Greedy Randomized Adaptive Search Procedures: Advances and Extensions

Handbook of Metaheuristics pp 169-220 | Cite as

- Mauricio G. C. Resende (1) (2) Email author (mgcr@uw.edu)
- Celso C. Ribeiro (3)

1. Amazon.com, , Seattle, USA
2. University of Washington, , Seattle, USA
3. Universidade Federal Fluminense, , Niterói, Brazil

Chapter
First Online: 21 September 2018

Part of the International Series in Operations Research & Management Science book series (ISOR, volume 272)

Abstract

A greedy randomized adaptive search procedure (GRASP) is a multi-start metaheuristic for combinatorial optimization problems, in which each iteration consists basically of two phases: construction and local search. The construction phase builds a feasible solution whose neighborhood is investigated until a local minimum is found during the local search phase. The best overall solution is kept as the result. In this chapter, we first describe the basic components of GRASP. Successful implementation techniques are discussed and illustrated by numerical results obtained for different applications. Enhanced or alternative solution construction mechanisms and techniques to speed up the search are also described: Alternative randomized greedy construction schemes, Reactive GRASP, cost perturbations, bias functions, memory and learning, Lagrangean constructive heuristics and Lagrangean GRASP, local search on partially constructed solutions, hashing, and filtering. We also discuss implementation strategies of memory-based intensification and post-optimization techniques using path-relinking. Restart strategies to speedup the search, hybridizations with other metaheuristics, and applications are also reviewed.

Keywords

Greedy Randomized Adaptive Search Procedure (GRASP) Path Relinking
Restart Strategy Basic GRASP Lagrangian Heuristics
These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves.

References

1. S. Abdinnour-Helm, S.W. Hadley, Tabu search based heuristics for multi-floor facility layout. Int. J. Prod. Res. **38**, 365–383 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Tabu%20search%20based%20heuristics%20for%20multi-floor%20facility%20layout&author=S..%20Abdinnour-Helm&author=S.W..%20Hadley&journal=Int.%20J.%20Prod.%20Res.&volume=38&pages=365-383&publication_year=2000)

2. J. Abello, P.M. Pardalos, M.G.C. Resende, On maximum clique problems in very large graphs, in *External Memory Algorithms and Visualization*, ed. by J. Abello, J. Vitter. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 50 (American Mathematical Society, Providence, 1999), pp. 199–130
Google Scholar (https://scholar.google.com/scholar?q=J.%C2%A0Abello%2C%20P.M.%20Pardalos%2C%20M.G.C.%20Resende%2C%20On%20maximum%20clique%20problems%20in%20very%20large%20graphs%2C%20in%20External%20Memory%20Algorithms%20and%20Visualization%2C%20ed.%20by%20J.%C2%A0Abello%2C%20J.%C2%A0Vitter.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A050%20%28American%20Mathematical%20Society%2C%20Providence%2C%201999%29%2C%20pp.%C2%A0199%E2%80%93130)

3. J. Abello, M.G.C. Resende, S. Sudarsky, Massive quasi-clique detection, in *LATIN 2002: Theoretical Informatics*, ed. by S. Rajsbaum. Lecture Notes in Computer Science, vol. 2286 (Springer, Berlin, 2002), pp. 598–612
Google Scholar (http://scholar.google.com/scholar_lookup?title=Massive%20Quasi-Clique%20Detection&author=James.%20Abello&author=Mauricio%20G.%20C..%20Resende&author=Sandra.%20Sudarsky&pages=598-612&publication_year=2002)

4. R.K. Ahuja, J.B. Orlin, A. Tiwari, A greedy genetic algorithm for the quadratic assignment problem. Comput. Oper. Res. **27**, 917–934 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20genetic%20algorithm%20for%20the%20quadratic%20assignment%20problem&author=R.K..%20Ahuja&author=J.B..%20Orlin&author=A..%20Tiwari&journal=Comput.%20Oper.%20Res.&volume=27&pages=917-934&publication_year=2000)

5. R.K. Ahuja, J.B. Orlin, D. Sharma, Multi-exchange neighborhood structures for the capacitated minimum spanning tree problem. Math. Program. **91**, 71–97

(2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Multi-exchange%20neighborhood%20structures%20for%20the%20capacitated%20minimum%20spanning%20tree%20problem&author=R.K..%20Ahuja&author=J.B..%20Orlin&author=D..%20Sharma&journal=Math.%20Program.&volume=91&pages=71-97&publication_year=2001)

6. R.M. Aiex, M.G.C. Resende, Parallel strategies for GRASP with path-relinking, in *Metaheuristics: Progress as Real Problem Solvers*, ed. by T. Ibaraki, K. Nonobe, M. Yagiura (Springer, New York, 2005), pp. 301–331
Google Scholar (http://scholar.google.com/scholar_lookup?title=Parallel%20strategies%20for%20GRASP%20with%20path-relinking&author=R.M..%20Aiex&author=M.G.C..%20Resende&pages=301-331&publication_year=2005)

7. R.M. Aiex, M.G.C. Resende, C.C. Ribeiro, Probability distribution of solution time in GRASP: an experimental investigation. J. Heuristics **8**, 343–373 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Probability%20distribution%20of%20solution%20time%20in%20GRASP%3A%20an%20experimental%20investigation&author=R.M..%20Aiex&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=J.%20Heuristics&volume=8&pages=343-373&publication_year=2002)

8. R.M. Aiex, S. Binato, M.G.C. Resende, Parallel GRASP with path-relinking for job shop scheduling. Parallel Comput. **29**, 393–430 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Parallel%20GRASP%20with%20path-relinking%20for%20job%20shop%20scheduling&author=R.M..%20Aiex&author=S..%20Binato&author=M.G.C..%20Resende&journal=Parallel%20Comput.&volume=29&pages=393-430&publication_year=2003)

9. R.M. Aiex, P.M. Pardalos, M.G.C. Resende, G. Toraldo, GRASP with path-relinking for three-index assignment. INFORMS J. Comput. **17**, 224–247 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%20for%20three-index%20assignment&author=R.M..%20Aiex&author=P.M..%20Pardalos&author=M.G.C..%20Resende&author=G..%20Toraldo&journal=INFORMS%20J.%20Comput.&volume=17&pages=224-247&publication_year=2005)

10. R.M. Aiex, M.G.C. Resende, C.C. Ribeiro, TTTPLOTS: a perl program to create time-to-target plots. Optim Lett. **1**, 355–366 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=TTTPLOTS%3A%20a%20perl%20program%20to%20create%20time-to-target%20plots&author=R.M..%20Aiex&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Optim%20Lett.&volume=1&pages=355-366&publication_year=2007)

11. E. Alekseeva, M. Mezmaz, D. Tuyttens, N. Melab, Parallel multi-core hyper-heuristic GRASP to solve permutation flow-shop problem. Concurrency Comput. Pract. Exp. **29**, e3835 (2017)
Google Scholar (http://scholar.google.com

/scholar_lookup?title=Parallel%20multi-core%20hyper-heuristic%20GRASP%20to%20solve%20permutation%20flow-shop%20problem&author=E..%20Alekseeva&author=M..%20Mezmaz&author=D..%20Tuyttens&author=N..%20Melab&journal=Concurrency%20Comput.%20Pract.%20Exp.&volume=29&publication_year=2017)

12. D. Aloise, C.C. Ribeiro, Adaptive memory in multistart heuristics for multicommodity network design. J. Heuristics **17**, 153–179 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Adaptive%20memory%20in%20multistart%20heuristics%20for%20multicommodity%20network%20design&author=D..%20Aloise&author=C.C..%20Ribeiro&journal=J.%20Heuristics&volume=17&pages=153-179&publication_year=2011)

13. R. Álvarez-Valdés, F. Parreno, J.M. Tamarit, A GRASP algorithm for constrained two-dimensional non-guillotine cutting problems. J. Oper. Res. Soc. **56**, 414–425 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20algorithm%20for%20constrained%20two-dimensional%20non-guillotine%20cutting%20problems&author=R..%20%C3%81lvarez-Vald%C3%A9s&author=F..%20Parreno&author=J.M..%20Tamarit&journal=J.%20Oper.%20Res.%20Soc.&volume=56&pages=414-425&publication_year=2005)

14. R. Álvarez-Valdés, E. Crespo, J.M. Tamarit, F. Villa, GRASP and path relinking for project scheduling under partially renewable resources. Eur. J. Oper. Res. **189**, 1153–1170 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20for%20project%20scheduling%20under%20partially%20renewable%20resources&author=R..%20%C3%81lvarez-Vald%C3%A9s&author=E..%20Crespo&author=J.M..%20Tamarit&author=F..%20Villa&journal=Eur.%20J.%20Oper.%20Res.&volume=189&pages=1153-1170&publication_year=2008)

15. R. Alvarez-Valdesa, F. Parreno, J.M. Tamarit, Reactive GRASP for the strip-packing problem. Comput. Oper. Res. **35**, 1065–1083 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Reactive%20GRASP%20for%20the%20strip-packing%20problem&author=R..%20Alvarez-Valdesa&author=F..%20Parreno&author=J.M..%20Tamarit&journal=Comput.%20Oper.%20Res.&volume=35&pages=1065-1083&publication_year=2008)

16. R. Alvarez-Valdes, F. Parreño, J.M. Tamarit, A GRASP/path relinking algorithm for two- and three-dimensional multiple bin-size bin packing problems. Comput. Oper. Res. **40**, 3081–3090 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%2Fpath%20relinking%20algorithm%20for%20two-%20and%20three-dimensional%20multiple%20bin-size%20bin%20packing%20problems&author=R..%20Alvarez-Valdes&author=F..%20Parre%C3%B1o&author=J.M..%20Tamarit&

journal=Comput.%20Oper.%20Res.&volume=40&pages=3081-3090&publication_year=2013)

17. E. Amaldi, A. Capone, F. Malucelli, Planning UMTS base station location: optimization models with power control and algorithms. IEEE Trans. Wirel. Commun. **2**, 939–952 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Planning%20UMTS%20base%20station%20location%3A%20optimization%20models%20with%20power%20control%20and%20algorithms&author=E..%20Amaldi&author=A..%20Capone&author=F..%20Malucelli&journal=IEEE%20Trans.%20Wirel.%20Commun.&volume=2&pages=939-952&publication_year=2003)

18. E. Amaldi, A. Capone, F. Malucelli, F. Signori, Optimization models and algorithms for downlink UMTS radio planning, in *Proceedings of Wireless Communications and Networking*, vol. 2 (2003), pp. 827–831
Google Scholar (https://scholar.google.com/scholar?q=E.%C2%A0Amaldi%2C%20A.%C2%A0Capone%2C%20F.%C2%A0Malucelli%2C%20F.%C2%A0Signori%2C%20Optimization%20models%20and%20algorithms%20for%20downlink%20UMTS%20radio%20planning%2C%20in%20Proceedings%20of%20Wireless%20Communications%20and%20Networking%2C%20vol.%C2%A02%20%282003%29%2C%20pp.%C2%A0827%E2%80%93831)

19. K.P. Anagnostopoulos, P.D. Chatzoglou, S. Katsavounis, A reactive greedy randomized adaptive search procedure for a mixed integer portfolio optimization problem. Manag. Financ. **36**, 1057–1065 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20reactive%20greedy%20randomized%20adaptive%20search%20procedure%20for%20a%20mixed%20integer%20portfolio%20optimization%20problem&author=K.P..%20Anagnostopoulos&author=P.D..%20Chatzoglou&author=S..%20Katsavounis&journal=Manag.%20Financ.&volume=36&pages=1057-1065&publication_year=2010)

20. D.V. Andrade, M.G.C. Resende, A GRASP for PBX telephone migration scheduling, in *Proceedings of the Eighth INFORMS Telecommunications Conference* (2006)
Google Scholar (https://scholar.google.com/scholar?q=D.V.%20Andrade%2C%20M.G.C.%20Resende%2C%20A%20GRASP%20for%20PBX%20telephone%20migration%20scheduling%2C%20in%20Proceedings%20of%20the%20Eighth%20INFORMS%20Telecommunications%20Conference%20%282006%29)

21. D.V. Andrade, M.G.C. Resende, GRASP with evolutionary path-relinking. Technical Report TD-6XPTS7, AT&T Labs Research, Florham Park, 2007
Google Scholar (https://scholar.google.com/scholar?q=D.V.%20Andrade%2C%20M.G.C.%20Resende%2C%20GRASP%20with%20evolutionary%20path-relinking.%20Technical%20Report%20TD-6XPTS7

%2C%20AT%26T%20Labs%20Research%2C%20Florham%20Park%2C%202007)

22. D.V. Andrade, M.G.C. Resende, GRASP with path-relinking for network migration scheduling, in *Proceedings of the International Network Optimization Conference* (2007)
Google Scholar (https://scholar.google.com/scholar?q=D.V.%20Andrade%2C%20M.G.C.%20Resende%2C%20GRASP%20with%20path-relinking%20for%20network%20migration%20scheduling%2C%20in%20Proceedings%20of%20the%20International%20Network%20Optimization%20Conference%20%282007%29)

23. A.A. Andreatta, C.C. Ribeiro, Heuristics for the phylogeny problem. J. Heuristics **8**, 429–447 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Heuristics%20for%20the%20phylogeny%20problem&author=A.A..%20Andreatta&author=C.C..%20Ribeiro&journal=J.%20Heuristics&volume=8&pages=429-447&publication_year=2002)

24. C. Andrés, C. Miralles, R. Pastor, Balancing and scheduling tasks in assembly lines with sequence-dependent setup times. Eur. J. Oper. Res. **187**, 1212–1223 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Balancing%20and%20scheduling%20tasks%20in%20assembly%20lines%20with%20sequence-dependent%20setup%20times&author=C..%20Andr%C3%A9s&author=C..%20Miralles&author=R..%20Pastor&journal=Eur.%20J.%20Oper.%20Res.&volume=187&pages=1212-1223&publication_year=2008)

25. C.H. Antunes, E. Oliveira, P. Lima, A multi-objective GRASP procedure for reactive power compensation planning. Optim. Eng. **15**, 199–215 (2014)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20multi-objective%20GRASP%20procedure%20for%20reactive%20power%20compensation%20planning&author=C.H..%20Antunes&author=E..%20Oliveira&author=P..%20Lima&journal=Optim.%20Eng.&volume=15&pages=199-215&publication_year=2014)

26. A.P.F. Araújo, C. Boeres, V.E.F. Rebello, C.C. Ribeiro, S. Urrutia, Exploring grid implementations of parallel cooperative metaheuristics: a case study for the mirrored traveling tournament problem, in *Metaheuristics: Progress in Complex Systems Optimization*, ed. by K.F. Doerner, M. Gendreau, P. Greistorfer, W. Gutjahr, R.F. Hartl, M. Reimann (Springer, New York, 2007), pp. 297–322
Google Scholar (http://scholar.google.com/scholar_lookup?title=Exploring%20grid%20implementations%20of%20parallel%20cooperative%20metaheuristics%3A%20a%20case%20study%20for%20the%20mirrored%20traveling%20tournament%20problem&author=A.P.F..%20Ara%C3%BAjo&author=C..%20Boeres&author=V.E.F..%20Rebello&author=C.C..%20Ribeiro&author=S..%20Urrutia&pages=297-322&publication_year=2007)

27. S.M. Areibi, GRASP: an effective constructive technique for VLSI circuit partitioning, in *Proceedings of the IEEE Canadian Conference on Electrical and Computer Engineering*, Edmonton, pp. 462–467 (1999)
Google Scholar (https://scholar.google.com/scholar?q=S.M.%20Areibi

%2C%20GRASP
%3A%20an%20effective%20constructive%20technique%20for%20VLSI%20circuit%20partitioning
%2C%20in%20Proceedings%20of%20the%20IEEE%20Canadian%20Conference%20on%20Electrical%20and%20Computer%20Engineering%2C%20Edmonton%2C%20pp.%C2%A0462%E2%80%93467%20%281999%29)

28. S. Areibi, A. Vannelli, A GRASP clustering technique for circuit partitioning, in *Satisfiability Problems*, ed. by J. Gu, P.M. Pardalos. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 35 (American Mathematical Society, Providence, 1997), pp. 711–724
Google Scholar (https://scholar.google.com/scholar?q=S.%C2%A0Areibi%2C%20A.%C2%A0Vannelli%2C%20A%20GRASP%20clustering%20technique%20for%20circuit%20partitioning%2C%20in%20Satisfiability%20Problems%2C%20ed.%20by%20J.%C2%A0Gu%2C%20P.M.%20Pardalos.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A035%20%28American%20Mathematical%20Society%2C%20Providence%2C%201997%29%2C%20pp.%C2%A0711%E2%80%93724)

29. M.F. Argüello, T.A. Feo, O. Goldschmidt, Randomized methods for the number partitioning problem. Comput. Oper. Res. **23**, 103–111 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Randomized%20methods%20for%20the%20number%20partitioning%20problem&author=M.F..%20Arg%C3%BCello&author=T.A..%20Feo&author=O..%20Goldschmidt&journal=Comput.%20Oper.%20Res.&volume=23&pages=103-111&publication_year=1996)

