

University of Groningen

## Dynamic and stochastic planning problems with online decision making

Cremers, M.L.A.G.

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2009

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Cremers, M. L. A. G. (2009). *Dynamic and stochastic planning problems with online decision making: a novel class of models*. [Thesis fully internal (DIV), University of Groningen]. PrintPartners Ipskamp B.V., Enschede, The Netherlands.

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

# Bibliography

- Albers, S. (2003). Online algorithms: A survey. *Mathematical Programming*, 97(1-2), 3–26.
- Applegate, D. L., Bixby, R. E., Chvátal, V., and Cook, W. J. (2006). *The traveling salesman problem: A computational study*. Princeton University Press.
- Attanasio, A., Cordeau, J.-F., Ghiani, G., and Laporte, G. (2004). Parallel tabu search heuristics for the dynamic multi-vehicle dial-a-ride problem. *Parallel Computing*, 30, 377–387.
- Baker, B. M. and Ayechev, M. A. (2003). A genetic algorithm for the vehicle routing problem. *Computers and Operations Research*, 30(5), 787–800.
- Ball, M. O., Magnanti, T. L., Monma, C. L., and Nemhauser, G. L. (Eds.). (1995). *Network routing*. Vol. 8 of Handbooks in Operations Research and Management Science, Elsevier.
- Barnhart, C. and Laporte, G. (Eds.). (2007). *Transportation*. Vol. 14 of Handbooks in Operations Research and Management Science, Elsevier.
- Birge, J. R. and Louveaux, F. (1997). *Introduction to stochastic programming*. New York: Springer-Verlag.
- Bolduc, M.-C., Renaud, J., and Boctor, F. (2007). A heuristic for the routing and carrier selection problem. *European Journal of Operational Research*, 183, 926–932.
- Borndörfer, R., Grötschel, M., Klostermeier, F., and Küttner, C. (1997). *Telebus Berlin: Vehicle scheduling in a dial-a-ride system*. (ZIB Report 97-23)
- Campbell, A. M. and Savelsbergh, M. W. P. (2005). Decision support for consumer direct grocery initiatives. *Transportation Science*, 39, 313–327.
- Charnes, A., Cooper, W. W., and Symonds, G. H. (1958). Cost horizons and certainty equivalents: An approach to stochastic programming in heat oil. *Management Science*, 4, 235–263.
- Chu, C.-W. (2005). A heuristic algorithm for the truckload and less-than-truckload

- problem. *European Journal of Operational Research*, 165, 657–667.
- Chu, P. C. and Beasley, J. E. (1997). A genetic algorithm for the generalized assignment problem. *Computers and Operations Research*, 24(1), 17–23.
- Chu, P. C. and Beasley, J. E. (1998). A genetic algorithm for the multidimensional knapsack problem. *Journal of Heuristics*, 4(1), 63–86.
- Cordeau, J.-F. and Laporte, G. (2003a). The dial-a-ride problem (DARP): Variants, modeling issues and algorithms. *Quarterly Journal of the Belgian, French and Italian Operations Research Societies*, 1, 89–101.
- Cordeau, J.-F. and Laporte, G. (2003b). A tabu search heuristic for the static multi-vehicle dial-a-ride problem. *Transportation Research Part B*, 37(6), 579–594.
- Cremers, M. L. A. G., Gromicho, J. A. S., Klein Haneveld, W. K., and van der Vlerk, M. H. (Under revision). *A dynamic service mechanic problem for a housing corporation*. Revision submitted to *Journal of Scheduling*. (<http://mally.eco.rug.nl/papers/DSMP.htm>)
- Cremers, M. L. A. G., Klein Haneveld, W. K., and van der Vlerk, M. H. (2006). A two-stage model for a day-ahead paratransit planning problem (abstract). *Electronic Notes in Discrete Mathematics*, 25, 35.
- Cremers, M. L. A. G., Klein Haneveld, W. K., and van der Vlerk, M. H. (2008). *Fast heuristics for a dynamic paratransit problem*. SOM Research Report 08004.
- Cremers, M. L. A. G., Klein Haneveld, W. K., and van der Vlerk, M. H. (2009). *A two-stage model for a day-ahead paratransit planning problem*. To appear in *Mathematical Methods of Operations Research*. (<http://mally.eco.rug.nl/papers/DaPP.htm>)
- Cremers, M. L. A. G., Klein Haneveld, W. K., and van der Vlerk, M. H. (To appear). *A dynamic day-ahead paratransit planning problem*. To appear in *IMA Journal of Management Mathematics*. (<http://mally.eco.rug.nl/papers/DDaPP.htm>)
- Dantzig, G. B. (1955). Linear programming under uncertainty. *Management Science*, 1, 197–206.
- Dawande, M., Kalagnanam, J., Keskinocak, P., Ravi, P., and Salman, F. S. (2000). Approximation algorithms for the multiple knapsack problem with assignment restrictions. *Journal of Combinatorial Optimization*, 4, 171–186.
- Desrosiers, J., Dumas, Y., Soumis, F., Taillefer, S., and Villeneuve, D. (1991). *An algorithm for mini-clustering in handicapped transport*. (Les Cahiers du GERAD, G-91-02)
- Diana, M. and Dessouky, M. M. (2004). A new regret insertion heuristic for solving large-scale dial-a-ride problems with time windows. *Transportation Research*

