

Jean-Philippe Vial

Professeur (honoraire)
Université de Genève
40 Blvd du Pont d'Arve
1211 Genève, 4
Email : jean-philippe.vial@unige.ch

Directeur
ORDECSYS
4 Place de l'Etrier
CH-1224 Chêne-Bougeries, Switzerland
Tel : +41 22 349 3390
Mobile : +41 78 889 3659
Email : jpvial@ordecsys.com

Résumé

Jean-Philippe Vial est Ingénieur des Arts et Manufactures (Ecole Centrale de Paris, 1964). Il a obtenu un Master in Industrial Engineering (University of Michigan, 1967), un doctorat en Recherche Opérationnelle (Université Catholique de Louvain, 1970) et un doctorat d'état en Mathématiques (Université Paris-Dauphine, 1985).

Il a commencé sa carrière universitaire à l'université catholique de Louvain, comme assistant en recherche opérationnelle (1967-70) et comme chercheur junior au CORE (Center for Operations Research and Econometrics, Louvain, Belgique). Il a poursuivi sa carrière à l'université catholique de Louvain et au CORE (1970-86) puis à l'université de Genève (section des Hautes Etudes Commerciales de la faculté des sciences économiques et sociales de l'université de Genève, Suisse) où il a enseigné en tant que professeur ordinaire les méthodes quantitatives de gestion et la logistique de production en tant que professeur ordinaire (1986-2006). Depuis 2006 il est professeur honoraire l'université de Genève.

Durant sa carrière, il a occupé des postes de direction de département (Mathématiques Appliquées, université de Louvain 1981-1982, Université de Genève, 1986-1989). Il a été professeur invité à la graduate school of management, University of California, Berkeley (1972-74 et 1981), à l'université Louis Pasteur, Strasbourg (1984-1986) et pour de plus brefs séjours au Technion, Haifa, à l'université Paris-Dauphine, à l'université Paul Sabatier (Toulouse), à la Technical University Delft (Pays-Bas). Avec Alain Haurie il a créé le laboratoire de recherche Logilab qu'il a animé jusqu'en 2006.

Il a enseigné la gestion de production et la recherche opérationnelle dans les programmes de licence, de diplôme et de formation continue de l'université de Genève. Il a dirigé plusieurs projets de recherche, portant principalement sur les méthodes d'optimisation convexe ainsi que sur les applications dans les télécommunications et dans l'analyse des choix énergétiques et environnementaux. Il a dirigé des thèses à l'université catholique de Louvain (2 thèses) et l'université de Genève (9 thèses).

En 2002 il a participé à la création de la société de conseil et d'étude ORDECSYS basée à Genève qui est spécialisée dans les domaines de la logistique, du calcul scientifique et de la modélisation technico-économique et environnementale. En 2005 il a participé à la création de la société C-ORDEE spécialisée dans les analyses économiques et systémiques de l'environnement. Actuellement son activité se concentre sur le développement de ces deux sociétés.

Nominations honorifiques

- Président de Mathematical Programming Society, 1998-2001.
- Vice-Président de Mathematical Programming Society, 1997 et 2002-2003.
- L'article « Supplier-retailer flexible commitments contracts : A robust optimization approach » (Manufacturing Services and Operations Management, 2005) a reçu la distinction de meilleure publication de l'année 2005 décernée par Operations Research Society of Israel.
- L'article « Automatic formulation of stochastic programs via an algebraic modeling language » (Computational Management Science, 2007) a reçu la « 2007 CMS Best Paper Award » attribuée par les éditeurs de Computational Management Science.

Editeur de revues scientifiques

- Associate Editor of Management Science
- Associate Editor of Mathematical Methods for Operations Research

Publications

Livres

C. Roos, T. Terlaky, and J.-Ph. Vial. *Interior Point Methods for Mathematical Programming*. John Wiley and Sons, New York, 1997.

C. Roos and J.-Ph. Vial. *Interior Point Methods for Linear Programming : Theory and Practice*. Number 52 in Mathematical Programming B. North-Holland, Amsterdam, The Netherlands, 1991.