30. M.F. Argüello, J.F. Bard, G. Yu, A GRASP for aircraft routing in response to groundings and delays. J. Comb. Optim. **1**, 211–228 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20aircraft%20routing%20in%20response%20to%20groundings%20and%20delays&author=M.F..%20Arg%C3%BCello&author=J.F..%20Bard&author=G..%20Yu&journal=J.%20Comb.%20Optim.&volume=1&pages=211-228&publication_year=1997)

31. M. Armony, J.C. Klincewicz, H. Luss, M.B. Rosenwein, Design of stacked self-healing rings using a genetic algorithm. J. Heuristics **6**, 85–105 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Design%20of%20stacked%20self-healing%20rings%20using%20a%20genetic%20algorithm&author=M..%20Armony&author=J.C..%20Klincewicz&author=H..%20Luss&author=M.B..%20Rosenwein&journal=J.%20Heuristics&volume=6&pages=85-105&publication_year=2000)

32. J.E.C. Arroyo, P.S. Vieira, D.S. Vianna, A GRASP algorithm for the multi-criteria minimum spanning tree problem. Ann. Oper. Res. **159**, 125–133 (2008)
Google Scholar (http://scholar.google.com

/scholar_lookup?title=A%20GRASP%20algorithm%20for%20the%20multi-criteria%20minimum%20spanning%20tree%20problem&author=J.E.C..%20Arroyo&author=P.S..%20Vieira&author=D.S..%20Vianna&journal=Ann.%20Oper.%20Res.&volume=159&pages=125-133&publication_year=2008)

33. J.B. Atkinson, A greedy randomised search heuristic for time-constrained vehicle scheduling and the incorporation of a learning strategy. J. Oper. Res. Soc. **49**, 700–708 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomised%20search%20heuristic%20for%20time-constrained%20vehicle%20scheduling%20and%20the%20incorporation%20of%20a%20learning%20strategy&author=J.B..%20Atkinson&journal=J.%20Oper.%20Res.%20Soc.&volume=49&pages=700-708&publication_year=1998)

34. J.F. Bard, An analysis of a rail car unloading area for a consumer products manufacturer. J. Oper. Res. Soc. **48**, 873–883 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20analysis%20of%20a%20rail%20car%20unloading%20area%20for%20a%20consumer%20products%20manufacturer&author=J.F..%20Bard&journal=J.%20Oper.%20Res.%20Soc.&volume=48&pages=873-883&publication_year=1997)

35. J.F. Bard, T.A. Feo, Operations sequencing in discrete parts manufacturing. Manage. Sci. **35**, 249–255 (1989)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Operations%20sequencing%20in%20discrete%20parts%20manufacturing&author=J.F..%20Bard&author=T.A..%20Feo&journal=Manage.%20Sci.&volume=35&pages=249-255&publication_year=1989)

36. J.F. Bard, T.A. Feo, An algorithm for the manufacturing equipment selection problem. IIE Trans. **23**, 83–92 (1991)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20algorithm%20for%20the%20manufacturing%20equipment%20selection%20problem&author=J.F..%20Bard&author=T.A..%20Feo&journal=IIE%20Trans.&volume=23&pages=83-92&publication_year=1991)

37. J.F. Bard, T.A. Feo, S. Holland, A GRASP for scheduling printed wiring board assembly. IIE Trans. **28**, 155–165 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20scheduling%20printed%20wiring%20board%20assembly&author=J.F..%20Bard&author=T.A..%20Feo&author=S..%20Holland&journal=IIE%20Trans.&volume=28&pages=155-165&publication_year=1996)

38. J.F. Bard, L. Huang, P. Jaillet, M. Dror, A decomposition approach to the inventory routing problem with satellite facilities. Transp. Sci. **32**, 189–203 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20decomposition%20approach%20to%20the%20inven

tory%20routing%20problem%20with%20satellite%20facilities&author=J.F..%20Bard&author=L..%20Huang&author=P..%20Jaillet&author=M..%20Dror&journal=Transp.%20Sci.&volume=32&pages=189-203&publication_year=1998)

39. J.F. Bard, Y. Shao, A.I. Jarrah, A sequential GRASP for the therapist routing and scheduling problem. J. Scheduling **17**, 109–133 (2014)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20sequential%20GRASP%20for%20the%20therapist%20routing%20and%20scheduling%20problem&author=J.F..%20Bard&author=Y..%20Shao&author=A.I..%20Jarrah&journal=J.%20Scheduling&volume=17&pages=109-133&publication_year=2014)

40. E.B. Baum, Iterated descent: a better algorithm for local search in combinatorial optimization problems. Technical Report, California Institute of Technology, 1986
Google Scholar (https://scholar.google.com/scholar?q=E.B.%20Baum%2C%20Iterated%20descent%3A%20a%20better%20algorithm%20for%20local%20search%20in%20combinatorial%20optimization%20problems.%20Technical%20Report%2C%20California%20Institute%20of%20Technology%2C%201986)

41. E.B. Baum, Towards practical 'neural' computation for combinatorial optimization problems, in *AIP Conference Proceedings 151 on Neural Networks for Computing* (American Institute of Physics Inc., Woodbury, 1987), pp. 53–58
Google Scholar (http://scholar.google.com/scholar_lookup?title=Towards%20practical%20%E2%80%98neural%E2%80%99%20computation%20for%20combinatorial%20optimization%20problems%2C%20in%20AIP%20Conference%20Proceedings%20151%20on%20Neural%20Networks%20for%20Computing%0A&author=E.B..%20Baum&publication_year=1987)

42. J. Baxter, Local optima avoidance in depot location. J. Oper. Res. Soc. **32**, 815–819 (1981)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Local%20optima%20avoidance%20in%20depot%20location&author=J..%20Baxter&journal=J.%20Oper.%20Res.%20Soc.&volume=32&pages=815-819&publication_year=1981)

43. J.E. Beasley, An algorithm for set-covering problems. Eur. J. Oper. Res. **31**, 85–93 (1987)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20algorithm%20for%20set-covering%20problems&author=J.E..%20Beasley&journal=Eur.%20J.%20Oper.%20Res.&volume=31&pages=85-93&publication_year=1987)

44. J.E. Beasley, A Lagrangian heuristic for set-covering problems. Nav. Res. Logist. **37**, 151–164 (1990)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20Lagrangian%20heuristic%20for%20set-covering%20problems&author=J.E..%20Beasley&journal=Nav.%20Res.%20Logist.&volume=37&pages=151-164&publication_year=1990)

45. J.E. Beasley, Lagrangean relaxation, in *Modern Heuristic Techniques for Combinatorial Problems*, ed. by C.R. Reeves (Blackwell Scientific Publications, Oxford, 1993), pp. 243–303
Google Scholar (http://scholar.google.com/scholar_lookup?title=Lagrangean%20relaxation&author=J.E..%20Beasley&pages=243-303&publication_year=1993)

46. S. Binato, G.C. Oliveira, A reactive GRASP for transmission network expansion planning, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 81–100
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20reactive%20GRASP%20for%20transmission%20network%20expansion%20planning&author=S..%20Binato&author=G.C..%20Oliveira&pages=81-100&publication_year=2002)

47. S. Binato, H. Faria Jr., M.G.C. Resende, Greedy randomized adaptive path relinking, in *Proceedings of the IV Metaheuristics International Conference*, ed. by J.P. Sousa, pp. 393–397 (2001)
Google Scholar (https://scholar.google.com/scholar?q=S.%C2%A0Binato%2C%20H.%C2%A0Faria%20Jr.%2C%20M.G.C.%20Resende%2C%20Greedy%20randomized%20adaptive%20path%20relinking%2C%20in%20Proceedings%20of%20the%20IV%20Metaheuristics%20International%20Conference%2C%20ed.%20by%20J.P.%20Sousa%2C%20pp.%C2%A0393%E2%80%93397%20%282001%29)

48. S. Binato, G.C. Oliveira, J.L. Araújo, A greedy randomized adaptive search procedure for transmission expansion planning. IEEE Trans. Power Syst. **16**, 247–253 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20transmission%20expansion%20planning&author=S..%20Binato&author=G.C..%20Oliveira&author=J.L..%20Ara%C3%BAjo&journal=IEEE%20Trans.%20Power%20Syst.&volume=16&pages=247-253&publication_year=2001)

49. S. Binato, W.J. Hery, D. Loewenstern, M.G.C. Resende, A GRASP for job shop scheduling, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 59–79
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20job%20shop%20scheduling&author=S..%20Binato&author=W.J..%20Hery&author=D..%20Loewenstern&author=M.G.C..%20Resende&pages=59-79&publication_year=2002)

50. M. Boudia, M.A.O. Louly, C. Prins, A reactive GRASP and path relinking for a combined production-distribution problem. Comput. Oper. Res. **34**, 3402–3419 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20reactive%20GRASP%20and%20path%20relinking%20for%20a%20combined%20production-distribution%20problem&author=M..%20Boudia&author=M.A.O..%20Louly&author=C..%20Prins&journal=Comput.%20Oper.%20Res.&volume=34&pages=3402-3419&

publication_year=2007)

51. J.L. Bresina, Heuristic-biased stochastic sampling, in *Proceedings of the Thirteenth National Conference on Artificial Intelligence*, Portland, pp. 271–278 (1996)
Google Scholar (https://scholar.google.com/scholar?q=J.L.%20Bresina%2C%20Heuristic-biased%20stochastic%20sampling%2C%20in%20Proceedings%20of%20the%20Thirteenth%20National%20Conference%20on%20Artificial%20Intelligence%2C%20Portland%2C%20pp.%C2%A0271%E2%80%93278%20%281996%29)

52. A.M. Campbell, B.W. Thomas, Probabilistic traveling salesman problem with deadlines. Transp. Sci. **42**, 1–21 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Probabilistic%20traveling%20salesman%20problem%20with%20deadlines&author=A.M..%20Campbell&author=B.W..%20Thomas&journal=Transp.%20Sci.&volume=42&pages=1-21&publication_year=2008)

53. R.G. Cano, G. Kunigami, C.C. de Souza, P.J. de Rezende, A hybrid GRASP heuristic to construct effective drawings of proportional symbol maps. Comput. Oper. Res. **40**, 1435–1447 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20GRASP%20heuristic%20to%20construct%20effective%20drawings%20of%20proportional%20symbol%20maps&author=R.G..%20Cano&author=G..%20Kunigami&author=C.C..%20Souza&author=P.J..%20Rezende&journal=Comput.%20Oper.%20Res.&volume=40&pages=1435-1447&publication_year=2013)

54. S.A. Canuto, M.G.C. Resende, C.C. Ribeiro, Local search with perturbations for the prize-collecting Steiner tree problem in graphs. Networks **38**, 50–58 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Local%20search%20with%20perturbations%20for%20the%20prize-collecting%20Steiner%20tree%20problem%20in%20graphs&author=S.A..%20Canuto&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Networks&volume=38&pages=50-58&publication_year=2001)

55. C. Carreto, B. Baker, A GRASP interactive approach to the vehicle routing problem with backhauls, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 185–199
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20interactive%20approach%20to%20the%20vehicle%20routing%20problem%20with%20backhauls&author=C..%20Carreto&author=B..%20Baker&pages=185-199&publication_year=2002)

56. W.A. Chaovalitwongse, C.A.S Oliveira, B. Chiarini, P.M. Pardalos, M.G.C. Resende, Revised GRASP with path-relinking for the linear ordering problem. J. Comb. Optim. **22**, 572–593 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Revised%20GRASP%20with%20path-relinking%20for%20the%20linear%20ordering%20problem&

author=W.%20Art.%20Chaovalitwongse&author=Carlos%20A.%20S..%20Oliveira&author=Bruno.%20Chiarini&author=Panos%20M..%20Pardalos&author=Mauricio%20G.%20C..%20Resende&journal=Journal%20of%20Combinatorial%20Optimization&volume=22&issue=4&pages=572-593&publication_year=2010)

57. I. Charon, O. Hudry, The noising method: a new method for combinatorial optimization. Oper. Res. Lett. **14**, 133–137 (1993)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20noising%20method%3A%20a%20new%20method%20for%20combinatorial%20optimization&author=I..%20Charon&author=O..%20Hudry&journal=Oper.%20Res.%20Lett.&volume=14&pages=133-137&publication_year=1993)

58. I. Charon, O. Hudry, The noising methods: a survey, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 245–261
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20noising%20methods%3A%20a%20survey&author=I..%20Charon&author=O..%20Hudry&pages=245-261&publication_year=2002)

59. M. Chica, O. Cordón, S. Damas, J. Bautista, A multiobjective GRASP for the 1/3 variant of the time and space assembly line balancing problem, in *Trends in Applied Intelligent Systems*, ed. by N. García-Pedrajas, F. Herrera, C. Fyfe, J. Benítez, M. Ali. Lecture Notes in Computer Science, vol. 6098 (Springer, Berlin, 2010), pp. 656–665
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20Multiobjective%20GRASP%20for%20the%201%2F3%20Variant%20of%20the%20Time%20and%20Space%20Assembly%20Line%20Balancing%20Problem&author=M..%20Chica&author=O..%20Cord%C3%B3n&author=S..%20Damas&author=J..%20Bautista&pages=656-665&publication_year=2010)

60. R. Colomé, D. Serra, Consumer choice in competitive location models: formulations and heuristics. Pap. Reg. Sci. **80**, 439–464 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Consumer%20choice%20in%20competitive%20location%20models%3A%20formulations%20and%20heuristics&author=R..%20Colom%C3%A9&author=D..%20Serra&journal=Pap.%20Reg.%20Sci.&volume=80&pages=439-464&publication_year=2001)

61. C.W. Commander, S.I. Butenko, P.M. Pardalos, C.A.S. Oliveira, Reactive GRASP with path relinking for the broadcast scheduling problem, in *Proceedings of the 40th Annual International Telemetry Conference*, pp. 792–800 (2004)
Google Scholar (https://scholar.google.com/scholar?q=C.W.%20Commander%2C%20S.I.%20Butenko%2C%20P.M.%20Pardalos%2C%20C.A.S.%20Oliveira%2C%20Reactive%20GRASP%20with%20path%20relinking%20for%20the%20broadcast%20scheduling%20problem%2C%20in%20Proceedings%20of%20the%2040th%20Annual%20International%20Telemetry%20Conference%2C%20pp.%C2%A0792%E2%80%93800

%20%282004%29)

62. C. Commander, C.A.S. Oliveira, P.M. Pardalos, M.G.C. Resende, A GRASP heuristic for the cooperative communication problem in ad hoc networks, in *Proceedings of the VI Metaheuristics International Conference*, pp. 225–330 (2005)
Google Scholar (https://scholar.google.com/scholar?q=C.%C2%A0Commander%2C%20C.A.S.%20Oliveira%2C%20P.M.%20Pardalos%2C%20M.G.C.%20Resende%2C%20A%20GRASP%20heuristic%20for%20the%20cooperative%20communication%20problem%20in%20ad%20hoc%20networks%2C%20in%20Proceedings%20of%20the%20VI%20Metaheuristics%20International%20Conference%2C%20pp.%C2%A0225%E2%80%93330%20%282005%29)

63. A. Corberán, R. Martí, J.M. Sanchís, A GRASP heuristic for the mixed Chinese postman problem. Eur. J. Oper. Res. **142**, 70–80 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20heuristic%20for%20the%20mixed%20Chinese%20postman%20problem&author=A..%20Corber%C3%A1n&author=R..%20Mart%C3%AD&author=J.M..%20Sanch%C3%ADs&journal=Eur.%20J.%20Oper.%20Res.&volume=142&pages=70-80&publication_year=2002)

64. R. Cordone, G. Lulli, A GRASP metaheuristic for microarray data analysis. Comput. Oper. Res. **40**, 3108–3120 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20metaheuristic%20for%20microarray%20data%20analysis&author=R..%20Cordone&author=G..%20Lulli&journal=Comput.%20Oper.%20Res.&volume=40&pages=3108-3120&publication_year=2013)

65. J.F. Correcher, M.T. Alonso, F. Parre no, R. Alvarez-Valdes, Solving a large multicontainer loading problem in the car manufacturing industry. Comput. Oper. Res. **82**, 139–152 (2017)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20a%20large%20multicontainer%20loading%20problem%20in%20the%20car%20manufacturing%20industry&author=J.F..%20Correcher&author=M.T..%20Alonso&author=F..%20Parre%C3%B10&author=R..%20Alvarez-Valdes&journal=Computers%20%26%20Operations%20Research&volume=82&pages=139-152&publication_year=2017)

66. G.L. Cravo, G.M. Ribeiro, L.A. Nogueira Lorena, A greedy randomized adaptive search procedure for the point-feature cartographic label placement. Comput. Geosci. **34**, 373–386 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20the%20point-feature%20cartographic%20label%20placement&author=G.L..%20Cravo&author=G.M..%20Ribeiro&author=L.A..%20Nogueira%20Lorena&

journal=Comput.%20Geosci.&volume=34&pages=373-386&publication_year=2008)

67. M.M. D'Apuzzo, A. Migdalas, P.M. Pardalos, G. Toraldo, Parallel computing in global optimization, in *Handbook of Parallel Computing and Statistics*, ed. by E. Kontoghiorghes (Chapman & Hall/CRC, Boca Raton, 2006)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Parallel%20computing%20in%20global%20optimization&author=M.M..%20D%E2%80%99Apuzzo&author=A..%20Migdalas&author=P.M..%20Pardalos&author=G..%20Toraldo&publication_year=2006)