- Part B*, 38, 539–557.
- Feltl, H. and Raidl, G. R. (2004). An improved hybrid genetic algorithm for the generalized assignment problem. In *Proceedings of the 2004 ACM symposium on applied computing* (pp. 990–995).
- Fiat, A. and Woeginger, G. J. (1998). *Online algorithms: The state of the art*. Springer-Verlag.
- Gallagher, A., Zimmerman, T., and Smith, S. (2006). Incremental scheduling to maximize quality in a dynamic environment. In D. Long, S. Smith, D. Borrajo, and L. McCluskey (Eds.), *Proceedings of the sixteenth international conference on automated planning and scheduling (ICAPS)* (pp. 222–232). AAAI Press.
- Gavish, B. and Pirkul, H. (1991). Algorithms for the multi-resource generalized assignment problem. *Management Science*, 37(6), 695–713.
- Gerchak, Y., Gupta, D., and Henig, M. (1996). Reservation planning for elective surgery under uncertain demand for emergency surgery. *Management Science*, 42(3), 321–334.
- Goldberg, D. E. (1989). *Genetic algorithms in search, optimization, and machine learning*. Addison-Wesley.
- Golden, B., Raghavan, S., and Wasil, E. (Eds.). (2008). *The vehicle routing problem: Latest advances and new challenges*. Springer.
- Grötschel, M., Krumke, S. O., and Rambau, J. (2001a). *Online optimization of complex transportation systems*. (ZIB Reprint ZR-01-17)
- Grötschel, M., Krumke, S. O., Rambau, J., Winter, T., and Zimmermann, U. T. (2001b). Combinatorial online optimization in real time. In M. Grötschel, S. O. Krumke, and J. Rambau (Eds.), *Online optimization of large scale systems* (pp. 679–704). Springer.
- Gutin, G. and Punnen, A. P. (Eds.). (2002). *The traveling salesman problem and its variations*. Kluwer Academic Publishers.
- Holland, J. H. (1975). *Adaptation in natural and artificial systems: An introductory analysis with applications to biology, control, and artificial intelligence*. University of Michigan Press.
- Ioachim, I., Desrosiers, J., Dumas, Y., Solomon, M. S., and Villeneuve, D. (1995). A request clustering algorithm for door-to-door handicapped transportation. *Transportation Science*, 29, 63–78.
- Jaw, J.-J., Odoni, A. R., Psaraftis, H. N., and Wilson, N. H. M. (1986). A heuristic algorithm for the multi-vehicle advance request dial-a-ride problem with time windows. *Transportation Research Part B*, 20(3), 243–257.