Articles à paraître

C. Beltran-Royo, J.-P. Vial, and A. Alonso-Ayuso. Semi-Lagrangian relaxation applied to the uncapacitated facility location problem. Working paper (to appear in *Computational Optimization and Applications*), Statistics and Operations Research, Rey Juan Carlos University, Madrid, Spain, 2010.

F. Babonneau, Y. Nesterov, and J.-Ph. Vial. Design and operations of gas transmission networks. Working paper (to appear in *Operations Research*), ORDECSYS, Place de l'Etrier, 4, 1224 Genève, Switzerland, 2010.

L. Drouet, A. Haurie, J.-P. Vial, and M. Vielle. A coupled game solved with the homogeneous version of OBOE to model Post Kyoto international climate policy. Working paper (to appear in *Annals of Dynamic Games*), ORDECSYS, Geneva, Switzerland, 2008.

F. Babonneau, A. Kanudia, M. Labriet, R. Loulou, and J.-P. Vial. Energy security : a robust optimization approach to design a robust European energy supply via TIAM. Working paper (to appear in *Environmental Modeling and Assessment*), ORDECSYS, 2010.

Articles

F. Babonneau and J.-P. Vial. A partitioning algorithm for the network loading problem. *European Journal of Operational Research*, 204(1) :173–179, 2010.

F. Babonneau and J.-P. Vial. Test instances for the multicommodity flow problem : an erratum. *Operations Research*, e-companion at <http://or.journal.informs.org/cgi/data/opre.1080.0658/DC1/1>, 2009.

F. Babonneau and J.-P. Vial. ACCPM with a nonlinear constraint and an active set strategy to solve nonlinear multicommodity flow problems : a corrigendum. *Mathematical Programming*, 120(1) :211–212, 2009.

