## Grafted Genetic Algorithm For Traveling Visitor Problem

Milan Djordjevic

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## References

- José Albiach, David Soler, and Departamento De Matemática Aplicada. Including Dependence Of The Costs On Time In The Traveling Salesman Problem. *Revista Investigacion Oerational*, 25(3):209–217, 2004.
- [2] S. Anily and R. Hassin. The Swapping Problem. Networks, 22(4):419–433, July 1992.
- [3] David Applegate, Robert Bixby, and William Cook. Finding Tours in the TSP. 1994.
- [4] David Applegate, William Cook, and Andre Rohe. Chained Lin-Kernighan for Large Traveling Salesman Problems. INFORMS Journal on Computing, 15(1):82–92, January 2003.
- [5] Esther M. Arkin. Optimal Covering Tours with Turn Costs. SIAM Journal on Computing, 1(3):149, 2005.
- [6] Serdar Korukoglu Aybars Ugur. Genetic Algorithm based solution for TSP on a sphere. *Earth*, 14(3):219–228, 2009.
- [7] Avrim Blum, Prasad Chalasani, Don Coppersmith, Bill Pulleyblank, Prabhakar Raghavan, and Madhu Sudan. The Minimum Latency Problem. Proceedings of the twenty-sixth annual ACM symposium on Theory of computing - STOC '94, pages 163–171, 1994.
- [8] Christian Blum and Andrea Roli. Metaheuristics in Combinatorial Optimization: Overview and Conceptual Comparison. ACM Computing Surveys, 35(3):268–308, 2003.
- [9] N Boland. The Asymmetric Traveling Salesman Problem with Replenishment Arcs. European Journal of Operational Research, 123(2):408–427, June 2000.
- [10] Janez Brest. A Heuristic for the Asymmetric Traveling Salesman Problem The Heuristic. Compare A Journal Of Comparative Education, pages 145–150, 2005.
- [11] Jill Cirasella, David S Johnson, Lyle A Mcgeoch, and Weixiong Zhang. The Asymmetric Traveling Salesman Problem : Algorithms, Instance Generators, and Tests. In *Lecture Notes in Computer Science*, volume 2153, pages 32–59, 2001.
- [12] a Cojaoghlan, S Krumke, and T Nierhoff. A heuristic for the Stacker Crane Problem on trees which is almost surely exact. *Journal of Algorithms*, 61(1):1–19, September 2006.
- [13] William Cook, David Applegate, and Robert Bixby. TSP Cuts Which Do Not Conform to the Template Paradigm. Computational Combinatorial Optimization, (1):261–303, 2001.
- [14] G. Dantzig. Solution of a Large-Scale Traveling-Salesman Problem. Operations Research, 2(4):393–410, November 1954.