- Johns, S. (1995). Heuristics to schedule service engineers within time windows. *Journal of the Operational Research Society*, 46, 339–346.
- Jørgensen, R. M., Larsen, J., and Bergvinsdottir, K. B. (2007). Solving the dial-a-ride problem using genetic algorithms. *Journal of the Operational Research Society*, 58, 1321–1331.
- Kall, P. and Mayer, J. (2005). *Stochastic linear programming: Models, theory, and computation*. New York: Kluwer Academic Publishers.
- Klein Haneveld, W. K. and van der Vlerk, M. H. (1999). Stochastic integer programming: General models and algorithms. *Annals of Operations Research*, 85, 39–57.
- Krumke, S. O. (2001). *Online optimization: Competitive analysis and beyond*. Habilitation thesis, Technical University of Berlin. (<http://www.mathematik.uni-kl.de/~krumke/>)
- Lawler, E. L., Lenstra, J. K., Rinnooy Kan, A. H. G., and Shmoys, D. B. (Eds.). (1985). *The traveling salesman problem: A guided tour of combinatorial optimization*. John Wiley & sons.
- Louveaux, F. V. and Schultz, R. (2003). Stochastic integer programming. In A. Ruszczyński and A. Shapiro (Eds.), *Handbooks in operations research and management science, vol. 10: Stochastic programming* (pp. 213–266). Elsevier.
- Madsen, O. B. G., Ravn, H. F., and Rygaard, J. M. (1995a). A heuristic algorithm for a dial-a-ride problem with time windows, multiple capacities, and multiple objectives. *Annals of Operations Research*, 60, 193–208.
- Madsen, O. B. G., Tosti, K., and Vælds, J. (1995b). A heuristic method for dispatching repair men. *Annals of Operations Research*, 61, 213–226.
- Mazzola, J. B. and Wilcox, S. P. (2001). Heuristics for the multi-resource generalized assignment problem. *Naval Research Logistics*, 48, 468–483.
- Parragh, S. N., Doerner, K. F., and Hartl, R. F. (2008a). A survey on pickup and delivery problems. Part I: transportation between customers and depot. *Journal für Betriebswirtschaft*, 58, 21 – 51.
- Parragh, S. N., Doerner, K. F., and Hartl, R. F. (2008b). A survey on pickup and delivery problems. Part II: Transportation between pickup and delivery locations. *Journal für Betriebswirtschaft*, 58, 81 – 117.
- Reeves, C. R. (1993). *Modern heuristic techniques for combinatorial problems*. Blackwell Scientific.
- Ruszczynski, A. and Shapiro, A. (Eds.). (2003). *Stochastic programming*. Vol. 10 of *Handbooks in Operations Research and Management Science*, Elsevier.

- Schultz, R. (2003). Stochastic programming with integer variables. *Mathematical Programming*, 97, 285–309.
- Sen, S. (2005). Algorithms for stochastic mixed-integer programming models. In K. Aardal, G. Nemhauser, and R. Weismantel (Eds.), *Handbooks in operations research and management science, vol. 12: Discrete optimization* (pp. 515–558). Elsevier.
- Sleator, D. D. and Tarjan, R. E. (1985). Amortized efficiency of list update and paging rules. *Communications of the ACM*, 28(2), 202–208.
- Stochastic programming e-print series*. (SPePS). <http://speps.org>.
- Toth, P. and Vigo, D. (1997). Heuristic algorithms for the handicapped persons transportation problem. *Transportation Science*, 31(1), 60–71.
- Toth, P. and Vigo, D. (Eds.). (2002). *The vehicle routing problem*. SIAM Monographs on Discrete Mathematics and Applications.
- Wallace, S. W. and Ziemba, W. T. (Eds.). (2005). *Applications of stochastic programming*. Philadelphia: MPS-SIAM Series on Optimization.
- Wong, K. I. and Bell, M. G. H. (2006). Solution of the dial-a-ride problem with multi-dimensional capacity constraints. *International Transactions in Operational Research*, 13, 195–208.
- Xu, J. and Chiu, S. Y. (2001). Effective heuristic procedures for a field technician scheduling problem. *Journal of Heuristics*, 7, 495–509.