- F. Babonneau and J.-P. Vial. ACCPM with a nonlinear constraint and an active set strategy to solve nonlinear multicommodity flow problems. *Mathematical Programming Ser. B*, 120 :179–210, 2009.
- F. Babonneau and J.-P. Vial. Test instances for the multicommodity flow problem : an erratum. (An electronic companion of the online version can be found at <http://or.journal.informs.org>.) *Operations Research*, 57(4) :1045, 2009.
- Y. Nesterov and J.-Ph. Vial. Confidence level solutions for stochastic programming. *Automatica*, 44(6) :1559–1568, 2008.
- L. Drouet, A. Haurie, F. Moresino, J.-P. Vial, M. Vielle, and L. Viguier. An oracle based method to compute a coupled equilibrium in a model of international climate policy. *Computational Management Science*, 5(1-2) :119–140, 2008.
- F. Babonneau and J.-P. Vial. An efficient method to compute traffic assignment problems with elastic demands. *Transportation Science*, 42(2) :249–260, May 2008.
- J. Thénier and J.-P. Vial. Step decision rules for multistage stochastic programming : a heuristic approach. *Automatica*, 44(6) :1569–1584, 2008.
- J. Thénier, C. van Delft, and J.-P. Vial. Automatic formulation of stochastic programs via an algebraic modeling language. *Computational Management Science*, 4(1) :17–40, 2007.
- F. Babonneau, O. du Merle, and J.-P. Vial. Solving large scale linear multicommodity flow problems with an active set strategy and Proximal-ACCPM. *Operations Research*, 54(1) :184–197, 2006.
- C. Beltran, N.R. Edwards, A.B. Haurie, J.-P. Vial, and D.S. Zachary. Oracle-based optimization applied to climate model calibration. *Environmental Modeling and Assessment*, 11(1) :31–43, 2006.
- C. Beltran, C. Tadonki, and J.-P. Vial. Solving the p-median problem with a semi-Lagrangian relaxation. *Computational Optimization and Applications*, (35), 2006.
- A. Ben-Tal, B. Golany, A. Nemirovski, and J.-Ph. Vial. Supplier-retailer flexible commitments contracts : A robust optimization approach. *Manufacturing Services and Operations Management*, 7 :248–271, 2005.
- Y. Nesterov and J.-Ph Vial. Augmented self-concordant barriers and nonlinear optimization problems with finite complexity. *Mathematical Programming*, 99 :149–174, 2004.
- D. Carlson, A. Haurie, J.-P. Vial, and D.S. Zachary. Large-scale convex optimization methods for air quality assessment. *Automatica*, 40 :385–395, 2004.
- Ch. van Delft and J.-Ph. Vial. A practical implementation of stochastic programming : an application to the evaluation of option contracts in supply chains. *Automatica*, 40 :743–756, 2004.
- O. Péton and J.-Ph. Vial. Multiple cuts with the homogeneous analytic center cutting plane method. *Computational Optimization and Applications*, 24 :27–61, 2003.
- J.-L. Goffin and J.-Ph. Vial. Convex nondifferentiable optimization : A survey focussed on the analytic center cutting plane method. *Optimization Methods and Software*, 17(805-867), 2002.
- J. Gondzio, R. Sarkissian, and J.-Ph. Vial. Parallel implementation of a central decomposition method for solving large-scale planning problems. *Computational Optimization and Applications*, 19 :5–29, 2001.
- A. Lissner, R. Sarkissian, and J.-Ph. Vial. Solving LP relaxation for survivability problems in telecommunication networks. *Investigacion Operativa*, 9 :21–27, 2000.
- A. Ouorou, P. Mahey, and J.-Ph. Vial. A survey of algorithms for convex multicommodity flow problems. *Management Science*, 46 :126–147, 2000.
- J.-L. Goffin and J.-Ph. Vial. Multiple cuts in the analytic center cutting plane method. *SIAM Journal on Optimization*, 11 :266 – 288, 2000.
- E. Fragnière, J. Gondzio, and J.-Ph. Vial. Building and solving large-scale programs on an affordable distributed computing system. *Annals of Operations Research*, 99(1/4) :167–187, 2000.
- E. Fragnière, J. Gondzio, R. Sarkissian, and J.-Ph. Vial. Structure exploiting tool in algebraic modeling languages. *Management Science*, 46 :1145 – 1158, 2000.

