, P. Marcotte and M. Stan  
 “The congested facility location problem”  
*Location Science* **3** (1995) 9–23
62. P. Marcotte and J. H. Wu  
 “On the convergence of projection methods: Application to the decomposition of affine variational inequalities”  
*JOTA* **85** (1995) 347–362
63. D. L. Zhu and P. Marcotte  
 “New classes of generalized monotonicity”  
*JOTA* **87** (1995) 457–471
64. J. H. Wu, M. Florian and P. Marcotte  
 “Transit equilibrium assignment: A model and solution algorithms”  
*Transportation Science* **28** (1994) 193–203
65. D. L. Zhu and P. Marcotte  
 “An extended descent framework for monotone variational inequalities”  
*JOTA* **80** (1994) 353–369
66. 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
67. P. Marcotte and D. L. Zhu  
 “Modified descent methods for solving monotone variational inequalities”  
*Operations Research Letters* **14** (1993) 111–120

68. 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
69. P. Marcotte and G. Marquis  
 “Efficient implementation of heuristics for the continuous network design problem”  
*Annals of Operations Research* **34** (1992) 163–176
70. P. Marcotte, L. Zubieta and G. Marquis  
 “A Newton-SOR method for solving the spatial price equilibrium problem”  
*Transportation Science* **26** (1992) 36–47
71. E. Fernández and P. Marcotte  
 “Operators-Users Equilibrium Model in a Partially Regulated Transit System”  
*Transportation Science* **26** (1992) 93–105
72. P. Marcotte and Gilles Savard  
 “Novel approaches to the discrimination problem”  
*Zeitschrift für Operations Research (Theory)* **36** (1992) 517–545
73. P. Marcotte  
 “Application of Khobotov’s algorithm to variational inequalities and network equilibrium problems”  
*INFOR* **29** (1991) 258–270
74. 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
75. P. Marcotte, O. Drissi-Kaïtouni and L. Zubieta  
 “Iterative methods for solving an equilibrium problem arising in transit deregulation”  
*Transportation Research B* **24B** (1990) 45–55
76. P. Marcotte  
 “To serve or not to serve: A badminton dilemma”  
*SIAM Review* **31** (1989) 303–305
77. P. Marcotte and J.-P. Dussault  
 “A sequential linear programming algorithm for solving monotone variational inequalities”  
*SIAM Journal on Control and Optimization* **27** (1989) 1260–1278
78. J.-P. Dussault and P. Marcotte  
 “Conditions de régularité géométrique pour les inéquations variationnelles”  
*R.A.I.R.O. Recherche Opérationnelle* **23** (1989) 1–16
79. P. Marcotte  
 “A note on a bilevel programming algorithm by LeBlanc and Boyce”  
*Transportation Research B* **22B** (1988) 233–237
80. P. Marcotte and J. Guélat  
 “Adaptation of a modified Newton method for solving the asymmetric traffic equilibrium problem”  
*Transportation Science* **22** (1988) 112–124
81. 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

82. P. Marcotte  
 “Algorithms for the network oligopoly problem”  
*Journal of the Operational Research Society* **38** (1987) 1051–1065.
83. P. Marcotte and J.-P. Dussault  
 “A note on a globally convergent Newton method for solving monotone variational inequalities”  
*Operations Research Letters* **6** (1987) 35–42
84. P. Marcotte  
 “A note on Khilnani and Tse USA algorithm”  
*Journal of Economic Dynamics and Control* **11** (1987) 457–459
85. A. Haurie and P. Marcotte  
 “A game theoretic approach to network equilibrium”  
*Mathematical Programming Study* **26** (1986) 252–255
86. P. Marcotte  
 “Network design problem with congestion effects: A case of bilevel programming”  
*Mathematical Programming* **34** (1986) 142–162
87. J. Guélat and P. Marcotte  
 “Some comments on Wolfe’s “Away Step””  
*Mathematical Programming* **35** (1986) 110–119
88. P. Marcotte  
 “A new algorithm for solving variational inequalities, with application to the traffic assignment problem”  
*Mathematical Programming* **33** (1985) 339–351
89. A. Haurie and P. Marcotte  
 “On the relationship between Nash-Cournot and Wardrop equilibria”  
*NETWORKS* **15** (1985) 295–308
90. 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
91. P. Marcotte  
 “Network optimization with continuous control parameters”  
*Transportation Science* **17** (1983) 181–197

### 3 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”  
 Proceedings of TRISTAN II (Triennial Symposium on Transportation Analysis) Capri, June 23–28 1994, 891–897

## 4 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”  
 Nonlinear Optimization and Related Topics, Di Pillo and Giannessi eds., Kluwer (1999) 183–206
8. P. Marcotte  
 “Reformulations of a bicriterion equilibrium problem”  
 Reformulation - Nonsmooth, Piecewise Smooth, Semismooth and Smoothing Methods, M. Fukushima and Liqun Qi eds., Kluwer (1999) 269–292



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  
 “A Stackelberg-Nash model for the design of deregulated transit system”  
 Dynamic Games in Economic Analysis, volume 57, Springer Berlin/Heidelberg (1991) 21–28.

## 5 Livres

1. M. Gendreau and P. Marcotte, eds.  
 Transportation and Network Analysis: Current Trends. Miscellanea in honor of Michael Florian  
 Kluwer (2002)
2. P. Marcotte and S. Nguyen, eds.  
 Equilibrium and Advanced Transportation Modelling  
 Kluwer (1998)

## 6 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.), Universit de Montral (1981)
3. P. Marcotte  
 Application de la transforme de Laplace l’interpolation par des sommes d’exponentielles  
 Mmoire de matrise (M.Sc.), Universit de Montral (1975)