68. S. Das, S.M. Idicula, Application of reactive GRASP to the biclustering of gene expression data, in *Proceedings of the International Symposium on Biocomputing* (ACM, Calicut, 2010), p. 14
Google Scholar (http://scholar.google.com/scholar_lookup?title=Application%20of%20reactive%20GRASP%20to%20the%20biclustering%20of%20gene%20expression%20data%2C%20in%20Proceedings%20of%20the%20International%20Symposium%20on%20Biocomputing%0A&author=S..%20Das&author=S.M..%20Idicula&publication_year=2010)

69. P. De, J.B. Ghosj, C.E. Wells, Solving a generalized model for con due date assignment and sequencing. Int. J. Prod. Econ. **34**, 179–185 (1994)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20a%20generalized%20model%20for%20con%20due%20date%20assignment%20and%20sequencing&author=P..%20De&author=J.B..%20Ghosj&author=C.E..%20Wells&journal=Int.%20J.%20Prod.%20Econ.&volume=34&pages=179-185&publication_year=1994)

70. R. De Leone, P. Festa, E. Marchitto, Solving a bus driver scheduling problem with randomized multistart heuristics. Int. Trans. Oper. Res. **18**, 707–727 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20a%20bus%20driver%20scheduling%20problem%20with%20randomized%20multistart%20heuristics&author=R..%20Leone&author=P..%20Festa&author=E..%20Marchitto&journal=Int.%20Trans.%20Oper.%20Res.&volume=18&pages=707-727&publication_year=2011)

71. H. Delmaire, J.A. Díaz, E. Fernández, M. Ortega, Reactive GRASP and Tabu Search based heuristics for the single source capacitated plant location problem. INFOR **37**, 194–225 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Reactive%20GRASP%20and%20Tabu%20Search%20based%20heuristics%20for%20the%20single%20source%20capacitated%20plant%20location%20problem&author=H..%20Delmaire&author=J.A..%20D%C3%ADaz&author=E..%20Fern%C3%A1ndez&author=M..%20Ortega&journal=INFOR&volume=37&pages=194-225&publication_year=1999)

72. X. Delorme, X. Gandibleux, F. Degoutin, Evolutionary, constructive and hybrid procedures for the bi-objective set packing problem. Eur. J. Oper. Res. **204**, 206–217 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Evolutionary

%2C%20constructive%20and%20hybrid%20procedures%20for%20the%20bi-objective%20set%20packing%20problem&author=X..%20Delorme&author=X..%20Gandibleux&author=F..%20Degoutin&journal=Eur.%20J.%20Oper.%20Res.&volume=204&pages=206-217&publication_year=2010)

73. Y. Deng, J.F. Bard, A reactive GRASP with path relinking for capacitated clustering. J. Heuristics **17**, 119–152 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20reactive%20GRASP%20with%20path%20relinking%20for%20capacitated%20clustering&author=Y..%20Deng&author=J.F..%20Bard&journal=J.%20Heuristics&volume=17&pages=119-152&publication_year=2011)

74. Y. Deng, J.F. Bard, G.R. Chacon, J. Stuber, Scheduling back-end operations in semiconductor manufacturing. IEEE Trans. Semicond. Manuf. **23**, 210–220 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Scheduling%20back-end%20operations%20in%20semiconductor%20manufacturing&author=Y..%20Deng&author=J.F..%20Bard&author=G.R..%20Chacon&author=J..%20Stuber&journal=IEEE%20Trans.%20Semicond.%20Manuf.&volume=23&pages=210-220&publication_year=2010)

75. A.S. Deshpande, E. Triantaphyllou, A greedy randomized adaptive search procedure (GRASP) for inferring logical clauses from examples in polynomial time and some extensions. Math. Comput. Model. **27**, 75–99 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20%28GRASP%29%20for%20inferring%20logical%20clauses%20from%20examples%20in%20polynomial%20time%20and%20some%20extensions&author=A.S..%20Deshpande&author=E..%20Triantaphyllou&journal=Math.%20Comput.%20Model.&volume=27&pages=75-99&publication_year=1998)

76. S. Dharan, A.S. Nair, Biclustering of gene expression data using reactive greedy randomized adaptive search procedure. BMC Bioinf. **10**(Suppl 1), S27 (2009)
Google Scholar (https://scholar.google.com/scholar?q=S.%C2%A0Dharan%2C%20A.S.%20Nair%2C%20Biclustering%20of%20gene%20expression%20data%20using%20reactive%20greedy%20randomized%20adaptive%20search%20procedure.%20BMC%20Bioinf.%2010%28Suppl%201%29%2C%20S27%20%282009%29)

77. J.A. Díaz, D.E. Luna, J.-F. Camacho-Vallejo, M.-S. Casas-Ramírez, GRASP and hybrid GRASP-Tabu heuristics to solve a maximal covering location problem with customer preference ordering. Expert Syst. Appl. **82**, 67–76 (2017)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20hybrid%20GRASP-Tabu%20heuristics%20to%20solve%20a%20maximal%20covering%20location%20problem%20with%20customer%20preference%20ordering&

author=J.A..%20D%C3%ADaz&author=D.E..%20Luna&author=J.-F..%20Camacho-Vallejo&author=M.-S..%20Casas-Ram%C3%ADrez&journal=Expert%20Syst.%20Appl.&volume=82&pages=67-76&publication_year=2017)

78. A. Drexl, F. Salewski, Distribution requirements and compactness constraints in school timetabling. Eur. J. Oper. Res. **102**, 193–214 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Distribution%20requirements%20and%20compactness%20constraints%20in%20school%20timetabling&author=A..%20Drexl&author=F..%20Salewski&journal=Eur.%20J.%20Oper.%20Res.&volume=102&pages=193-214&publication_year=1997)

79. A. Duarte, R. Martí, Tabu search and GRASP for the maximum diversity problem. Eur. J. Oper. Res. **178**, 71–84 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Tabu%20search%20and%20GRASP%20for%20the%20maximum%20diversity%20problem&author=A..%20Duarte&author=R..%20Mart%C3%AD&journal=Eur.%20J.%20Oper.%20Res.&volume=178&pages=71-84&publication_year=2007)

80. A. Duarte, C.C. Ribeiro, S. Urrutia, A hybrid ILS heuristic to the referee assignment problem with an embedded MIP strategy. Lect. Notes Comput. Sci. **4771**, 82–95 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20ILS%20heuristic%20to%20the%20referee%20assignment%20problem%20with%20an%20embedded%20MIP%20strategy&author=A..%20Duarte&author=C.C..%20Ribeiro&author=S..%20Urrutia&journal=Lect.%20Notes%20Comput.%20Sci.&volume=4771&pages=82-95&publication_year=2007)

81. A.R. Duarte, C.C. Ribeiro, S. Urrutia, E.H. Haeusler, Referee assignment in sports leagues. Lect. Notes Comput. Sci. **3867**, 158–173 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Referee%20assignment%20in%20sports%20leagues&author=A.R..%20Duarte&author=C.C..%20Ribeiro&author=S..%20Urrutia&author=E.H..%20Haeusler&journal=Lect.%20Notes%20Comput.%20Sci.&volume=3867&pages=158-173&publication_year=2007)

82. A. Duarte, R. Martí, M.G.C. Resende, R.M.A. Silva, GRASP with path relinking heuristics for the antibandwidth problem. Networks **58**, 171–189 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path%20relinking%20heuristics%20for%20the%20antibandwidth%20problem&author=A..%20Duarte&author=R..%20Mart%C3%AD&author=M.G.C..%20Resende&author=R.M.A..%20Silva&journal=Networks&volume=58&pages=171-189&publication_year=2011)

83. A. Duarte, R. Martí, A. Álvarez, F. Ángel-Bello, Metaheuristics for the linear ordering problem with cumulative costs. Eur. J. Oper. Res. **216**, 270–277 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Metaheuristics%20for%20the%20linear%20ordering%20problem%20with%20cumulative%20costs&author=A..%20Duarte&

author=R..%20Mart%C3%AD&author=A..%20%C3%81lvarez&author=F..%20%C3%81ngel-Bello&journal=Eur.%20J.%20Oper.%20Res.&volume=216&pages=270-277&publication_year=2012)

84. A. Duarte, J. Sánchez-Oro, M.G.C. Resende, F. Glover, R. Martí, GRASP with exterior path relinking for differential dispersion minimization. Inform. Sci. **296**, 46–60 (2015)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20exterior%20path%20relinking%20for%20differential%20dispersion%20minimization&author=A..%20Duarte&author=J..%20S%C3%A1nchez-Oro&author=M.G.C..%20Resende&author=F..%20Glover&author=R..%20Mart%C3%AD&journal=Inform.%20Sci.&volume=296&pages=46-60&publication_year=2015)

85. M. Essafi, X. Delorme, A. Dolgui, Balancing lines with CNC machines: a multi-start and based heuristic. CIRP J. Manuf. Sci. Technol. **2**, 176–182 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Balancing%20lines%20with%20CNC%20machines%3A%20a%20multi-start%20and%20based%20heuristic&author=M..%20Essafi&author=X..%20Delorme&author=A..%20Dolgui&journal=CIRP%20J.%20Manuf.%20Sci.%20Technol.&volume=2&pages=176-182&publication_year=2010)

86. H. Faria Jr., S. Binato, M.G.C. Resende, D.J. Falcão, Transmission network design by a greedy randomized adaptive path relinking approach. IEEE Trans. Power Syst. **20**, 43–49 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Transmission%20network%20design%20by%20a%20greedy%20randomized%20adaptive%20path%20relinking%20approach&author=H..%20Faria&author=S..%20Binato&author=M.G.C..%20Resende&author=D.J..%20Falc%C3%A3o&journal=IEEE%20Trans.%20Power%20Syst.&volume=20&pages=43-49&publication_year=2005)

87. T.A. Feo, J.F. Bard, Flight scheduling and maintenance base planning. Manag. Sci. **35**, 1415–1432 (1989)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Flight%20scheduling%20and%20maintenance%20base%20planning&author=T.A..%20Feo&author=J.F..%20Bard&journal=Manag.%20Sci.&volume=35&pages=1415-1432&publication_year=1989)

88. T.A. Feo, J.F. Bard, The cutting path and tool selection problem in computer-aided process planning. J. Manufact. Syst. **8**, 17–26 (1989)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20cutting%20path%20and%20tool%20selection%20problem%20in%20computer-aided%20process%20planning&author=T.A..%20Feo&author=J.F..%20Bard&journal=J.%20Manufact.%20Syst.&volume=8&pages=17-26&publication_year=1989)

89. T.A. Feo, J.L. González-Velarde, The intermodal trailer assignment problem: Models, algorithms, and heuristics. Transp. Sci. **29**, 330–341 (1995)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20intermodal%20trailer%20assignment%20problem

%3A%20Models%2C%20algorithms%2C%20and%20heuristics&author=T.A..%20Feo&author=J.L..%20Gonz%C3%A1lez-Velarde&journal=Transp.%20Sci.&volume=29&pages=330-341&publication_year=1995)

90. T.A. Feo, M.G.C. Resende, A probabilistic heuristic for a computationally difficult set covering problem. Oper. Res. Lett. **8**, 67–71 (1989)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20probabilistic%20heuristic%20for%20a%20computationally%20difficult%20set%20covering%20problem&author=T.A..%20Feo&author=M.G.C..%20Resende&journal=Oper.%20Res.%20Lett.&volume=8&pages=67-71&publication_year=1989)

91. T.A. Feo, M.G.C. Resende, Greedy randomized adaptive search procedures. J. Glob. Optim. **6**, 109–133 (1995)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Greedy%20randomized%20adaptive%20search%20procedures&author=T.A..%20Feo&author=M.G.C..%20Resende&journal=J.%20Glob.%20Optim.&volume=6&pages=109-133&publication_year=1995)

92. T.A. Feo, K. Venkatraman, J.F. Bard, A GRASP for a difficult single machine scheduling problem. Comput. Oper. Res. **18**, 635–643 (1991)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20a%20difficult%20single%20machine%20scheduling%20problem&author=T.A..%20Feo&author=K..%20Venkatraman&author=J.F..%20Bard&journal=Comput.%20Oper.%20Res.&volume=18&pages=635-643&publication_year=1991)

93. T.A. Feo, M.G.C. Resende, S.H. Smith, A greedy randomized adaptive search procedure for maximum independent set. Oper. Res. **42**, 860–878 (1994)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20maximum%20independent%20set&author=T.A..%20Feo&author=M.G.C..%20Resende&author=S.H..%20Smith&journal=Oper.%20Res.&volume=42&pages=860-878&publication_year=1994)

94. T.A. Feo, J.F. Bard, S. Holland, Facility-wide planning and scheduling of printed wiring board assembly. Oper. Res. **43**, 219–230 (1995)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Facility-wide%20planning%20and%20scheduling%20of%20printed%20wiring%20board%20assembly&author=T.A..%20Feo&author=J.F..%20Bard&author=S..%20Holland&journal=Oper.%20Res.&volume=43&pages=219-230&publication_year=1995)

95. T.A. Feo, K. Sarathy, J. McGahan, A GRASP for single machine scheduling with sequence dependent setup costs and linear delay penalties. Comput. Oper. Res. **23**, 881–895 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20single%20machine%20scheduling%20with%20sequence%20dependent%20setup%20costs%20and%20linear%20delay%20penalties&author=T.A..%20Feo&author=K..%20Sarathy&

author=J..%20McGahan&journal=Comput.%20Oper.%20Res.&volume=23&pages=881-895&publication_year=1996)

96. E. Fernández, R. Martí, GRASP for seam drawing in mosaicking of aerial photographic maps. J. Heuristics **5**, 181–197 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20for%20seam%20drawing%20in%20mosaicking%20of%20aerial%20photographic%20maps&author=E..%20Fern%C3%A1ndez&author=R..%20Mart%C3%AD&journal=J.%20Heuristics&volume=5&pages=181-197&publication_year=1999)

97. P. Festa, On some optimization problems in molecular biology. Math. Biosci. **207**, 219–234 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=On%20some%20optimization%20problems%20in%20molecular%20biology&author=P..%20Festa&journal=Math.%20Biosci.&volume=207&pages=219-234&publication_year=2007)

98. P. Festa, M.G.C. Resende, GRASP: An annotated bibliography, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 325–367
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%3A%20An%20annotated%20bibliography&author=P..%20Festa&author=M.G.C..%20Resende&pages=325-367&publication_year=2002)

99. P. Festa, M.G.C. Resende, An annotated bibliography of GRASP, part I: algorithms. Int. Trans. Oper. Res. **16**, 1–24 (2009)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20annotated%20bibliography%20of%20GRASP%2C%20part%20I%3A%20algorithms&author=P..%20Festa&author=M.G.C..%20Resende&journal=Int.%20Trans.%20Oper.%20Res.&volume=16&pages=1-24&publication_year=2009)

100. P. Festa, M.G.C. Resende, An annotated bibliography of GRASP, part II: applications. Int. Trans. Oper. Res. **16**, 131–172 (2009)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20annotated%20bibliography%20of%20GRASP%2C%20part%20II%3A%20applications&author=P..%20Festa&author=M.G.C..%20Resende&journal=Int.%20Trans.%20Oper.%20Res.&volume=16&pages=131-172&publication_year=2009)

101. P. Festa, P.M. Pardalos, M.G.C. Resende, Algorithm 815: FORTRAN subroutines for computing approximate solution to feedback set problems using GRASP. ACM Trans. Math. Softw. **27**, 456–464 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Algorithm%20815%3A%20FORTRAN%20subroutines%20for%20computing%20approximate%20solution%20to%20feedback%20set%20problems%20using%20GRASP&author=P..%20Festa&author=P.M..%20Pardalos&author=M.G.C..%20Resende&journal=ACM%20Trans.%20Math.%20Softw.&volume=27&pages=456-464&publication_year=2001)

102. P. Festa, M.G.C. Resende, P. Pardalos, C.C. Ribeiro, GRASP and VNS for Max-Cut, in *Extended Abstracts of the Fourth Metaheuristics International Conference*, Porto, pp. 371–376 (2001)
Google Scholar (https://scholar.google.com/scholar?q=P.%C2%A0Festa%2C%20M.G.C.%20Resende%2C%20P.%C2%A0Pardalos%2C%20C.C.%20Ribeiro%2C%20GRASP%20and%20VNS%20for%20Max-Cut%2C%20in%20Extended%20Abstracts%20of%20the%20Fourth%20Metaheuristics%20International%20Conference%2C%20Porto%2C%20pp.%C2%A0371%E2%80%93376%20%282001%29)

103. P. Festa, P.M. Pardalos, M.G.C. Resende, C.C. Ribeiro, Randomized heuristics for the MAX-CUT problem. Optim. Methods Softw. **7**, 1033–1058 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Randomized%20heuristics%20for%20the%20MAX-CUT%20problem&author=P..%20Festa&author=P.M..%20Pardalos&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Optim.%20Methods%20Softw.&volume=7&pages=1033-1058&publication_year=2002)

104. P. Festa, P.M. Pardalos, L.S. Pitsoulis, M.G.C. Resende, GRASP with path-relinking for the weighted MAXSAT problem. ACM J. Exp. Algorithmics **11**, 1–16 (2006)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%20for%20the%20weighted%20MAXSAT%20problem&author=P..%20Festa&author=P.M..%20Pardalos&author=L.S..%20Pitsoulis&author=M.G.C..%20Resende&journal=ACM%20J.%20Exp.%20Algorithmics&volume=11&pages=1-16&publication_year=2006)