- Yu. Nesterov and J.-Ph. Vial. Homogeneous analytic center cutting plane methods for convex problems and variational inequalities. *SIAM Journal on Optimization*, 9 :707–728, 1999.
- J. Gondzio and J.-Ph. Vial. Warm start and ϵ -subgradients in the cutting plane scheme for block-angular linear programs. *Computational Optimization and Applications*, 14 :17–36, 1999.
- J.-L. Goffin and J.-Ph. Vial. Shallow, deep and very deep cuts in the analytic center cutting plane method. *Mathematical Programming*, 84 :89–103, 1999.
- Yu. Nesterov, O. Péton, and J.-Ph. Vial. Homogeneous Analytic Center Cutting Plane Methods with Approximate Centers. *Optimization Methods and Software*, 11&12 :243–273, 1999.
- J.-L. Goffin and J.-P. Vial. A two-cut approach in the analytic center cutting plane method. *Mathematical Methods in Operations Research*, (49) :149–169, 1999.
- J.-Ph. Vial. The New MPS Chair. *Optima*, 59 :9, 1998.
- T. Terlaky and J.-Ph. Vial. Computing maximum likelihood estimators of convex density functions. *SIAM Journal of Scientific and Statistical Computing*, 19 :675–694, 1998.
- O. Bahn, A. Haurie, S. Kypreos, and J.-Ph. Vial. Advanced mathematical programming modeling to assess the benefits from international CO2 abatement cooperation. *Environmental Modeling and Assessment*, 3 :107–116, 1998.
- O. du Merle, J.-L. Goffin, and J.-P. Vial. On improvements to the analytic center cutting plane method. *Computational optimization and applications*, (11) :37–52, 1998.
- J.-Ph. Vial. A path-following version of the Todd-Burrell procedure for linear programming. *Mathematical Methods of Operations Research*, 46 :153–167, 1997.
- J. Gondzio, R. Sarkissian, and J.-Ph. Vial. Using an interior point method for the master problem in a decomposition approach. *European Journal of Operational Research*, pages 577–587, 1996.
- B. Jansen, C. Roos, T. Terlaky, and J.-Ph. Vial. Primal-dual target-following algorithms for linear programming. *Annals of Operations Research*, 62 :197–231, 1996.
- B. Jansen, C. Roos, T. Terlaky, and J.-Ph. Vial. Long-step primal-dual target-following algorithms for linear programming. *Mathematical Methods of Operations Research*, 44 :11–30, 1996.
- J. Gondzio, O. du Merle, R. Sarkissian, and J.-Ph. Vial. ACCPM - A library for convex optimization based on an analytic center cutting plane method. *European Journal of Operational Research*, 94 :206–211, 1996.
- J. L. Goffin, J. Gondzio, Sarkissian R., and J. P. Vial. Solving nonlinear multicommodity flow problems by the analytic center cutting plane method. *Mathematical Programming*, 76 :131–154, 1996.
- O. Güler, C. Roos, T. Terlaky, and J.-Ph. Vial. A survey of the implication of the behavior of the central path for the duality theory of linear programming. *Management Science*, 41 :1922–1934, 1995.
- O. Bahn, O. du Merle, J.-L. Goffin, and J.-Ph. Vial. A cutting plane method from analytic centers for stochastic programming. *Mathematical Programming*, 69 :45–73, 1995.
- J.-L. Goffin and J.-Ph. Vial. Short steps with Karmarkar’s projective algorithm for linear programming. *SIAM Journal on Optimization*, 4 :193–207, 1994.
- B. Jansen, C. Roos, T. Terlaky, and J.-Ph. Vial. Primal–dual algorithms for linear programming based on the logarithmic barrier method. *Journal of Optimization Theory and Applications*, 83 :1–26, 1994.
- K. Anstreicher and J.-Ph. Vial. On the Convergence of an infeasible primal-dual interior point method for convex programming. *Optimization Methods and Software*, 3 :273–283, 1994.
- O. Bahn, J.-L. Goffin, J.-Ph. Vial, and O. du Merle. Implementation and behavior of an interior point cutting plane algorithm for convex programming : an application to geometric programming. *Discrete Applied Mathematics*, 49 :3–23, 1994.
- J.-Ph. Vial. Computational experience with a primal–dual interior-point method for smooth convex programming. *Optimization Methods and Software*, 3 :285–316, 1994.
- C. Roos and J.-Ph. Vial. Achievable potential reductions in the method of Kojima and al. in the case of linear programming. *RAIRO*, 28 :123–133, 1994.

- J.-L. Goffin, A. Haurie, J.-Ph. Vial, and D.L. Zhu. Using central prices in the decomposition of linear programs. *European Journal of Operational Research*, 64 :393–409, 1993.
- J.-L. Goffin and J.-Ph. Vial. On the computation of weighted analytic centers and dual ellipsoids with the projective algorithm. *Mathematical Programming*, 60 :81–92, 1993.
- N. Vi Cao, O. du Merle, and J.-P. Vial. Un système de confection automatisée d’horaires d’examens. *Revue des Systèmes de Décision*, 1(4) :377–399, 1992.
- M.J. Todd and J.-Ph. Vial. Todd’s low-complexity algorithm is a predictor-corrector method. *Operations Research Letters*, 11 :199–207, 1992.
- J.-L. Goffin, A. Haurie, and J.-Ph. Vial. Decomposition and nondifferentiable optimization with the projective algorithm. *Management Science*, 38 :284–302, 1992.
- C. Fraley and J.-Ph. Vial. Alternative approaches to feasibility in projective methods for linear programming. *ORSA Journal on Computing*, 4 :285–299, 1992.
- J.-Ph. Vial. A projective algorithm for linear programming with no regularity condition. *Operations Research Letters*, 12 :1–2, 1992.
- C. Roos and J.-Ph. Vial. A polynomial method of approximate centers for linear programming. *Mathematical Programming*, pages 295–305, 1992.
- D. den Hertog, C. Roos, and J.-Ph. Vial. A complexity reduction for the long-step path-following algorithm for linear programming. *SIAM Journal on Optimization*, 2 :71–87, 1992.
- J.-L. Goffin and J.-Ph. Vial. Cutting planes and column generation techniques with the projective algorithm. *Journal of Optimization Theory and Applications*, 65 :409–429, 1990.
- J.-Ph. Vial. A fully polynomial time projective method. *Operations Research Letters*, 7(1) :15–19, 1988.
- J.-P. Bulteau and J.-Ph. Vial. Curvilinear path and trust region in unconstrained optimization : a convergence analysis. *Mathematical Programming Study*, pages 82–101, 1987.
- G. de Ghellinck and J.-Ph. Vial. An extension of Karmarkar’s algorithm for solving a system of linear homogeneous equations on the simplex. *Mathematical Programming*, 39 :79–92, 1987.
- B. Cornet and J.-Ph. Vial. Lipschitz solutions of perturbed nonlinear programming problems. *SIAM Journal of Optimization and Control*, 24 :1123–1137, 1986.
- G. de Ghellinck and J.-Ph. Vial. A polynomial Newton method for linear programming. *Algorithmica*, 1 :425–453, 1986.
- J.-P. Bulteau and J.-Ph. Vial. A restricted trust region algorithm for unconstrained optimization. *Journal of Optimization Theory and Applications*, 44 :413–435, 1985.
- F. Tolfo, J.-P. Vial, and J.-P. Bulteau. Separazione di gas naturale. *ICP–Rivista dell’Industria Chimica*, XIII :35–42, 1985.
- J.-Ph. Vial. Strong and weak convexity of sets and functions. *Mathematics of Operations Research*, 8 :231–259, 1983.
- J.-Ph. Vial. Strong convexity of sets and functions. *Journal of Mathematical Economics*, 9 :187–205, 1982.
- H. Moulin and J.-Ph. Vial. Strategically zero-sum game : the class of game whose completely mixed equilibria cannot be improved upon. *International Journal of Game Theory*, 7 :201–221, 1978.
- J.-Ph. Vial and I. Zang. Unconstrained optimization by approximation of the gradient path. *Mathematics of Operations Research*, 2, 1977.
- J. Jaskold Gabszewicz and J.-Ph. Vial. Oligopoly ‘à la Cournot’ in a general equilibrium analysis. *Journal of Economic Theory*, 4 :1381–1400, 1972.