105. M.L. Fisher, The Lagrangian relaxation method for solving integer programming problems. Manag. Sci. **50**, 1861–1871 (2004)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20Lagrangian%20relaxation%20method%20for%20solving%20integer%20programming%20problems&author=M.L..%20Fisher&journal=Manag.%20Sci.&volume=50&pages=1861-1871&publication_year=2004)

106. C. Fleurent, F. Glover, Improved constructive multistart strategies for the quadratic assignment problem using adaptive memory. INFORMS J. Comput. **11**, 198–204 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Improved%20constructive%20multistart%20strategies%20for%20the%20quadratic%20assignment%20problem%20using%20adaptive%20memory&author=C..%20Fleurent&author=F..%20Glover&journal=INFORMS%20J.%20Comput.&volume=11&pages=198-204&publication_year=1999)

107. E. Fonseca, R. Fuchsuber, L.F.M. Santos, A. Plastino, S.L. Martins, Exploring the hybrid metaheuristic DM-GRASP for efficient server replication for reliable multicast, in *International Conference on Metaheuristics and Nature Inspired Computing*, Hammamet (2008)

Google Scholar (https://scholar.google.com/scholar?q=E.%C2%A0Fonseca%2C%20R.%C2%A0Fuchsuber%2C%20L.F.M.%20Santos%2C%20A.%C2%A0Plastino%2C%20S.L.%20Martins%2C%20Exploring%20the%20hybrid%20metaheuristic%20DM-GRASP%20for%20efficient%20server%20replication%20for%20reliable%20multicast%2C%20in%20International%20Conference%20on%20Metaheuristics%20and%20Nature%20Inspired%20Computing%2C%20Hammamet%20%282008%29)

108. R.D. Frinhani, R.M. Silva, G.R. Mateus, P. Festa, M.G.C. Resende, GRASP with path-relinking for data clustering: a case study for biological data, in *Experimental Algorithms*, ed. by P.M. Pardalos, S. Rebennack. Lecture Notes in Computer Science, vol. 6630 (Springer, Berlin, 2011), pp. 410–420
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20Path-Relinking%20for%20Data%20Clustering%3A%20A%20Case%20Study%20for%20Biological%20Data&author=Rafael%20M.%20D..%20Frinhani&author=Ricardo%20M.%20A..%20Silva&author=Geraldo%20R..%20Mateus&author=Paola.%20Festa&author=Mauricio%20G.%20C..%20Resende&pages=410-420&publication_year=2011)

109. J.B. Ghosh, Computational aspects of the maximum diversity problem. Oper. Res. Lett. **19**, 175–181 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Computational%20aspects%20of%20the%20maximum%20diversity%20problem&author=J.B..%20Ghosh&journal=Oper.%20Res.%20Lett.&volume=19&pages=175-181&publication_year=1996)

110. F. Glover, New ejection chain and alternating path methods for traveling salesman problems, in *Computer Science and Operations Research: New Developments in Their Interfaces*, ed. by O. Balci, R. Sharda, S. Zenios (Elsevier, Amsterdam, 1992), pp. 449–509
Google Scholar (http://scholar.google.com/scholar_lookup?title=New%20ejection%20chain%20and%20alternating%20path%20methods%20for%20traveling%20salesman%20problems&author=F..%20Glover&pages=449-509&publication_year=1992)

111. F. Glover, Ejection chains, reference structures and alternating path methods for traveling salesman problems. Discret. Appl. Math. **65**, 223–254 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Ejection%20chains%2C%20reference%20structures%20and%20alternating%20path%20methods%20for%20traveling%20salesman%20problems&author=F..%20Glover&journal=Discret.%20Appl.%20Math.&volume=65&pages=223-254&publication_year=1996)

112. F. Glover, Tabu search and adaptive memory programing – advances, applications and challenges, in *Interfaces in Computer Science and Operations Research*, ed. by R.S. Barr, R.V. Helgason, J.L. Kennington (Kluwer Academic Publishers, Boston, 1996), pp. 1–75

Google Scholar (http://scholar.google.com/scholar_lookup?title=Tabu%20search%20and%20adaptive%20memory%20programing%20%E2%80%93%20advances%2C%20applications%20and%20challenges&author=F..%20Glover&pages=1-75&publication_year=1996)

113. F. Glover, Multi-start and strategic oscillation methods – principles to exploit adaptive memory, in *Computing Tools for Modeling, Optimization and Simulation: Interfaces in Computer Science and Operations Research*, ed. by M. Laguna, J.L. Gonzáles-Velarde (Kluwer Academic Publishers, Boston, 2000), pp. 1–24
Google Scholar (http://scholar.google.com/scholar_lookup?title=Multi-start%20and%20strategic%20oscillation%20methods%20%E2%80%93%20principles%20to%20exploit%20adaptive%20memory&author=F..%20Glover&pages=1-24&publication_year=2000)

114. F. Glover, Exterior path relinking for zero-one optimization. Int. J. Appl. Metaheuristic Comput. **5**, 1–8 (2014)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Exterior%20path%20relinking%20for%20zero-one%20optimization&author=F..%20Glover&journal=Int.%20J.%20Appl.%20Metaheuristic%20Comput.&volume=5&pages=1-8&publication_year=2014)

115. F. Glover, M. Laguna, *Tabu Search* (Kluwer Academic Publishers, Boston, 1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Tabu%20Search&author=F..%20Glover&author=M..%20Laguna&publication_year=1997)

116. F. Glover, M. Laguna, R. Martí, Fundamentals of scatter search and path relinking. Control Cybern. **39**, 653–684 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Fundamentals%20of%20scatter%20search%20and%20path%20relinking&author=F..%20Glover&author=M..%20Laguna&author=R..%20Mart%C3%AD&journal=Control%20Cybern.&volume=39&pages=653-684&publication_year=2000)

117. M.X. Goemans, D.P. Williamson, The primal dual method for approximation algorithms and its application to network design problems, in *Approximation Algorithms for NP-Hard Problems*, ed. by D. Hochbaum (PWS Publishing Co., Boston, 1996), pp. 144–191
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20primal%20dual%20method%20for%20approximation%20algorithms%20and%20its%20application%20to%20network%20design%20problems&author=M.X..%20Goemans&author=D.P..%20Williamson&pages=144-191&publication_year=1996)

118. F.C. Gomes, C.S. Oliveira, P.M. Pardalos, M.G.C. Resende, Reactive GRASP with path relinking for channel assignment in mobile phone networks, in *Proceedings of the 5th International Workshop on Discrete Algorithms and Methods for Mobile Computing and Communications* (ACM Press, New York, 2001), pp. 60–67
Google Scholar (http://scholar.google.com

/scholar_lookup?title=Reactive%20GRASP%20with%20path%20relinking%20for%20channel%20assignment%20in%20mobile%20phone%20networks%2C%20in%20Proceedings%20of%20the%205th%20International%20Workshop%20on%20Discrete%20Algorithms%20and%20Methods%20for%20Mobile%20Computing%20and%20Communications%0A&author=F.C..%20Gomes&author=C.S..%20Oliveira&author=P.M..%20Pardalos&author=M.G.C..%20Resende&publication_year=2001)

119. P.L. Hammer, D.J. Rader Jr., Maximally disjoint solutions of the set covering problem. J. Heuristics **7**, 131–144 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Maximally%20disjoint%20solutions%20of%20the%20set%20covering%20problem&author=P.L..%20Hammer&author=D.J..%20Rader&journal=J.%20Heuristics&volume=7&pages=131-144&publication_year=2001)

120. B.T. Han, V.T. Raja, A GRASP heuristic for solving an extended capacitated concentrator location problem. Int. J. Inf. Technol. Decis. Mak. **2**, 597–617 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20heuristic%20for%20solving%20an%20extended%20capacitated%20concentrator%20location%20problem&author=B.T..%20Han&author=V.T..%20Raja&journal=Int.%20J.%20Inf.%20Technol.%20Decis.%20Mak.&volume=2&pages=597-617&publication_year=2003)

121. P. Hansen, N. Mladenović, Developments of variable neighborhood search, in *Essays and Surveys in Metaheuristics*, ed. by C.C. Ribeiro, P. Hansen (Kluwer Academic Publishers, Boston, 2002), pp. 415–439
Google Scholar (http://scholar.google.com/scholar_lookup?title=Developments%20of%20variable%20neighborhood%20search&author=P..%20Hansen&author=N..%20Mladenovi%C4%87&pages=415-439&publication_year=2002)

122. J.P. Hart, A.W. Shogan, Semi-greedy heuristics: an empirical study. Oper. Res. Lett. **6**, 107–114 (1987)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Semi-greedy%20heuristics%3A%20an%20empirical%20study&author=J.P..%20Hart&author=A.W..%20Shogan&journal=Oper.%20Res.%20Lett.&volume=6&pages=107-114&publication_year=1987)

123. M. Held, R.M. Karp, The traveling-salesman problem and minimum spanning trees. Oper. Res. **18**, 1138–1162 (1970)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20traveling-salesman%20problem%20and%20minimum%20spanning%20trees&author=M..%20Held&author=R.M..%20Karp&journal=Oper.%20Res.&volume=18&pages=1138-1162&publication_year=1970)

124. M. Held, R.M. Karp, The traveling-salesman problem and minimum spanning trees: part II. Math. Program. **1**, 6–25 (1971)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20traveling-salesman%20problem%20and%20minimum%20spanning%20trees%3A%20part%20II&author=M..%20Held&author=R.M..%20Karp&

journal=Math.%20Program.&volume=1&pages=6-25&publication_year=1971)

125. M. Held, P. Wolfe, H.P. Crowder, Validation of subgradient optimization. Math. Program. **6**, 62–88 (1974)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Validation%20of%20subgradient%20optimization&author=M..%20Held&author=P..%20Wolfe&author=H.P..%20Crowder&journal=Math.%20Program.&volume=6&pages=62-88&publication_year=1974)

126. C. Helmberg, F. Rendl, A spectral bundle method for semidefinite programming. SIAM J. Optim. **10**, 673–696 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20spectral%20bundle%20method%20for%20semidefinite%20programming&author=C..%20Helmberg&author=F..%20Rendl&journal=SIAM%20J.%20Optim.&volume=10&pages=673-696&publication_year=2000)

127. A.J. Higgins, S. Hajkowicz, E. Bui, A multi-objective model for environmental investment decision making. Comput. Oper. Res. **35**, 253–266 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20multi-objective%20model%20for%20environmental%20investment%20decision%20making&author=A.J..%20Higgins&author=S..%20Hajkowicz&author=E..%20Bui&journal=Comput.%20Oper.%20Res.&volume=35&pages=253-266&publication_year=2008)

128. M.J. Hirsch, GRASP-based heuristics for continuous global optimization problems. Ph.D. thesis, Department of Industrial and Systems Engineering, University of Florida, Gainesville, 2006
Google Scholar (https://scholar.google.com/scholar?q=M.J.%20Hirsch%2C%20GRASP-based%20heuristics%20for%20continuous%20global%20optimization%20problems.%20Ph.D.%20thesis%2C%20Department%20of%20Industrial%20and%20Systems%20Engineering%2C%20University%20of%20Florida%2C%20Gainesville%2C%202006)

129. M.J. Hirsch, C.N. Meneses, P.M. Pardalos, M.G.C. Resende, Global optimization by continuous GRASP. Optim. Lett. **1**, 201–212 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Global%20optimization%20by%20continuous%20GRASP&author=M.J..%20Hirsch&author=C.N..%20Meneses&author=P.M..%20Pardalos&author=M.G.C..%20Resende&journal=Optim.%20Lett.&volume=1&pages=201-212&publication_year=2007)

130. M.J. Hirsch, P.M. Pardalos, M.G.C. Resende, Solving systems of nonlinear equations with continuous GRASP. Nonlinear Anal. Real World Appl. **10**, 2000–2006 (2009)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20systems%20of%20nonlinear%20equations%20with%20continuous%20GRASP&author=M.J..%20Hirsch&author=P.M..%20Pardalos&author=M.G.C..%20Resende&journal=Nonlinear%20Anal.%20Real%20World%20Appl.&volume=10&pages=2000-2006&publication_year=2009)

131. M.J. Hirsch, P.M. Pardalos, M.G.C. Resende, Speeding up continuous GRASP. Eur. J. Oper. Res. **205**, 507–521 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Speeding%20up%20continuous%20GRASP&author=M.J..%20Hirsch&author=P.M..%20Pardalos&author=M.G.C..%20Resende&journal=Eur.%20J.%20Oper.%20Res.&volume=205&pages=507-521&publication_year=2010)

132. M.J. Hirsch, P.M. Pardalos, M.G.C. Resende, Correspondence of projected 3D points and lines using a continuous GRASP. Int. Trans. Oper. Res. **18**, 493–511 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Correspondence%20of%20projected%203D%20points%20and%20lines%20using%20a%20continuous%20GRASP&author=M.J..%20Hirsch&author=P.M..%20Pardalos&author=M.G.C..%20Resende&journal=Int.%20Trans.%20Oper.%20Res.&volume=18&pages=493-511&publication_year=2011)

133. K. Holmqvist, A. Migdalas, P.M. Pardalos, Greedy randomized adaptive search for a location problem with economies of scale, in *Developments in Global Optimization*, ed. by I.M. Bomze et al. (Kluwer Academic Publishers, Dordrecht, 1997), pp. 301–313
Google Scholar (http://scholar.google.com/scholar_lookup?title=Greedy%20randomized%20adaptive%20search%20for%20a%20location%20problem%20with%20economies%20of%20scale&author=K..%20Holmqvist&author=A..%20Migdalas&author=P.M..%20Pardalos&pages=301-313&publication_year=1997)

134. K. Holmqvist, A. Migdalas, P.M. Pardalos, A GRASP algorithm for the single source uncapacitated minimum concave-cost network flow problem, in *Network Design: Connectivity and Facilities Location*, ed. by P.M. Pardalos, D.-Z. Du. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 40 (American Mathematical Society, Providence, 1998), pp. 131–142
Google Scholar (https://scholar.google.com/scholar?q=K.%C2%A0Holmqvist%2C%20A.%C2%A0Migdalas%2C%20P.M.%20Pardalos%2C%20A%20GRASP%20algorithm%20for%20the%20single%20source%20uncapacitated%20minimum%20concave-cost%20network%20flow%20problem%2C%20in%20Network%20Design%3A%20Connectivity%20and%20Facilities%20Location%2C%20ed.%20by%20P.M.%20Pardalos%2C%20D.-Z.%20Du.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A040%20%28American%20Mathematical%20Society%2C%20Providence%2C%201998%29%2C%20pp.%C2%A0131%E2%80%93142)

135. H.H. Hoos, T. Stützle, Evaluation of Las Vegas algorithms - Pitfalls and remedies, in *Proceedings of the 14th Conference on Uncertainty in Artificial Intelligence*, ed. by G. Cooper, S. Moral (Morgan Kaufmann, Madison, 1998), pp. 238–245
Google Scholar (http://scholar.google.com/scholar_lookup?title=Evaluation%20of%20Las%20Vegas%20algorithms%20-%20Pitfalls%20and%20remedies&author=H.H..%20Hoos&author=T..%20St

%C3%BCtzle&pages=238-245&publication_year=1998)

136. R. Interian, C.C. Ribeiro, A GRASP heuristic using path-relinking and restarts for the Steiner traveling salesman problem. Int. Trans. Oper. Res. **24**, 1307–1323 (2017)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20heuristic%20using%20path-relinking%20and%20restarts%20for%20the%20Steiner%20traveling%20salesman%20problem&author=R..%20Interian&author=C.C..%20Ribeiro&journal=Int.%20Trans.%20Oper.%20Res.&volume=24&pages=1307-1323&publication_year=2017)

137. D.S. Johnson, Local optimization and the traveling salesman problem, in *Proceedings of the 17th Colloquium on Automata*. LNCS, vol. 443 (Springer, Berlin, 1990), pp. 446–461
Google Scholar (https://scholar.google.com/scholar?q=D.S.%20Johnson%2C%20Local%20optimization%20and%20the%20traveling%20salesman%20problem%2C%20in%20Proceedings%20of%20the%2017th%20Colloquium%20on%20Automata.%20LNCS%2C%20vol.%C2%A0443%20%28Springer%2C%20Berlin%2C%201990%29%2C%20pp.%C2%A0446%E2%80%93461)

138. E.H. Kampke, J.E.C. Arroyo, A.G. Santos, Reactive GRASP with path relinking for solving parallel machines scheduling problem with resource-assignable sequence dependent setup times, in *Proceedings of the World Congress on Nature and Biologically Inspired Computing*, Coimbatore (IEEE, New York, 2009), pp. 924–929
Google Scholar (http://scholar.google.com/scholar_lookup?title=Reactive%20GRASP%20with%20path%20relinking%20for%20solving%20parallel%20machines%20scheduling%20problem%20with%20resource-assignable%20sequence%20dependent%20setup%20times%2C%20in%20Proceedings%20of%20the%20World%20Congress%20on%20Nature%20and%20Biologically%20Inspired%20Computing%2C%20Coimbatore&author=E.H..%20Kampke&author=J.E.C..%20Arroyo&author=A.G..%20Santos&publication_year=2009)

139. H. Kautz, E. Horvitz, Y. Ruan, C. Gomes, B. Selman, Dynamic restart policies, in *Proceedings of the Eighteenth National Conference on Artificial Intelligence* (American Association for Artificial Intelligence, Edmonton, 2002), pp. 674–681
Google Scholar (https://scholar.google.com/scholar?q=H.%C2%A0Kautz%2C%20E.%C2%A0Horvitz%2C%20Y.%C2%A0Ruan%2C%20C.%C2%A0Gomes%2C%20B.%C2%A0Selman%2C%20Dynamic%20restart%20policies%2C%20in%20Proceedings%20of%20the%20Eighteenth%20National%20Conference%20on%20Artificial%20Intelligence%20%28American%20Association%20for%20Artificial%20Intelligence%2C%20Edmonton%2C%202002%29%2C%20pp.%C2%A0674%E2%80%93681)

140. G. Kendall, S. Knust, C.C. Ribeiro, S. Urrutia, Scheduling in sports: an annotated bibliography. Comput. Oper. Res. **37**, 1–19 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Scheduling%20in%20sports

%3A%20an%20annotated%20bibliography&author=G..%20Kendall&
author=S..%20Knust&author=C.C..%20Ribeiro&author=S..%20Urrutia&
journal=Comput.%20Oper.%20Res.&volume=37&pages=1-19&publication_year=2010)

141. J.G. Klincewicz, Avoiding local optima in the *p*-hub location problem using tabu search and GRASP. Ann. Oper. Res. **40**, 283–302 (1992)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Avoiding%20local%20optima%20in%20the%20p-hub%20location%20problem%20using%20tabu%20search%20and%20GRASP&author=J.G..%20Klincewicz&journal=Ann.%20Oper.%20Res.&volume=40&pages=283-302&publication_year=1992)

142. J.G. Klincewicz, A. Rajan, Using GRASP to solve the component grouping problem. Nav. Res. Log. **41**, 893–912 (1994)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Using%20GRASP%20to%20solve%20the%20component%20grouping%20problem&author=J.G..%20Klincewicz&author=A..%20Rajan&journal=Nav.%20Res.%20Log.&volume=41&pages=893-912&publication_year=1994)

143. G. Kontoravdis, J.F. Bard, A GRASP for the vehicle routing problem with time windows. ORSA J. Comput. **7**, 10–23 (1995)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20the%20vehicle%20routing%20problem%20with%20time%20windows&author=G..%20Kontoravdis&author=J.F..%20Bard&journal=ORSA%20J.%20Comput.&volume=7&pages=10-23&publication_year=1995)

144. M. Kulich, J.J. Miranda-Bront, L. Preucil, A meta-heuristic based goal-selection strategy for mobile robot search in an unknown environment. Comput. Oper. Res. **84**, 178–187 (2017)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20meta-heuristic%20based%20goal-selection%20strategy%20for%20mobile%20robot%20search%20in%20an%20unknown%20environment&author=M..%20Kulich&author=J.J..%20Miranda-Bront&author=L..%20Preucil&journal=Comput.%20Oper.%20Res.&volume=84&pages=178-187&publication_year=2017)

145. N. Labadi, C. Prins, M. Reghioui, GRASP with path relinking for the capacitated arc routing problem with time windows, in *Advances in Computational Intelligence in Transport, Logistics, and Supply Chain Management*, ed. by A. Fink, F. Rothlauf (Springer, Berlin, 2008), pp. 111–135
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path%20relinking%20for%20the%20capacitated%20arc%20routing%20problem%20with%20time%20windows&author=N..%20Labadi&author=C..%20Prins&author=M..%20Reghioui&pages=111-135&publication_year=2008)

146. M. Laguna, J.L. González-Velarde, A search heuristic for just-in-time scheduling in parallel machines. J. Intell. Manuf. **2**, 253–260 (1991)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20search%20heuristic%20for%20just-in-

time%20scheduling%20in%20parallel%20machines&author=M..%20Laguna&author=J.L..%20Gonz%C3%A1lez-Velarde&journal=J.%20Intell.%20Manuf.&volume=2&pages=253-260&publication_year=1991)

147. M. Laguna, R. Martí, GRASP and path relinking for 2-layer straight line crossing minimization. INFORMS J. Comput. **11**, 44–52 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20for%202-layer%20straight%20line%20crossing%20minimization&author=M..%20Laguna&author=R..%20Mart%C3%AD&journal=INFORMS%20J.%20Comput.&volume=11&pages=44-52&publication_year=1999)

148. M. Laguna, R. Martí, A GRASP for coloring sparse graphs. Comput. Optim. Appl. **19**, 165–178 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20coloring%20sparse%20graphs&author=M..%20Laguna&author=R..%20Mart%C3%AD&journal=Comput.%20Optim.%20Appl.&volume=19&pages=165-178&publication_year=2001)

149. M. Laguna, T.A. Feo, H.C. Elrod, A greedy randomized adaptive search procedure for the two-partition problem. Oper. Res. **42**, 677–687 (1994)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20the%20two-partition%20problem&author=M..%20Laguna&author=T.A..%20Feo&author=H.C..%20Elrod&journal=Oper.%20Res.&volume=42&pages=677-687&publication_year=1994)

150. Y. Li, P.M. Pardalos, M.G.C. Resende, A greedy randomized adaptive search procedure for the quadratic assignment problem, in *Quadratic Assignment and Related Problems*, ed. by P.M. Pardalos, H. Wolkowicz. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 16 (American Mathematical Society, Providence, 1994), pp. 237–261
Google Scholar (https://scholar.google.com/scholar?q=Y.%C2%A0Li%2C%20P.M.%20Pardalos%2C%20M.G.C.%20Resende%2C%20A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20the%20quadratic%20assignment%20problem%2C%20in%20Quadratic%20Assignment%20and%20Related%20Problems%2C%20ed.%20by%20P.M.%20Pardalos%2C%20H.%C2%A0Wolkowicz.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A016%20%28American%20Mathematical%20Society%2C%20Providence%2C%201994%29%2C%20pp.%C2%A0237%E2%80%93261)

151. A. Lim, F. Wang, A smoothed dynamic tabu search embedded GRASP for *m*-VRPTW, in *Proceedings of ICTAI 2004*, pp. 704–708 (2004)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20smoothed%20dynamic%20tabu%20search%20embedded%20GRASP%20for%20m-VRPTW&author=A..%20Lim&author=F..%20Wang&journal=Proceedings%20of%20ICTAI&volume=2004&

pages=704-708&publication_year=2004)

152. A. Lim, B. Rodrigues, C. Wang, Two-machine flow shop problems with a single server. J. Sched. **9**, 515–543 (2006)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Two-machine%20flow%20shop%20problems%20with%20a%20single%20server&author=A..%20Lim&author=B..%20Rodrigues&author=C..%20Wang&journal=J.%20Sched.&volume=9&pages=515-543&publication_year=2006)

153. X. Liu, P.M. Pardalos, S. Rajasekaran, M.G.C. Resende, A GRASP for frequency assignment in mobile radio networks, in *Mobile Networks and Computing*, ed. by B.R. Badrinath, F. Hsu, P.M. Pardalos, S. Rajasejaran. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 52 (American Mathematical Society, Providence, 2000), pp. 195–201
Google Scholar (https://scholar.google.com/scholar?q=X.%C2%A0Liu%2C%20P.M.%20Pardalos%2C%20S.%C2%A0Rajasekaran%2C%20M.G.C.%20Resende%2C%20A%20GRASP%20for%20frequency%20assignment%20in%20mobile%20radio%20networks%2C%20in%20Mobile%20Networks%20and%20Computing%2C%20ed.%20by%20B.R.%20Badrinath%2C%20F.%C2%A0Hsu%2C%20P.M.%20Pardalos%2C%20S.%C2%A0Rajasejaran.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A052%20%28American%20Mathematical%20Society%2C%20Providence%2C%202000%29%2C%20pp.%C2%A0195%E2%80%93201)

154. H.R. Lourenço, D. Serra, Adaptive approach heuristics for the generalized assignment problem. Mathw. Soft Comput. **9**, 209–234 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Adaptive%20approach%20heuristics%20for%20the%20generalized%20assignment%20problem&author=H.R..%20Louren%C3%A7o&author=D..%20Serra&journal=Mathw.%20Soft%20Comput.&volume=9&pages=209-234&publication_year=2002)

155. H.R. Lourenço, O.C. Martin, T. Stützle, Iterated local search, in *Handbook of Metaheuristics*, ed. by F. Glover, G. Kochenberger (Kluwer Academic Publishers, Boston, 2003), pp. 321–353
Google Scholar (http://scholar.google.com/scholar_lookup?title=Iterated%20local%20search&author=H.R..%20Louren%C3%A7o&author=O.C..%20Martin&author=T..%20St%C3%BCtzle&pages=321-353&publication_year=2003)

156. M. Luby, A. Sinclair, D. Zuckerman, Optimal speedup of Las Vegas algorithms. Inf. Process. Lett. **47**, 173–180 (1993)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Optimal%20speedup%20of%20Las%20Vegas%20algorithms&author=M..%20Luby&author=A..%20Sinclair&author=D..%20Zuckerman&journal=Inf.%20Process.%20Lett.&volume=47&pages=173-180&publication_year=1993)

157. M. Luis, S. Salhi, G. Nagy, A guided reactive GRASP for the capacitated multi-source Weber problem. Comput. Oper. Res. **38**, 1014–1024 (2011)

Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20guided%20reactive%20GRASP%20for%20the%20capacitated%20multi-source%20Weber%20problem&author=M..%20Luis&author=S..%20Salhi&author=G..%20Nagy&journal=Comput.%20Oper.%20Res.&volume=38&pages=1014-1024&publication_year=2011)

158. C.L.B. Maia, R.A.F. Carmo, F.G. Freitas, G.A.L. Campos, J.T. Souza, Automated test case prioritization with reactive GRASP. Adv. Softw. Eng. **2010**, Article ID 428521 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Automated%20test%20case%20prioritization%20with%20reactive%20GRASP&author=C.L.B..%20Maia&author=R.A.F..%20Carmo&author=F.G..%20Freitas&author=G.A.L..%20Campos&author=J.T..%20Souza&journal=Adv.%20Softw.%20Eng.&volume=2010&publication_year=2010)

159. R. Martí, Arc crossing minimization in graphs with GRASP. IEE Trans. **33**, 913–919 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Arc%20crossing%20minimization%20in%20graphs%20with%20GRASP&author=R..%20Mart%C3%AD&journal=IEE%20Trans.&volume=33&pages=913-919&publication_year=2001)

160. R. Martí, Arc crossing minimization in graphs with GRASP. IEEE Trans. **33**, 913–919 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Arc%20crossing%20minimization%20in%20graphs%20with%20GRASP&author=R..%20Mart%C3%AD&journal=IEEE%20Trans.&volume=33&pages=913-919&publication_year=2002)

161. R. Martí, V. Estruch, Incremental bipartite drawing problem. Comput. Oper. Res. **28**, 1287–1298 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Incremental%20bipartite%20drawing%20problem&author=R..%20Mart%C3%AD&author=V..%20Estruch&journal=Comput.%20Oper.%20Res.&volume=28&pages=1287-1298&publication_year=2001)

162. R. Martí, M. Laguna, Heuristics and meta-heuristics for 2-layer straight line crossing minimization. Discret. Appl. Math. **127**, 665–678 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Heuristics%20and%20meta-heuristics%20for%202-layer%20straight%20line%20crossing%20minimization&author=R..%20Mart%C3%AD&author=M..%20Laguna&journal=Discret.%20Appl.%20Math.&volume=127&pages=665-678&publication_year=2003)

163. R. Martí, F. Sandoya, GRASP and path relinking for the equitable dispersion problem. Comput. Oper. Res. **40**, 3091–3099 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20for%20the%20equitable%20dispersion%20problem&author=R..%20Mart%C3%AD&author=F..%20Sandoya&journal=Comput.%20Oper.%20Res.&volume=40&pages=3091-3099&publication_year=2013)

164. O. Martin, S.W. Otto, Combining simulated annealing with local search heuristics. Ann. Oper. Res. **63**, 57–75 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Combining%20simulated%20annealing%20with%20local%20search%20heuristics&author=O..%20Martin&author=S.W..%20Otto&journal=Ann.%20Oper.%20Res.&volume=63&pages=57-75&publication_year=1996)

165. O. Martin, S.W. Otto, E.W. Felten, Large-step Markov chains for the traveling salesman problem. Complex Syst. **5**, 299–326 (1991)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Large-step%20Markov%20chains%20for%20the%20traveling%20salesman%20problem&author=O..%20Martin&author=S.W..%20Otto&author=E.W..%20Felten&journal=Complex%20Syst.&volume=5&pages=299-326&publication_year=1991)

166. S.L. Martins, C.C. Ribeiro, M.C. Souza, A parallel GRASP for the Steiner problem in graphs, in *Proceedings of IRREGULAR'98 – 5th International Symposium on Solving Irregularly Structured Problems in Parallel*, ed. by A. Ferreira, J. Rolim. Lecture Notes in Computer Science, vol. 1457 (Springer, Berlin, 1998), pp. 285–297
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20parallel%20GRASP%20for%20the%20Steiner%20problem%20in%20graphs&author=Simone%20L..%20Martins&author=Celso%20C..%20Ribeiro&author=Mauricio%20C..%20Souza&pages=285-297&publication_year=1998)

167. S.L. Martins, P.M. Pardalos, M.G.C. Resende, C.C. Ribeiro, Greedy randomized adaptive search procedures for the steiner problem in graphs, in *Randomization Methods in Algorithmic Design*, P.M. Pardalos, S. Rajasejaran, J. Rolim. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 43 (American Mathematical Society, Providence, 1999), pp. 133–145
Google Scholar (https://scholar.google.com/scholar?q=S.L.%20Martins%2C%20P.M.%20Pardalos%2C%20M.G.C.%20Resende%2C%20C.C.%20Ribeiro%2C%20Greedy%20randomized%20adaptive%20search%20procedures%20for%20the%20steiner%20problem%20in%20graphs%2C%20in%20Randomization%20Methods%20in%20Algorithmic%20Design%2C%20P.M.%20Pardalos%2C%20S.%C2%A0Rajasejaran%2C%20J.%C2%A0Rolim.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A043%20%28American%20Mathematical%20Society%2C%20Providence%2C%201999%29%2C%20pp.%C2%A0133%E2%80%93145)

168. S.L. Martins, M.G.C. Resende, C.C. Ribeiro, P.M. Pardalos, A parallel GRASP for the Steiner tree problem in graphs using a hybrid local search strategy. J. Glob. Optim. **17**, 267–283 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20parallel%20GRASP%20for%20the%20Steiner%20tree%20problem%20in%20graphs%20using%20a%20hybrid%20local%20search%20strategy&author=S.L..%20Martins&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&author=P.M..%20Pardalos&journal=J.%20Glob.%20Optim.&volume=17&pages=267-283&

publication_year=2000)

169. G.R. Mateus, M.G.C. Resende, R.M.A. Silva, GRASP with path-relinking for the generalized quadratic assignment problem. J. Heuristics **17**, 527–565 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%20for%20the%20generalized%20quadratic%20assignment%20problem&author=G.R..%20Mateus&author=M.G.C..%20Resende&author=R.M.A..%20Silva&journal=J.%20Heuristics&volume=17&pages=527-565&publication_year=2011)

170. T. Mavridou, P.M. Pardalos, L.S. Pitsoulis, M.G.C. Resende, A GRASP for the biquadratic assignment problem. Eur. J. Oper. Res. **105**, 613–621 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20the%20biquadratic%20assignment%20problem&author=T..%20Mavridou&author=P.M..%20Pardalos&author=L.S..%20Pitsoulis&author=M.G.C..%20Resende&journal=Eur.%20J.%20Oper.%20Res.&volume=105&pages=613-621&publication_year=1998)

171. M. Mestria, L.S. Ochi, S.L. Martins, GRASP with path relinking for the symmetric Euclidean clustered traveling salesman problem. Comput. Oper. Res. **40**, 3218–3229 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path%20relinking%20for%20the%20symmetric%20Euclidean%20clustered%20traveling%20salesman%20problem&author=M..%20Mestria&author=L.S..%20Ochi&author=S.L..%20Martins&journal=Comput.%20Oper.%20Res.&volume=40&pages=3218-3229&publication_year=2013)

172. N. Mladenović, P. Hansen, Variable neighborhood search. Comput. Oper. Res. **24**, 1097–1100 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Variable%20neighborhood%20search&author=N..%20Mladenovi%C4%87&author=P..%20Hansen&journal=Comput.%20Oper.%20Res.&volume=24&pages=1097-1100&publication_year=1997)

173. S.K. Monkman, D.J. Morrice, J.F. Bard, A production scheduling heuristic for an electronics manufacturer with sequence-dependent setup costs. Eur. J. Oper. Res. **187**, 1100–1114 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20production%20scheduling%20heuristic%20for%20an%20electronics%20manufacturer%20with%20sequence-dependent%20setup%20costs&author=S.K..%20Monkman&author=D.J..%20Morrice&author=J.F..%20Bard&journal=Eur.%20J.%20Oper.%20Res.&volume=187&pages=1100-1114&publication_year=2008)