Articles dans des livres

- F. Babonneau, J.-P. Vial, and R. Apparigliato. Robust optimization for environmental and energy planning. In J.A. Filar and A. Haurie, editors, *Handbook on "Uncertainty and Environmental Decision Making"*, International Series in Operations Research and Management Science, pages 79–126. Springer Verlag, 2010.
- O. Bahn, L. Drouet, N. Edwards, A. Haurie, R. Knutti, S. Kypreos, T.F. Stocker, and J.-P. Vial. The coupling of optimal economic growth and climate models. In H. Wanner, M. Grosjean, R. Röthlisberger, and E. Xoplak, editors, *Climate Variability, Predictability and Climate Risks : A European Perspective*, volume 79, pages 103–119. Climatic Change, 2006.
- F. Babonneau, C. Beltran, A. Haurie, C. Taddonji, and J.-P. Vial. Proximal-ACCPM : a versatile oracle based optimization method. In E. J. Kontoghiorghes, editor, *Optimisation, Econometric and Financial Analysis*, volume 9 of *Advances in Computational Management Science*. Springer Verlag, 2006.
- C. Beltran, L. Drouet, N.R. Edwards, A. Haurie, J.-P. Vial, and D.S Zachary. An oracle method to couple climate and economic dynamics. In A. Haurie and L. Viguier, editors, *The Coupling of Climate and Economic Dynamics*, chapter 3. Springer, 2005.
- L. M. Nicoletti, G. Stauffer, and J.-Ph. Vial. An industrial cutting stock problem. In M. Breton and G. Zaccour, editors, *Decision and Control in Management Science*. Kluwer, 2002.
- J. Filar, A. Haurie, F. Moresino, and J.-Ph. Vial. Singularly perturbed hybrid systems approximated by structured linear programs. In Z. Hou, J. Filar, and A. Chen, editors, *Markov Processes and Controlled Markov Chains*. Kluwer, Dordrecht, 2002.
- S. Elhedhli, J.-L. Goffin, and J.-Ph. Vial. Nondifferentiable optimization : Introduction, applications and algorithm. In Panos M. Pardalos and Chris A. Floudas, editors, *Encyclopedia of Optimization*. Kluwer Academic Publishers, 2000.
- S. Elhedhli, J.-L. Goffin, and J.-Ph. Vial. Cutting plane methods for nondifferentiable optimization. In Panos M. Pardalos and Chris A. Floudas, editors, *Encyclopedia of Optimization*. Kluwer Academic Publishers, 2000.
- O. du Merle, J.-L. Goffin, C. Trouiller, and J.-Ph. Vial. A Lagrangian relaxation of the capacitated multi-item lot sizing problem solved with an interior point cutting plane algorithm. In P. M. Pardalos, editor, *Approximation and Complexity in Numerical Optimization : Continuous and Discrete Problems*,. Kluwer Academic Publishers, 1999.
- C. Roos and J.-Ph. Vial. Interior point methods. In J.E Beasley, editor, *Advances in Linear and Integer Programming*, pages 51–106. Oxford University Press, Oxford, England, 1996.
- O. Bahn, A. Haurie, S. Kypreos, and J.-Ph. Vial. A multinational MARKAL model to study joint implementation of carbon dioxide emission reduction measures. In P. Ghosh and J. Puri, editors, *Joint Implementation of Climate Change Commitments*, pages 43–50. Tata Energy Research Institute, 1994.
- O. Bahn, A. Haurie, S. Kypreos, and J.-Ph. Vial. A decomposition approach to multiregional environmental planning : a numerical study. In C. Carraro and A. Haurie, editors, *Operations Research and Environmental Management*, pages 119–132. Kluwer Academic Publisher, The Netherlands, 1994.
- B. Jansen, C. Roos, T. Terlaky, and J.-Ph. Vial. Interior-point methodology for linear programming : duality, sensitivity analysis and computational aspects. In K. Frauendorfer, H. Glavitsch, and R. Bacher, editors, *Optimization in Planning and Operation of Electric Power Systems*, Lecture Notes of the SVOR/ASRO Tutorial (Thun, Switzerland, October 14-16, 1992), pages 57–123. Physica-Verlag, Heidelberg, 1993.
- C. Roos and J.-Ph. Vial. Long steps with the logarithmic penalty barrier function in linear programming. In J. Gabszewicz, J.-F. Richard, and L. Wolsey, editors, *Economic Decision-Making : Games, Economics and Optimization, dedicated to Jacques H. Drèze*, pages 433–441. Elsevier Science Publisher B.V., Amsterdam, The Netherlands, 1990.
- J.-Ph. Vial. Approximate projections in a projective method for the linear feasibility problem. In N. Megiddo, editor, *Progress in Mathematical Programming : Interior-Points and Related Methods*, pages 65–78. Springer Verlag, Berlin, Heidelberg, New York, 1989.

J. Jaskold Gabszewicz and J.-Ph. Vial. Optimal capacity expansion under growing demand and technological change,. In G. Szegő and K. Shell, editors, *Mathematical Methods in Investment and Finance*. North-Holland, Amsterdam, 1972.

J.-Ph. Vial. Continuous time model for the cash balance problem. In G. Szegő and K. Shell, editors, *Mathematical Methods in Investment and Finance*. North-Holland, Amsterdam, 1972.

Articles dans des proceedings

A. Ouorou and J.-P. Vial. A model for robust capacity planning for telecommunications networks under demand uncertainty. In *Proceedings of the 6th International Workshop on Design and Reliable Communication Networks, DRCN 2007*, 2007.

C. Tadonki and J.-Ph. Vial. Efficient algorithm for linear pattern separation. In M. Bubak, G.D. van Al-bada, P.M.A. Sloot, and J.J. Dongarra, editors, *Computational Science - ICCS 2004 : 4th International Conference, Kraków, Poland, June 6-9, 2004, Proceedings, Part I*, Lecture Notes in Computer Science, pages 679 – 682. Springer-Verlag GmbH, 2004.

J.A. Filar, J. Gondzio, A. Haurie, F. Moresino, and J.-Ph. Vial. Decomposition and parallel processing techniques for two-time scale controlled markov chains. In *IEEE CDC Proceedings, Sidney*, 2000.

J.-L. Goffin and J.-Ph. Vial. Interior Point Methods for Nondifferentiable Optimization. In P. Kishka et al., editor, *1997 Operations Research Proceedings*, pages 35–49, Berlin, Heidelberg, New York, 1998. Springer Verlag.

A. Haurie, R. Loulou, and J.-Ph. Vial. Programmation mathématique et analyse des choix énergétiques et environnementaux. In F. Carlevaro, M. Garbely, and F. Romerio, editors, *Modèle d'aide à la décision en matière de politique énergétique suisse*. Proceedings of Journée du CUEPE 1990 held in Genève, Switzerland, 1991.

J.-Ph. Vial. Decomposition of structured linear programs based on analytical centers. In G. Ricci, editor, *Decision Processes in Economics*, pages 190–203, Berlin, Heidelberg, New York, 1991. Springer Verlag. Proceedings of the 6th Italian Conference on Game Theory and Applications held in Modena.

C. Fraley and J.-Ph. Vial. Numerical study of projective methods for linear programming. In S. Dolecki, editor, *Optimization*, number 1405 in Lecture Notes in Mathematics, pages 25–38, Berlin, Heidelberg, New York, 1989. Springer Verlag. Proceedings of the Fifth French-German Conference in Optimization held in Castel-Novel 1988.

J.-Ph. Vial. A unified approach to projective algorithms for linear programming. In S. Dolecki, editor, *Optimization*, number 1405 in Lecture Notes in Mathematics, pages 191–220, Berlin, Heidelberg, New York, 1989. Springer Verlag. Proceedings of the Fifth French-German Conference in Optimization held in Castel-Novel 1988.

Edition de numéros spéciaux

J.-L. Goffin and J.-Ph. Vial, editors. *Nondifferentiable and Large Scale Optimization*. Number 69 in Mathematical Programming B. North-Holland, Amsterdam, The Netherlands, 1995.

B. Cornet, Nguyen v. Hien, and J.-Ph. Vial, editors. *Nonlinear Analysis and Optimization*. Mathematical Programming Study. North-Holland, Amsterdam, The Netherlands, 1987.

Rapports de recherche

Frédéric Babonneau, Olivier Klopfenstein, Adam Ouorou, and Jean-Philippe Vial. Robust capacity expansion solutions for telecommunication networks with uncertain demands. Working paper (submitted to *Networks*), ORDECSYS, Place de l'Etrier, 4, 1224 Genève, Switzerland, 2010.

J.-P. Vial and R. Apparigliato. Optimisation robuste linéaire : une introduction. Rapport de recherche, EDF R&D OSIRIS, 1 Av. Général de Gaulle, 92141 Clamart cedex, France, 2007.

R. Apparigliato, J.-P. Vial, and R. Zorgati. Optimisation robuste linéaire. Application ; Gestion à court terme d'une vallée hydraulique. Rapport de recherche H-R32-2006-04804-FR, EDF R&D, Dépt OSIRIS, 1 Av. Général de Gaulle, 92141 Clamart cedex, France, 2007.