174. R.E.N. Moraes, C.C. Ribeiro, Power optimization in ad hoc wireless network topology control with biconnectivity requirements. Comput. Oper. Res. **40**, 3188–3196 (2013)

Google Scholar (http://scholar.google.com/scholar_lookup?title=Power%20optimization%20in%20ad%20hoc%20wireless%20network%20topology%20control%20with%20biconnectivity%20requirements&author=R.E.N..%20Moraes&author=C.C..%20Ribeiro&journal=Comput.%20Oper.%20Res.&volume=40&pages=3188-3196&publication_year=2013)

175. L.F. Morán-Mirabal, J.L. González-Velarde, M.G.C. Resende, R.M.A. Silva, Randomized heuristics for handover minimization in mobility networks. J. Heuristics **19**, 845–880 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Randomized%20heuristics%20for%20handover%20minimization%20in%20mobility%20networks&author=L.F..%20Mor%C3%A1n-Mirabal&author=J.L..%20Gonz%C3%A1lez-Velarde&author=M.G.C..%20Resende&author=R.M.A..%20Silva&journal=J.%20Heuristics&volume=19&pages=845-880&publication_year=2013)

176. L.F. Morán-Mirabal, J.L. González-Velarde, M.G.C. Resende, Randomized heuristics for the family traveling salesperson problem. Int. Trans. Oper. Res. **21**, 41–57 (2014)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Randomized%20heuristics%20for%20the%20family%20traveling%20salesperson%20problem&author=L.F..%20Mor%C3%A1n-Mirabal&author=J.L..%20Gonz%C3%A1lez-Velarde&author=M.G.C..%20Resende&journal=Int.%20Trans.%20Oper.%20Res.&volume=21&pages=41-57&publication_year=2014)

177. R.A. Murphey, P.M. Pardalos, L.S. Pitsoulis, A greedy randomized adaptive search procedure for the multitarget multisensor tracking problem, in *Network Design: Connectivity and Facilities Location*, ed. by P.M. Pardalos, D.-Z. Du. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 40 (American Mathematical Society, Providence, 1998), pp. 277–301
Google Scholar (https://scholar.google.com/scholar?q=R.A.%20Murphey%2C%20P.M.%20Pardalos%2C%20L.S.%20Pitsoulis%2C%20A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20the%20multitarget%20multisensor%20tracking%20problem%2C%20in%20Network%20Design%3A%20Connectivity%20and%20Facilities%20Location%2C%20ed.%20by%20P.M.%20Pardalos%2C%20D.-Z.%20Du.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A040%20%28American%20Mathematical%20Society%2C%20Providence%2C%201998%29%2C%20pp.%C2%A0277%E2%80%93301)

178. R.A. Murphey, P.M. Pardalos, L.S. Pitsoulis, A parallel GRASP for the data association multidimensional assignment problem, in *Parallel Processing of Discrete Problems*, ed. by P.M. Pardalos. The IMA Volumes in Mathematics and Its Applications, vol. 106 (Springer, New York, 1998), pp. 159–180
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20Parallel%20Grasp%20for%20the%20Data%20Association%20Multidimensional%20Assignment%20Problem&

author=R.%20A..%20Murphey&author=P.%20M..%20Pardalos&
author=L..%20Pitsoulis&pages=159-179&publication_year=1999)

179. M.C.V. Nascimento, L. Pitsoulis, Community detection by modularity maximization using GRASP with path relinking. Comput. Oper. Res. **40**, 3121–3131 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Community%20detection%20by%20modularity%20maximization%20using%20GRASP%20with%20path%20relinking&author=M.C.V..%20Nascimento&author=L..%20Pitsoulis&journal=Comput.%20Oper.%20Res.&volume=40&pages=3121-3131&publication_year=2013)

180. M.C.V. Nascimento, M.G.C. Resende, F.M.B. Toledo, GRASP heuristic with path-relinking for the multi-plant capacitated lot sizing problem. Eur. J. Oper. Res. **200**, 747–754 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20heuristic%20with%20path-relinking%20for%20the%20multi-plant%20capacitated%20lot%20sizing%20problem&author=M.C.V..%20Nascimento&author=M.G.C..%20Resende&author=F.M.B..%20Toledo&journal=Eur.%20J.%20Oper.%20Res.&volume=200&pages=747-754&publication_year=2010)

181. V.-P. Nguyen, C. Prins, C. Prodhon, Solving the two-echelon location routing problem by a GRASP reinforced by a learning process and path relinking. Eur. J. Oper. Res. **216**, 113–126 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20the%20two-echelon%20location%20routing%20problem%20by%20a%20GRASP%20reinforced%20by%20a%20learning%20process%20and%20path%20relinking&author=V.-P..%20Nguyen&author=C..%20Prins&author=C..%20Prodhon&journal=Eur.%20J.%20Oper.%20Res.&volume=216&pages=113-126&publication_year=2012)

182. E. Nowicki, C. Smutnicki, An advanced tabu search algorithm for the job shop problem. J. Sched. **8**, 145–159 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20advanced%20tabu%20search%20algorithm%20for%20the%20job%20shop%20problem&author=E..%20Nowicki&author=C..%20Smutnicki&journal=J.%20Sched.&volume=8&pages=145-159&publication_year=2005)

183. C.A. Oliveira, P.M. Pardalos, M.G.C. Resende, GRASP with path-relinking for the quadratic assignment problem, in *Proceedings of III Workshop on Efficient and Experimental Algorithms*, vol. 3059, ed. by C.C. Ribeiro, S.L. Martins (Springer, New York, 2004), pp. 356–368
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%20for%20the%20quadratic%20assignment%20problem&author=C.A..%20Oliveira&author=P.M..%20Pardalos&

author=M.G.C..%20Resende&pages=356-368&publication_year=2004)

184. I.H. Osman, B. Al-Ayoubi, M. Barake, A greedy random adaptive search procedure for the weighted maximal planar graph problem. Comput. Ind. Eng. **45**, 635–651 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20random%20adaptive%20search%20procedure%20for%20the%20weighted%20maximal%20planar%20graph%20problem&author=I.H..%20Osman&author=B..%20Al-Ayoubi&author=M..%20Barake&journal=Comput.%20Ind.%20Eng.&volume=45&pages=635-651&publication_year=2003)

185. J.A. Pacheco, S. Casado, Solving two location models with few facilities by using a hybrid heuristic: a real health resources case. Comput. Oper. Res. **32**, 3075–3091 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solving%20two%20location%20models%20with%20few%20facilities%20by%20using%20a%20hybrid%20heuristic%3A%20a%20real%20health%20resources%20case&author=J.A..%20Pacheco&author=S..%20Casado&journal=Comput.%20Oper.%20Res.&volume=32&pages=3075-3091&publication_year=2005)

186. A.V.F. Pacheco, G.M. Ribeiro, G.R. Mauri, A GRASP with path-relinking for the workover rig scheduling problem. Int. J. Nat. Comput. Res. **1**, 1–14 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20with%20path-relinking%20for%20the%20workover%20rig%20scheduling%20problem&author=A.V.F..%20Pacheco&author=G.M..%20Ribeiro&author=G.R..%20Mauri&journal=Int.%20J.%20Nat.%20Comput.%20Res.&volume=1&pages=1-14&publication_year=2010)

187. G. Palubeckis, Multistart tabu search strategies for the unconstrained binary quadratic optimization problem. Ann. Oper. Res. **131**, 259–282 (2004)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Multistart%20tabu%20search%20strategies%20for%20the%20unconstrained%20binary%20quadratic%20optimization%20problem&author=G..%20Palubeckis&journal=Ann.%20Oper.%20Res.&volume=131&pages=259-282&publication_year=2004)

188. P.M. Pardalos, L.S. Pitsoulis, M.G.C. Resende, A parallel GRASP implementation for the quadratic assignment problem, in *Parallel Algorithms for Irregularly Structured Problems – Irregular'94*, ed. by A. Ferreira, J. Rolim (Kluwer Academic Publishers, Dordrecht, 1995), pp. 115–133
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20parallel%20GRASP%20implementation%20for%20the%20quadratic%20assignment%20problem&author=P.M..%20Pardalos&author=L.S..%20Pitsoulis&author=M.G.C..%20Resende&pages=115-133&publication_year=1995)

189. P.M. Pardalos, L.S. Pitsoulis, M.G.C. Resende, A parallel GRASP for MAX-SAT problems. Lect. Notes Comput. Sci. **1184**, 575–585 (1996)
Google Scholar (http://scholar.google.com

/scholar_lookup?title=A%20parallel%20GRASP%20for%20MAX-SAT%20problems&author=P.M..%20Pardalos&author=L.S..%20Pitsoulis&author=M.G.C..%20Resende&journal=Lect.%20Notes%20Comput.%20Sci.&volume=1184&pages=575-585&publication_year=1996)

190. P.M. Pardalos, L.S. Pitsoulis, M.G.C. Resende, Algorithm 769: Fortran subroutines for approximate solution of sparse quadratic assignment problems using GRASP. ACM Trans. Math. Softw. **23**, 196–208 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Algorithm%20769%3A%20Fortran%20subroutines%20for%20approximate%20solution%20of%20sparse%20quadratic%20assignment%20problems%20using%20GRASP&author=P.M..%20Pardalos&author=L.S..%20Pitsoulis&author=M.G.C..%20Resende&journal=ACM%20Trans.%20Math.%20Softw.&volume=23&pages=196-208&publication_year=1997)

191. P.M. Pardalos, T. Qian, M.G.C. Resende, A greedy randomized adaptive search procedure for the feedback vertex set problem. J. Comb. Optim. **2**, 399–412 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20greedy%20randomized%20adaptive%20search%20procedure%20for%20the%20feedback%20vertex%20set%20problem&author=P.M..%20Pardalos&author=T..%20Qian&author=M.G.C..%20Resende&journal=J.%20Comb.%20Optim.&volume=2&pages=399-412&publication_year=1999)

192. F. Parreño, R. Alvarez-Valdes, J.M. Tamarit, J.F. Oliveira, A maximal-space algorithm for the container loading problem. INFORMS J. Comput. **20**, 412–422 (2008)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20maximal-space%20algorithm%20for%20the%20container%20loading%20problem&author=F..%20Parre%C3%B10&author=R..%20Alvarez-Valdes&author=J.M..%20Tamarit&author=J.F..%20Oliveira&journal=INFORMS%20J.%20Comput.&volume=20&pages=412-422&publication_year=2008)

193. R.A. Patterson, H. Pirkul, E. Rolland, A memory adaptive reasoning technique for solving the capacitated minimum spanning tree problem. J. Heuristics **5**, 159–180 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20memory%20adaptive%20reasoning%20technique%20for%20solving%20the%20capacitated%20minimum%20spanning%20tree%20problem&author=R.A..%20Patterson&author=H..%20Pirkul&author=E..%20Rolland&journal=J.%20Heuristics&volume=5&pages=159-180&publication_year=1999)

194. O. Pedrola, M. Ruiz, L. Velasco, D. Careglio, O. González de Dios, J. Comellas, A GRASP with path-relinking heuristic for the survivable IP/MPLS-over-WSON multi-layer network optimization problem. Comput. Oper. Res. **40**, 3174–3187 (2013)
Google Scholar (http://scholar.google.com

/scholar_lookup?title=A%20GRASP%20with%20path-relinking%20heuristic%20for%20the%20survivable%20IP%2FMPLS-over-WSON%20multi-layer%20network%20optimization%20problem&author=O..%20Pedrola&author=M..%20Ruiz&author=L..%20Velasco&author=D..%20Careglio&author=O..%20Gonz%C3%A1lez%20de%20Dios&author=J..%20Comellas&journal=Comput.%20Oper.%20Res.&volume=40&pages=3174-3187&publication_year=2013)

195. L.S. Pessoa, M.G.C. Resende, C.C. Ribeiro, Experiments with the LAGRASP heuristic for set *k*-covering. Optim. Lett. **5**, 407–419 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Experiments%20with%20the%20LAGRASP%20heuristic%20for%20set%20k-covering&author=L.S..%20Pessoa&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Optim.%20Lett.&volume=5&pages=407-419&publication_year=2011)

196. L.S. Pessoa, M.G.C. Resende, C.C. Ribeiro, A hybrid Lagrangean heuristic with GRASP and path-relinking for set *k*-covering. Comput. Oper. Res. **40**, 3132–3146 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20Lagrangean%20heuristic%20with%20GRASP%20and%20path-relinking%20for%20set%20k-covering&author=L.S..%20Pessoa&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Comput.%20Oper.%20Res.&volume=40&pages=3132-3146&publication_year=2013)

197. E. Pinana, I. Plana, V. Campos, R. Martí, GRASP and path relinking for the matrix bandwidth minimization. Eur. J. Oper. Res. **153**, 200–210 (2004)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20for%20the%20matrix%20bandwidth%20minimization&author=E..%20Pinana&author=I..%20Plana&author=V..%20Campos&author=R..%20Mart%C3%AD&journal=Eur.%20J.%20Oper.%20Res.&volume=153&pages=200-210&publication_year=2004)

198. L.S. Pitsoulis, P.M. Pardalos, D.W. Hearn, Approximate solutions to the turbine balancing problem. Eur. J. Oper. Res. **130**, 147–155 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Approximate%20solutions%20to%20the%20turbine%20balancing%20problem&author=L.S..%20Pitsoulis&author=P.M..%20Pardalos&author=D.W..%20Hearn&journal=Eur.%20J.%20Oper.%20Res.&volume=130&pages=147-155&publication_year=2001)

199. F. Poppe, M. Pickavet, P. Arijs, P. Demeester, Design techniques for SDH mesh-restorable networks, in *Proceedings of the European Conference on Networks and Optical Communications, Volume 2: Core and ATM Networks*, pp. 94–101, (1997)
Google Scholar (https://scholar.google.com/scholar?q=F.%C2%A0Poppe%2C%20M.%C2%A0Pickavet%2C%20P.%C2%A0Arijs%2C%20P.%C2%A0Demeester%2C%20Design%20techniques%20for%20SDH%20mesh-restorable%20networks

%2C%20in%20Proceedings%20of%20the%20European%20Conference%20on%20Networks%20and%20Optical%20Communications%2C%20Volume%202%3A%20Core%20and%20ATM%20Networks%2C%20pp.%C2%A094%E2%80%93101%2C%20%281997%29)

200. M. Prais, C.C. Ribeiro, Parameter variation in GRASP implementations, in *Extended Abstracts of the Third Metaheuristics International Conference*, Angra dos Reis, pp. 375–380 (1999)
Google Scholar (https://scholar.google.com/scholar?q=M.%C2%A0Prais%2C%20C.C.%20Ribeiro%2C%20Parameter%20variation%20in%20GRASP%20implementations%2C%20in%20Extended%20Abstracts%20of%20the%20Third%20Metaheuristics%20International%20Conference%2C%20Angra%20dos%20Reis%2C%20pp.%C2%A0375%E2%80%93380%20%281999%29)

201. M. Prais, C.C. Ribeiro, Parameter variation in GRASP procedures. Investigación Operativa **9**, 1–20 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Parameter%20variation%20in%20GRASP%20procedures&author=M..%20Prais&author=C.C..%20Ribeiro&journal=Investigaci%C3%B3n%20Operativa&volume=9&pages=1-20&publication_year=2000)

202. M. Prais, C.C. Ribeiro, Reactive GRASP: an application to a matrix decomposition problem in TDMA traffic assignment. INFORMS J. Comput. **12**, 164–176 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Reactive%20GRASP%3A%20an%20application%20to%20a%20matrix%20decomposition%20problem%20in%20TDMA%20traffic%20assignment&author=M..%20Prais&author=C.C..%20Ribeiro&journal=INFORMS%20J.%20Comput.&volume=12&pages=164-176&publication_year=2000)

203. M. Rahmani, M. Rashidinejad, E.M. Carreno, R.A. Romero, Evolutionary multi-move path-relinking for transmission network expansion planning, in *2010 IEEE Power and Energy Society General Meeting*, Minneapolis (IEEE, New York, 2010), pp. 1–6
Google Scholar (http://scholar.google.com/scholar_lookup?title=Evolutionary%20multi-move%20path-relinking%20for%20transmission%20network%20expansion%20planning%2C%20in%202010%20IEEE%20Power%20and%20Energy%20Society%20General%20Meeting%2C%20Minneapolis&author=M..%20Rahmani&author=M..%20Rashidinejad&author=E.M..%20Carreno&author=R.A..%20Romero&publication_year=2010)

204. M.C. Rangel, N.M.M. Abreu, P.O. Boaventura Netto, GRASP in the QAP: an acceptance bound for initial solutions. Pesquisa Operacional **20**, 45–58 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20in%20the%20QAP%3A%20an%20acceptance%20bound%20for%20initial%20solutions&author=M.C..%20Rangel&author=N.M.M..%20Abreu&author=P.O..%20Boaventura%20Netto&journal=Pesquisa%20Operacional&volume=20&pages=45-58&publication_year=2000)

205. M.G. Ravetti, F.G. Nakamura, C.N. Meneses, M.G.C. Resende, G.R. Mateus, P.M. Pardalos, Hybrid heuristics for the permutation flow shop problem. Technical Report, AT&T Labs Research Technical Report, Florham Park, 2006
Google Scholar (https://scholar.google.com/scholar?q=M.G.%20Ravetti%2C%20F.G.%20Nakamura%2C%20C.N.%20Meneses%2C%20M.G.C.%20Resende%2C%20G.R.%20Mateus%2C%20P.M.%20Pardalos%2C%20Hybrid%20heuristics%20for%20the%20permutation%20flow%20shop%20problem.%20Technical%20Report%2C%20AT%26T%20Labs%20Research%20Technical%20Report%2C%20Florham%20Park%2C%202006)

206. M. Reghioui, C. Prins, N. Labadi, GRASP with path relinking for the capacitated arc routing problem with time windows, in *Applications of Evolutionary Computing*, ed. by M. Giacobini et al. Lecture Notes in Computer Science, vol. 4448 (Springer, Berlin, 2007), pp. 722–731
Google Scholar (https://scholar.google.com/scholar?q=M.%C2%A0Reghioui%2C%20C.%C2%A0Prins%2C%20N.%20Labadi%2C%20GRASP%20with%20path%20relinking%20for%20the%20capacitated%20arc%20routing%20problem%20with%20time%20windows%2C%20in%20Applications%20of%20Evolutionary%20Computing%2C%20ed.%20by%20M.%C2%A0Giacobini%20et%C2%A0al.%20Lecture%20Notes%20in%20Computer%20Science%2C%20vol.%C2%A04448%20%28Springer%2C%20Berlin%2C%202007%29%2C%20pp.%C2%A0722%E2%80%93731)

207. M.G.C. Resende, Computing approximate solutions of the maximum covering problem using GRASP. J. Heuristics **4**, 161–171 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Computing%20approximate%20solutions%20of%20the%20maximum%20covering%20problem%20using%20GRASP&author=M.G.C..%20Resende&journal=J.%20Heuristics&volume=4&pages=161-171&publication_year=1998)

208. M.G.C. Resende, T.A. Feo, A GRASP for satisfiability, in *Cliques, Coloring, and Satisfiability: The Second DIMACS Implementation Challenge*, ed. by D.S. Johnson, M.A. Trick. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 26 (American Mathematical Society, Providence, 1996), pp. 499–520
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20satisfiability&author=Mauricio.%20Resende&author=Thomas.%20Feo&pages=499-520&publication_year=1996)

209. L.I.P. Resende, M.G.C. Resende, A GRASP for frame relay permanent virtual circuit routing, in *Extended Abstracts of the III Metaheuristics International Conference*, ed. by C.C. Ribeiro, P. Hansen, Angra dos Reis, pp. 397–401 (1999)
Google Scholar (https://scholar.google.com/scholar?q=L.I.P.%20Resende%2C%20M.G.C.%20Resende%2C%20A%20GRASP%20for%20frame%20relay%20permanent%20virtual%20circuit%20routing%2C%20in%20Extended%20Abstracts%20of%20the%20III%20Metaheuristics%

20International%20Conference%2C%20ed.%20by%20C.C.%20Ribeiro%2C%20P.%C2%A0Hansen%2C%20Angra%20dos%20Reis%2C%20pp.%C2%A0397%E2%80%93401%20%281999%29)

210. M.G.C. Resende, C.C. Ribeiro, A GRASP for graph planarization. Networks **29**, 173–189 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20for%20graph%20planarization&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Networks&volume=29&pages=173-189&publication_year=1997)

211. M.G.C. Resende, C.C. Ribeiro, Graph planarization, in *Encyclopedia of Optimization*, vol. 2, ed. by C. Floudas, P.M. Pardalos (Kluwer Academic Publishers, Boston, 2001), pp. 368–373
Google Scholar (http://scholar.google.com/scholar_lookup?title=Graph%20planarization&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&pages=368-373&publication_year=2001)

212. M.G.C. Resende, C.C. Ribeiro, A GRASP with path-relinking for private virtual circuit routing. Networks **41**, 104–114 (2003)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20with%20path-relinking%20for%20private%20virtual%20circuit%20routing&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Networks&volume=41&pages=104-114&publication_year=2003)

213. M.G.C. Resende, C.C. Ribeiro, GRASP with path-relinking: recent advances and applications, in *Metaheuristics: Progress as Real Problem Solvers*, ed. by T. Ibaraki, K. Nonobe, M. Yagiura (Springer, Boston, 2005), pp. 29–63
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%3A%20recent%20advances%20and%20applications&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&pages=29-63&publication_year=2005)

214. M.G.C. Resende, C.C. Ribeiro, Restart strategies for GRASP with path-relinking heuristics. Optim. Lett. **5**, 467–478 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Restart%20strategies%20for%20GRASP%20with%20path-relinking%20heuristics&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&journal=Optim.%20Lett.&volume=5&pages=467-478&publication_year=2011)

215. M.G.C. Resende, C.C. Ribeiro, *Optimization by GRASP: Greedy Randomized Adaptive Search Procedures* (Springer, New York, 2016)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Optimization%20by%20GRASP%3A%20Greedy%20Randomized%20Adaptive%20Search%20Procedures&author=M.G.C..%20Resende&author=C.C..%20Ribeiro&publication_year=2016)

216. M.G.C. Resende, R.F. Werneck, A hybrid heuristic for the *p*-median problem. J. Heuristics **10**, 59–88 (2004)

Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20heuristic%20for%20the%20p-median%20problem&author=M.G.C..%20Resende&author=R.F..%20Werneck&journal=J.%20Heuristics&volume=10&pages=59-88&publication_year=2004)

217. M.G.C. Resende, R.F. Werneck, A hybrid multistart heuristic for the uncapacitated facility location problem. Eur. J. Oper. Res. **174**, 54–68 (2006)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20multistart%20heuristic%20for%20the%20uncapacitated%20facility%20location%20problem&author=M.G.C..%20Resende&author=R.F..%20Werneck&journal=Eur.%20J.%20Oper.%20Res.&volume=174&pages=54-68&publication_year=2006)

218. M.G.C. Resende, P.M. Pardalos, Y. Li, Algorithm 754: Fortran subroutines for approximate solution of dense quadratic assignment problems using GRASP. ACM Trans. Math. Softw. **22**, 104–118 (1996)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Algorithm%20754%3A%20Fortran%20subroutines%20for%20approximate%20solution%20of%20dense%20quadratic%20assignment%20problems%20using%20GRASP&author=M.G.C..%20Resende&author=P.M..%20Pardalos&author=Y..%20Li&journal=ACM%20Trans.%20Math.%20Softw.&volume=22&pages=104-118&publication_year=1996)

219. M.G.C. Resende, L.S. Pitsoulis, P.M. Pardalos, Approximate solution of weighted MAX-SAT problems using GRASP, in *Satisfiability Problems*, ed. by J. Gu, P.M. Pardalos. DIMACS Series on Discrete Mathematics and Theoretical Computer Science, vol. 35 (American Mathematical Society, Providence, 1997), pp. 393–405
Google Scholar (https://scholar.google.com/scholar?q=M.G.C.%20Resende%2C%20L.S.%20Pitsoulis%2C%20P.M.%20Pardalos%2C%20Approximate%20solution%20of%20weighted%20MAX-SAT%20problems%20using%20GRASP%2C%20in%20Satisfiability%20Problems%2C%20ed.%20by%20J.%C2%A0Gu%2C%20P.M.%20Pardalos.%20DIMACS%20Series%20on%20Discrete%20Mathematics%20and%20Theoretical%20Computer%20Science%2C%20vol.%C2%A035%20%28American%20Mathematical%20Society%2C%20Providence%2C%201997%29%2C%20pp.%C2%A0393%E2%80%93405)

220. M.G.C. Resende, T.A. Feo, S.H. Smith, Algorithm 787: Fortran subroutines for approximate solution of maximum independent set problems using GRASP. ACM Trans. Math. Softw. **24**, 386–394 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Algorithm%20787%3A%20Fortran%20subroutines%20for%20approximate%20solution%20of%20maximum%20independent%20set%20problems%20using%20GRASP&author=M.G.C..%20Resende&author=T.A..%20Feo&author=S.H..%20Smith&journal=ACM%20Trans.%20Math.%20Softw.&volume=24&pages=386-394&publication_year=1998)

221. M.G.C. Resende, L.S. Pitsoulis, P.M. Pardalos, Fortran subroutines for computing

approximate solutions of MAX-SAT problems using GRASP. Discret. Appl. Math. **100**, 95–113 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Fortran%20subroutines%20for%20computing%20approximate%20solutions%20of%20MAX-SAT%20problems%20using%20GRASP&author=M.G.C..%20Resende&author=L.S..%20Pitsoulis&author=P.M..%20Pardalos&journal=Discret.%20Appl.%20Math.&volume=100&pages=95-113&publication_year=2000)

222. M.G.C. Resende, R. Martí, M. Gallego, A. Duarte, GRASP and path relinking for the max-min diversity problem. Comput. Oper. Res. **37**, 498–508 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20for%20the%20max-min%20diversity%20problem&author=M.G.C..%20Resende&author=R..%20Mart%C3%AD&author=M..%20Gallego&author=A..%20Duarte&journal=Comput.%20Oper.%20Res.&volume=37&pages=498-508&publication_year=2010)

223. A.P. Reynolds, B. de la Iglesia, A multi-objective GRASP for partial classification. Soft Comput. **13**, 227–243 (2009)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20multi-objective%20GRASP%20for%20partial%20classification&author=A.P..%20Reynolds&author=B..%20Iglesia&journal=Soft%20Comput.&volume=13&pages=227-243&publication_year=2009)

224. C.C. Ribeiro, GRASP: Une métaheuristique gloutone et probabiliste, in *Optimisation Approchée en Recherche Opérationnelle*, ed. by J. Teghem, M. Pirlot (Hermès, Paris, 2002), pp. 153–176
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%3A%20Une%20m%C3%A9taheuristique%20gloutone%20et%20probabiliste&author=C.C..%20Ribeiro&pages=153-176&publication_year=2002)

225. C.C. Ribeiro, Sports scheduling: problems and applications. Int. Trans. Oper. Res. **19**, 201–226 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Sports%20scheduling%3A%20problems%20and%20applications&author=C.C..%20Ribeiro&journal=Int.%20Trans.%20Oper.%20Res.&volume=19&pages=201-226&publication_year=2012)

226. C.C. Ribeiro, M.G.C. Resende, Algorithm 797: Fortran subroutines for approximate solution of graph planarization problems using GRASP. ACM Trans. Math. Softw. **25**, 342–352 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Algorithm%20797%3A%20Fortran%20subroutines%20for%20approximate%20solution%20of%20graph%20planarization%20problems%20using%20GRASP&author=C.C..%20Ribeiro&author=M.G.C..%20Resende&journal=ACM%20Trans.%20Math.%20Softw.&volume=25&pages=342-352&publication_year=1999)

227. C.C. Ribeiro, I. Rosseti, Efficient parallel cooperative implementations of GRASP

heuristics. Parallel Comput. **33**, 21–35 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Efficient%20parallel%20cooperative%20implementations%20of%20GRASP%20heuristics&author=C.C..%20Ribeiro&author=I..%20Rosseti&journal=Parallel%20Comput.&volume=33&pages=21-35&publication_year=2007)

228. C.C. Ribeiro, I. Rosseti, tttplots-compare: A perl program to compare time-to-target plots or general runtime distributions of randomized algorithms. Optim. Lett. **9**, 601–614 (2015)
Google Scholar (https://scholar.google.com/scholar?q=C.C.%20Ribeiro%2C%20I.%C2%A0Rosseti%2C%20tttplots-compare%3A%20A%20perl%20program%20to%20compare%20time-to-target%20plots%20or%20general%20runtime%20distributions%20of%20randomized%20algorithms.%20Optim.%20Lett.%209%2C%20601%E2%80%93614%20%282015%29)

229. C.C. Ribeiro, M.C. Souza, Variable neighborhood search for the degree constrained minimum spanning tree problem. Discret. Appl. Math. **118**, 43–54 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Variable%20neighborhood%20search%20for%20the%20degree%20constrained%20minimum%20spanning%20tree%20problem&author=C.C..%20Ribeiro&author=M.C..%20Souza&journal=Discret.%20Appl.%20Math.&volume=118&pages=43-54&publication_year=2002)

230. C.C. Ribeiro, S. Urrutia, Heuristics for the mirrored traveling tournament problem. Eur. J. Oper. Res. **179**, 775–787 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Heuristics%20for%20the%20mirrored%20traveling%20tournament%20problem&author=C.C..%20Ribeiro&author=S..%20Urrutia&journal=Eur.%20J.%20Oper.%20Res.&volume=179&pages=775-787&publication_year=2007)

231. C.C. Ribeiro, D.S. Vianna, A GRASP/VND heuristic for the phylogeny problem using a new neighborhood structure. Int. Trans. Oper. Res. **12**, 325–338 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%2FVND%20heuristic%20for%20the%20phylogeny%20problem%20using%20a%20new%20neighborhood%20structure&author=C.C..%20Ribeiro&author=D.S..%20Vianna&journal=Int.%20Trans.%20Oper.%20Res.&volume=12&pages=325-338&publication_year=2005)

232. C.C. Ribeiro, C.D. Ribeiro, R.S. Lanzelotte, Query optimization in distributed relational databases. J. Heuristics **3**, 5–23 (1997)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Query%20optimization%20in%20distributed%20relational%20databases&author=C.C..%20Ribeiro&author=C.D..%20Ribeiro&author=R.S..%20Lanzelotte&journal=J.%20Heuristics&volume=3&pages=5-23&publication_year=1997)

233. C.C. Ribeiro, E. Uchoa, R.F. Werneck, A hybrid GRASP with perturbations for the

Steiner problem in graphs. INFORMS J. Comput. **14**, 228–246 (2002)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20GRASP%20with%20perturbations%20for%20the%20Steiner%20problem%20in%20graphs&author=C.C..%20Ribeiro&author=E..%20Uchoa&author=R.F..%20Werneck&journal=INFORMS%20J.%20Comput.&volume=14&pages=228-246&publication_year=2002)

234. C.C. Ribeiro, S.L. Martins, I. Rosseti, Metaheuristics for optimization problems in computer communications. Comput. Comuun. **30**, 656–669 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Metaheuristics%20for%20optimization%20problems%20in%20computer%20communications&author=C.C..%20Ribeiro&author=S.L..%20Martins&author=I..%20Rosseti&journal=Comput.%20Comuun.&volume=30&pages=656-669&publication_year=2007)

235. C.C. Ribeiro, I. Rosseti, R. Vallejos, On the use of run time distributions to evaluate and compare stochastic local search algorithms, in *Engineering Stochastic Local Search Algorithms*, ed. by T. Sttzle, M. Biratari, and H.H. Hoos. Lecture Notes in Computer Science, vol. 5752 (Springer, Berlin, 2009), pp. 16–30
Google Scholar (http://scholar.google.com/scholar_lookup?title=On%20the%20Use%20of%20Run%20Time%20Distributions%20to%20Evaluate%20and%20Compare%20Stochastic%20Local%20Search%20Algorithms&author=Celso%20C..%20Ribeiro&author=Isabel.%20Rosseti&author=Reinaldo.%20Vallejos&pages=16-30&publication_year=2009)

236. C.C. Ribeiro, I. Rosseti, R. Vallejos, Exploiting run time distributions to compare sequential and parallel stochastic local search algorithms. J. Glob. Optim. **54**, 405–429 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Exploiting%20run%20time%20distributions%20to%20compare%20sequential%20and%20parallel%20stochastic%20local%20search%20algorithms&author=C.C..%20Ribeiro&author=I..%20Rosseti&author=R..%20Vallejos&journal=J.%20Glob.%20Optim.&volume=54&pages=405-429&publication_year=2012)

237. R.Z. Ríos-Mercado, J.F. Bard, Heuristics for the flow line problem with setup costs. Eur. J. Oper. Res. **110**, 76–98 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Heuristics%20for%20the%20flow%20line%20problem%20with%20setup%20costs&author=R.Z..%20R%C3%ADos-Mercado&author=J.F..%20Bard&journal=Eur.%20J.%20Oper.%20Res.&volume=110&pages=76-98&publication_year=1998)

238. R.Z. Ríos-Mercado, J.F. Bard, An enhanced TSP-based heuristic for makespan minimization in a flow shop with setup costs. J. Heuristics **5**, 57–74 (1999)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20enhanced%20TSP-based%20heuristic%20for%20makespan%20minimization%20in%20a%20flow%20shop%20with%20setup%20costs&author=R.Z..%20R%C3%ADos-Mercado&

author=J.F..%20Bard&journal=J.%20Heuristics&volume=5&pages=57-74&publication_year=1999)

239. R.Z. Ríos-Mercado, E. Fernández. A reactive GRASP for a commercial territory design problem with multiple balancing requirements. Comput. Oper. Res. **36**, 755–776 (2009)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20reactive%20GRASP%20for%20a%20commercial%20territory%20design%20problem%20with%20multiple%20balancing%20requirements&author=R.Z..%20R%C3%ADos-Mercado&author=E..%20Fern%C3%A1ndez&journal=Comput.%20Oper.%20Res.&volume=36&pages=755-776&publication_year=2009)