C. Beltran-Royo, J.-P. Vial, and A. Alonso-Ayuso. Solving the uncapacitated facility location problem with semi-Lagrangian relaxation. Working paper, Statistics and Operations Research, Rey Juan Carlos University, Madrid, Spain, 2007.

J. Thénier and J.-P. Vial. A script for the automatic generation of stochastic programming models with AMPL. Technical report, HEC/Logilab, University of Geneva, 40 Bd du Pont d'Arve, CH-1211, Switzerland, 2005.

A. Dubois, J. Thénier, and J.-P. Vial. Stochastic programming : the det2sto tool. Technical report, 2005.

O. Péton, N. Sawhney, and J.-P. Vial. Linear and nonlinear discrimination via the analytic center cutting plane method. Technical report, Hec/Logilab, University of Geneva, 40 bd du Pont d'Arve, CH-1211 Geneva 4, Switzerland, 2005.

C. Beltran, A. Haurie, X. Haurie, M. Polis, and J.-P. Vial. A multicriterion circuit design problem. Technical report, Logilab, HEC, University of Geneva, 2004.

Y. Hachez and J.-Ph. Vial. Cutting plane methods and nonnegative polynomial. Technical report, HEC/Logilab, University of Geneva, 40 Bd du Pont d'Arve, CH-1211, Switzerland, 2002.

F. Babonneau, C. Beltran, O. du Merle, C. Tadonki, and J.-P. Vial. *The proximal analytic center cutting plane method*. Logilab - HEC - University of Geneva, 2003.

O. du Merle and J.-P. Vial. Proximal ACCPM, a cutting plane method for column generation and Lagrangian relaxation : application to the p-median problem. Technical report, Logilab, HEC, University of Geneva, 2002.

O. Péton and J.-P. Vial. A tutorial on ACCPM : user's guide for version 2.01. Technical report, Logilab - HEC - University of Geneva, 2001.

Y. Nesterov and J.-Ph. Vial. Confidence level solutions for stochastic programming. Technical report, Department of Management Studies, University of Geneva, 2000, revised 2001.

O. Epelley, J. Gondzio, and J.-Ph. Vial. An interior point solver for smooth convex optimization with an application to environmental-energy-economic models. Technical Report 2000.08, Department of Management Studies, University of Geneva, Switzerland, 2000.

A. Ouorou, J.-Ph. Vial, and A. Lissner. Capacity planning under uncertain demand in telecommunications networks. Technical report, HEC/Logilab, University of Geneva, 102 Bd Carl-Vogt, CH-1211, Switzerland, 1999.

J.-Ph. Vial. A note on an infeasible start interior point method for linear programming. Technical Report 99.04, HEC/Logilab, University of Geneva, 102 Bd Carl-Vogt, CH-1211, Switzerland, 1999.

A. Lissner, R. Sarkissian, and J.-Ph. Vial. Mid-range planning of survivable telecommunications networks : joint optimal synthesis of base and spare network. Technical Report 98.14, HEC/Logilab, University of Geneva, 102 Bd Carl-Vogt, CH-1211, Switzerland, 1998. Extensive revision of [19].

J.-Ph. Vial. A generic path-following algorithm with a sliding constraint and its application to linear programming and the computation of analytic centers. Technical Report 96.8, HEC/Logilab, University of Geneva, 102 Bd Carl-Vogt, CH-1211, Switzerland, February 1996.

A. Lissner, R. Sarkissian, and J.-Ph. Vial. Optimal joint synthesis of base and reserve telecommunication networks. Technical report, HEC/Logilab, University of Geneva, 102 Bd Carl-Vogt, CH-1211, Switzerland, October 1995.

E. Loute and J.-Ph. Vial. A parallel block Cholesky factorization for staircase linear programs. Technical Report CORE DP 9260, Center for Operations Research and Econometrics, Louvain, Belgium, 1992. Revised October 1993.