240. A. Riva, F. Amigoni, A GRASP metaheuristic for the coverage of grid environments with limited-footprint tools, in *Proceedings of the 16th Conference on Autonomous Agents and MultiAgent Systems, AAMAS '17*, Richland, SC, pp. 484–491. International Foundation for Autonomous Agents and Multiagent Systems (2017)
Google Scholar (https://scholar.google.com/scholar?q=A.%C2%A0Riva%2C%20F.%C2%A0Amigoni%2C%20A%20GRASP%20metaheuristic%20for%20the%20coverage%20of%20grid%20environments%20with%20limited-footprint%20tools%2C%20in%20Proceedings%20of%20the%2016th%20Conference%20on%20Autonomous%20Agents%20and%20MultiAgent%20Systems%2C%20AAMAS%20%E2%80%9917%2C%20Richland%2C%20SC%2C%20pp.%C2%A0484%E2%80%93491.%20International%20Foundation%20for%20Autonomous%20Agents%20and%20Multiagent%20Systems%20%282017%29)

241. A.J. Robertson, A set of greedy randomized adaptive local search procedure (GRASP) implementations for the multidimensional assignment problem. Comput. Optim. Appl. **19**, 145–164 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20set%20of%20greedy%20randomized%20adaptive%20local%20search%20procedure%20%28GRASP%29%20implementations%20for%20the%20multidimensional%20assignment%20problem&author=A.J..%20Robertson&journal=Comput.%20Optim.%20Appl.&volume=19&pages=145-164&publication_year=2001)

242. P.L. Rocha, M.G. Ravetti, G.R. Mateus, The metaheuristic GRASP as an upper bound for a branch and bound algorithm in a scheduling problem with non-related parallel machines and sequence-dependent setup times, in *Proceedings of the 4th EU/ME Workshop: Design and Evaluation of Advanced Hybrid Meta-Heuristics*, vol. 1 (2004), pp. 62–67
Google Scholar (https://scholar.google.com/scholar?q=P.L.%20Rocha%2C%20M.G.%20Ravetti%2C%20G.R.%20Mateus%2C%20The%20metaheuristic%20GRASP%20as%20an%20upper%20bound%20for%20a%20branch%20and%20bound%20algorithm%20in%20a%20scheduling%20problem%20with%20non-related%20parallel%20machines%20and%20sequence-dependent%20setup%20times

%2C%20in%20Proceedings%20of%20the%204th%20EU%2FME%20Workshop%3A%20Design%20and%20Evaluation%20of%20Advanced%20Hybrid%20Meta-Heuristics%2C%20vol.%C2%A01%20%282004%29%2C%20pp.%C2%A062%E2%80%9367)

243. F.J. Rodriguez, C. Blum, C. García-Martínez, M. Lozano, GRASP with path-relinking for the non-identical parallel machine scheduling problem with minimising total weighted completion times. Ann. Oper. Res. **201**, 383–401 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20path-relinking%20for%20the%20non-identical%20parallel%20machine%20scheduling%20problem%20with%20minimising%20total%20weighted%20completion%20times&author=F.J..%20Rodriguez&author=C..%20Blum&author=C..%20Garc%C3%ADa-Mart%C3%ADnez&author=M..%20Lozano&journal=Ann.%20Oper.%20Res.&volume=201&pages=383-401&publication_year=2012)

244. F.J. Rodriguez, F. Glover, C. García-Martínez, R. Martí, M. Lozano, Grasp with exterior path-relinking and restricted local search for the multidimensional two-way number partitioning problem. Comput. Oper. Res. **78**, 243–254 (2017)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Grasp%20with%20exterior%20path-relinking%20and%20restricted%20local%20search%20for%20the%20multidimensional%20two-way%20number%20partitioning%20problem&author=F.J..%20Rodriguez&author=F..%20Glover&author=C..%20Garc%C3%ADa-Mart%C3%ADnez&author=R..%20Mart%C3%AD&author=M..%20Lozano&journal=Comput.%20Oper.%20Res.&volume=78&pages=243-254&publication_year=2017)

245. M.A. Salazar-Aguilar, R.Z. Ríos-Mercado, J.L. González-Velarde, GRASP strategies for a bi-objective commercial territory design problem. J. Heuristics **19**, 179–200 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20strategies%20for%20a%20bi-objective%20commercial%20territory%20design%20problem&author=M.A..%20Salazar-Aguilar&author=R.Z..%20R%C3%ADos-Mercado&author=J.L..%20Gonz%C3%A1lez-Velarde&journal=J.%20Heuristics&volume=19&pages=179-200&publication_year=2013)

246. J. Santamaría, O. Cordón, S. Damas, R. Martí, R.J. Palma, GRASP & evolutionary path relinking for medical image registration based on point matching, in *2010 IEEE Congress on Evolutionary Computation* (IEEE, New York, 2010), pp. 1–8
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20%26%20evolutionary%20path%20relinking%20for%20medical%20image%20registration%20based%20on%20point%20matching%2C%20in%202010%20IEEE%20Congress%20on%20Evolutionary%20Computation%0A&author=J..%20Santamar%C3%ADa&author=O..%20Cord%C3%B3n&author=S..%20Damas&author=R..%20Mart%C3%AD&author=R.J..%20Palma&

publication_year=2010)

247. J. Santamaría, O. Cordón, S. Damas, R. Martí, R.J. Palma, GRASP and path relinking hybridizations for the point matching-based image registration problem. J. Heuristics **18**, 169–192 (2012)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20and%20path%20relinking%20hybridizations%20for%20the%20point%20matching-based%20image%20registration%20problem&author=J..%20Santamar%C3%ADa&author=O..%20Cord%C3%B3n&author=S..%20Damas&author=R..%20Mart%C3%AD&author=R.J..%20Palma&journal=J.%20Heuristics&volume=18&pages=169-192&publication_year=2012)

248. D. Santos, A. de Sousa, F. Alvelos, A hybrid column generation with GRASP and path relinking for the network load balancing problem. Comput. Oper. Res. **40**, 3147–3158 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20hybrid%20column%20generation%20with%20GRASP%20and%20path%20relinking%20for%20the%20network%20load%20balancing%20problem&author=D..%20Santos&author=A..%20Sousa&author=F..%20Alvelos&journal=Comput.%20Oper.%20Res.&volume=40&pages=3147-3158&publication_year=2013)

249. M. Scaparra, R. Church, A GRASP and path relinking heuristic for rural road network development. J. Heuristics **11**, 89–108 (2005)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20and%20path%20relinking%20heuristic%20for%20rural%20road%20network%20development&author=M..%20Scaparra&author=R..%20Church&journal=J.%20Heuristics&volume=11&pages=89-108&publication_year=2005)

250. I.V. Sergienko, V.P. Shilo, V.A. Roshchin, Optimization parallelizing for discrete programming problems. Cybern. Syst. Anal. **40**, 184–189 (2004)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Optimization%20parallelizing%20for%20discrete%20programming%20problems&author=I.V..%20Sergienko&author=V.P..%20Shilo&author=V.A..%20Roshchin&journal=Cybern.%20Syst.%20Anal.&volume=40&pages=184-189&publication_year=2004)

251. O.V. Shylo, T. Middelkoop, P.M. Pardalos, Restart strategies in optimization: parallel and serial cases. Parallel Comput. **37**, 60–68 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Restart%20strategies%20in%20optimization%3A%20parallel%20and%20serial%20cases&author=O.V..%20Shylo&author=T..%20Middelkoop&author=P.M..%20Pardalos&journal=Parallel%20Comput.&volume=37&pages=60-68&publication_year=2011)

252. O.V. Shylo, O.A. Prokopyev, J. Rajgopal, On algorithm portfolios and restart strategies. Oper. Res. Lett. **39**, 49–52 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=On%20algorithm%20portfolios%20and%20restart%20str

ategies&author=O.V..%20Shylo&author=O.A..%20Prokopyev&author=J..%20Rajgopal&journal=Oper.%20Res.%20Lett.&volume=39&pages=49-52&publication_year=2011)

253. F. Silva, D. Serra, Locating emergency services with different priorities: the priority queuing covering location problem. J. Oper. Res. Soc. **59**, 1229–1238 (2007)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Locating%20emergency%20services%20with%20different%20priorities%3A%20the%20priority%20queuing%20covering%20location%20problem&author=F..%20Silva&author=D..%20Serra&journal=J.%20Oper.%20Res.%20Soc.&volume=59&pages=1229-1238&publication_year=2007)

254. R.M.A. Silva, M.G.C. Resende, P.M. Pardalos, M.J. Hirsch, A Python/C library for bound-constrained global optimization with continuous GRASP. Optim. Lett. **7**, 967–984 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20Python%2FC%20library%20for%20bound-constrained%20global%20optimization%20with%20continuous%20GRASP&author=R.M.A..%20Silva&author=M.G.C..%20Resende&author=P.M..%20Pardalos&author=M.J..%20Hirsch&journal=Optim.%20Lett.&volume=7&pages=967-984&publication_year=2013)

255. R.M.A. Silva, M.G.C. Resende, P.M. Pardalos, G.R. Mateus, G. de Tomi, GRASP with path-relinking for facility layout, in *Models, Algorithms, and Technologies for Network Analysis*, ed. by B.I. Goldengorin, V.A. Kalyagin, P.M. Pardalos. *Springer Proceedings in Mathematics and Statistics*, vol. 59 (Springer, Berlin, 2013), pp. 175–190
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20Path-Relinking%20for%20Facility%20Layout&author=R.%20M.%20A..%20Silva&author=M.%20G.%20C..%20Resende&author=P.%20M..%20Pardalos&author=G.%20R..%20Mateus&author=G..%20De%20Tomi&pages=175-190&publication_year=2013)

256. D. Sosnowska, Optimization of a simplified fleet assignment problem with metaheuristics: simulated annealing and GRASP, in *Approximation and Complexity in Numerical Optimization*, ed. by P.M. Pardalos (Kluwer Academic Publishers, Dordrecht, 2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Optimization%20of%20a%20simplified%20fleet%20assignment%20problem%20with%20metaheuristics%3A%20simulated%20annealing%20and%20GRASP&author=D..%20Sosnowska&publication_year=2000)

257. M.C. Souza, C. Duhamel, C.C. Ribeiro, A GRASP heuristic for the capacitated minimum spanning tree problem using a memory-based local search strategy, in *Metaheuristics: Computer Decision-Making*, ed. by M.G.C. Resende, J. Souza (Kluwer Academic Publisher, Dordrecht, 2004), pp. 627–658
Google Scholar (http://scholar.google.com

/scholar_lookup?title=A%20GRASP%20heuristic%20for%20the%20capacitated%20minimum%20spanning%20tree%20problem%20using%20a%20memory-based%20local%20search%20strategy&author=M.C..%20Souza&author=C..%20Duhamel&author=C.C..%20Ribeiro&pages=627-658&publication_year=2004)

258. A. Srinivasan, K.G. Ramakrishnan, K. Kumaram, M. Aravamudam, S. Naqvi, Optimal design of signaling networks for Internet telephony, in *IEEE INFOCOM 2000*, vol. 2 (2000), pp. 707–716
Google Scholar (https://scholar.google.com/scholar?q=A.%C2%A0Srinivasan%2C%20K.G.%20Ramakrishnan%2C%20K.%C2%A0Kumaram%2C%20M.%C2%A0Aravamudam%2C%20S.%C2%A0Naqvi%2C%20Optimal%20design%20of%20signaling%20networks%20for%20Internet%20telephony%2C%20in%20IEEE%20INFOCOM%202000%2C%20vol.%C2%A02%20%282000%29%2C%20pp.%C2%A0707%E2%80%93716)

259. H. Takahashi, A. Matsuyama, An approximate solution for the Steiner problem in graphs. Math. Jpn. **24**, 573–577 (1980)
Google Scholar (http://scholar.google.com/scholar_lookup?title=An%20approximate%20solution%20for%20the%20Steiner%20problem%20in%20graphs&author=H..%20Takahashi&author=A..%20Matsuyama&journal=Math.%20Jpn.&volume=24&pages=573-577&publication_year=1980)

260. T.L. Urban, Solution procedures for the dynamic facility layout problem. Ann. Oper. Res. **76**, 323–342 (1998)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Solution%20procedures%20for%20the%20dynamic%20facility%20layout%20problem&author=T.L..%20Urban&journal=Ann.%20Oper.%20Res.&volume=76&pages=323-342&publication_year=1998)

261. T.L. Urban, W.-C. Chiang, R.A. Russel, The integrated machine allocation and layout problem. Int. J. Prod. Res. **38**, 2913–2930 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=The%20integrated%20machine%20allocation%20and%20layout%20problem&author=T.L..%20Urban&author=W.-C..%20Chiang&author=R.A..%20Russel&journal=Int.%20J.%20Prod.%20Res.&volume=38&pages=2913-2930&publication_year=2000)

262. F.L. Usberti, P.M. França, A.L.M. França, GRASP with evolutionary path-relinking for the capacitated arc routing problem. Comput. Oper. Res. **40**, 3206–3217 (2013)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%20with%20evolutionary%20path-relinking%20for%20the%20capacitated%20arc%20routing%20problem&author=F.L..%20Usberti&author=P.M..%20Fran%C3%A7a&author=A.L.M..%20Fran%C3%A7a&journal=Comput.%20Oper.%20Res.&volume=40&pages=3206-3217&publication_year=2013)

263. J.X. Vianna Neto, D.L.A. Bernert, L.S. Coelho, Continuous GRASP algorithm applied to economic dispatch problem of thermal units, in *Proceedings of the 13th*

Brazilian Congress of Thermal Sciences and Engineering, Uberlandia (2010)
Google Scholar (https://scholar.google.com/scholar?q=J.X.%20Vianna%20Neto%2C%20D.L.A.%20Bernert%2C%20L.S.%20Coelho%2C%20Continuous%20GRASP%20algorithm%20applied%20to%20economic%20dispatch%20problem%20of%20thermal%20units%2C%20in%20Proceedings%20of%20the%2013th%20Brazilian%20Congress%20of%20Thermal%20Sciences%20and%20Engineering%2C%20Uberlandia%20%282010%29)

264. J.G. Villegas, C. Prins, C. Prodhon, A.L. Medaglia, N. Velasco, GRASP/VND and multi-start evolutionary local search for the single truck and trailer routing problem with satellite depots. Eng. Appl. Artif. Intelli. **23**, 780–794 (2010)
Google Scholar (http://scholar.google.com/scholar_lookup?title=GRASP%2FVND%20and%20multi-start%20evolutionary%20local%20search%20for%20the%20single%20truck%20and%20trailer%20routing%20problem%20with%20satellite%20depots&author=J.G..%20Villegas&author=C..%20Prins&author=C..%20Prodhon&author=A.L..%20Medaglia&author=N..%20Velasco&journal=Eng.%20Appl.%20Artif.%20Intelli.&volume=23&pages=780-794&publication_year=2010)

265. J.G. Villegas, C. Prins, C. Prodhon, A.L. Medaglia, N. Velasco, A GRASP with evolutionary path relinking for the truck and trailer routing problem. Comput. Oper. Res. **38**, 1319–1334 (2011)
Google Scholar (http://scholar.google.com/scholar_lookup?title=A%20GRASP%20with%20evolutionary%20path%20relinking%20for%20the%20truck%20and%20trailer%20routing%20problem&author=J.G..%20Villegas&author=C..%20Prins&author=C..%20Prodhon&author=A.L..%20Medaglia&author=N..%20Velasco&journal=Comput.%20Oper.%20Res.&volume=38&pages=1319-1334&publication_year=2011)

266. D.L. Woodruff, E. Zemel, Hashing vectors for tabu search. Ann. Oper. Res. **41**, 123–137 (1993)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Hashing%20vectors%20for%20tabu%20search&author=D.L..%20Woodruff&author=E..%20Zemel&journal=Ann.%20Oper.%20Res.&volume=41&pages=123-137&publication_year=1993)

267. J.Y. Xu, S.Y. Chiu, Effective heuristic procedure for a field technician scheduling problem. J. Heuristics **7**, 495–509 (2001)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Effective%20heuristic%20procedure%20for%20a%20field%20technician%20scheduling%20problem&author=J.Y..%20Xu&author=S.Y..%20Chiu&journal=J.%20Heuristics&volume=7&pages=495-509&publication_year=2001)

268. J. Yen, M. Carlsson, M. Chang, J.M. Garcia, H. Nguyen, Constraint solving for inkjet print mask design. J. Imaging Sci. Technol. **44**, 391–397 (2000)
Google Scholar (http://scholar.google.com/scholar_lookup?title=Constraint%20solving%20for%20inkjet%20print%20mas

k%20design&author=J..%20Yen&author=M..%20Carlsson&author=M..%20Chang&author=J.M..%20Garcia&author=H..%20Nguyen&journal=J.%20Imaging%20Sci.%20Technol.&volume=44&pages=391-397&publication_year=2000)

Copyright information

About this chapter

Cite this chapter as:

Resende M.G.C., Ribeiro C.C. (2019) Greedy Randomized Adaptive Search Procedures: Advances and Extensions. In: Gendreau M., Potvin JY. (eds) Handbook of Metaheuristics. International Series in Operations Research & Management Science, vol 272. Springer, Cham

- First Online 21 September 2018
- DOI https://doi.org/10.1007/978-3-319-91086-4_6
- Publisher Name Springer, Cham
- Print ISBN 978-3-319-91085-7
- Online ISBN 978-3-319-91086-4
- eBook Packages Business and Management

Personalised recommendations