- [15] Lyle A. McGeoch David S. Johnson. Experimental Analysis of Heuristics for the STSP. Combinatorial Optimization, 12(November 2001):369–443, 2002.
- [16] Keith L Downing. Selected Applications of Evolutionary Algorithms. Science And Technology, 2006.
- [17] Tarek A El-mihoub, Adrian A Hopgood, Lars Nolle, and Alan Battersby. Hybrid Genetic Algorithms : A Review. Solutions, 11(August), 2006.
- [18] T. Fischer and P. Merz. A Distributed Chained Lin-Kernighan Algorithm for TSP Problems. 19th IEEE International Parallel and Distributed Processing Symposium, (April):16b–16b, 2005.
- [19] Bernd Freisleben and Peter Merz. New Genetic Local Search Operators for the Traveling Salesman Problem. Parallel Problem Solving from Nature, 1141(Fb 12):890–899, 1996.
- [20] S. Johnson G. Dantzig, R. Fulkerson. Solution of a large-scale Traveling-Salesman Problem. Operations Research, 2(4):393–410, 1954.
- [21] Peng Gang, Ichiro Iimura, and Shigeru Nakayama. An Evolutionary Multiple Heuristic with Genetic Local Search for Solving TSP. International Journal, 14(2):1–11, 2008.
- [22] Alfredo Garcia, Pedro Jodra, and Javier Tejel. A Note on the Traveling Repairman Problem. Networks, 40(1):27–31, August 2002.
- [23] M. X. Goemans and D. J. Bertsimas. Probabilistic Analysis of the Held and Karp Lower Bound for the Euclidean Traveling Salesman Problem. *Mathematics of Operations Research*, 16(1):72–89, February 1991.
- [24] Computer Graphics and Technology Favoritenstra. Evolutionary Computation: An Overview and Recent Trends. Evolutionary Computation, pages 1–6, 1861.
- [25] Federico Greco. Travelling Salesman Problem, page 202. In-Teh, 2009.
- [26] Anupam Gupta. Approximation Algorithms for Optimal Decision Trees and Adaptive TSP Problems. Automata, Languages and Programming, pages 690–701, 2010.
- [27] Gregory Gutin. Seismic Vessel Problem. Production, pages 1–9, 2003.
- [28] Gregory Gutin and Daniel Karapetyan. A memetic algorithm for the generalized traveling salesman problem. *Natural Computing*, 9(1):47–60, January 2009.
- [29] Gregory Gutin, Anders Yeo, and Alexei Zverovitch. Exponential Neighborhoods And Domination Analysis For The TSP, page 833. 2002.
- [30] Michael Hahsler and Kurt Hornik. Introduction to TSP Infrastructure for the Traveling Salesperson Problem. New York, (1978):1–17, 2009.
- [31] William Eugene Hart. Adaptive Global Optimization with Local Search. PhD thesis, University of California, San Diego, 1994.
- [32] Michael Held and Richard M. Karp. The Traveling-Salesman Problem and Minimum Spanning Trees. Mathematical Programming, 1(1):6–25, December 1971.
- [33] K Helsgaun. An effective implementation of the Lin–Kernighan Traveling Salesman Heuristic. European Journal of Operational Research, 126(1):106–130, October 2000.
- [34] Lawrence J. Hubert and Frank B. Baker. Applications of combinatorial programming to data analysis: The traveling salesman and related problems. *Psychometrika*, 43(1):81–91, March 1978.

- [35] A. H. G. Rinnooy Kan J. K. Lenstra. Some Simple Applications of the Travelling Salesman Problem. Operational Research Quarterly, 26(4):717–733, 1975.
- [36] David S Johnson and Lyle A Mcgeoch. The Traveling Salesman Problem : A Case Study in Local Optimization. Local search in combinatorial optimization, pages 215–310, 1997.
- [37] Olin Johnson and Jing Liu. A traveling salesman approach for predicting protein functions. Source code for biology and medicine, 1(3), January 2006.
- [38] B Kallehauge. Formulations and exact algorithms for the vehicle routing problem with time windows. Computers & Operations Research, 35(7):2307–2330, July 2008.
- [39] D Karapetyan and G Gutin. Lin-Kernighan Heuristic Adaptations for the Generalized Traveling Salesman Problem. European Journal of Operational Research, 208(3):221–232, 2010.
- [40] Lila Kari and Grzegorz Rozenberg. The many facets of natural computing. Communications of the ACM, 51(10):72, October 2008.
- [41] N. Krasnogor and J. Smith. A Tutorial for Competent Memetic Algorithms: Model, Taxonomy, and Design Issues. *IEEE Transactions on Evolutionary Computation*, 9(5):474–488, October 2005.
- [42] Natalio Krasnogor. Studies on the Theory and Design Space of Memetic algorithms. Phd thesis, University of the West of England, Bristol, 2002.
- [43] Natalio Krasnogor and Michael G Norman. A New Hybrid Heuristic For Large Geometric Traveling Salesman Problems Based On The Delaunay Triangulation. Number 1. 1995.
- [44] Ratnesh Kumar and Haomin Li. On Asymmetric TSP : Transformation to Symmetric TSP and Performance Bound. *Electrical Engineering*, pages 1–10, 1999.
- [45] Lau Tung Leng. Guided Genetic Algorithm. PhD thesis, University of Essex, Colchester, United Kingdom, 2008.
- [46] S B Liu, K M Ng, and H L Ong. A New Heuristic Algorithm for the Classical Symmetric Traveling Salesman Problem. *Engineering and Technology*, 119260:267–271, 2007.
- [47] Ben Lund, Rhodes Hall, Justin W Smith, and Rhodes Hall. A Multi-Stage CUDA Kernel for Floyd-Warshall. 2010.
- [48] Novi Sad J Math, Miroslav Hajdukovi, Zorica Suvajd, Zarko Zivanov, and Edin Hod. A Problem Of Program Execution Time. J. Math, 33(1):67–73, 2003.
- [49] Marjan Mernik, Maribor Faculty, Electrical Engineering, and Computer Science Smetanova. A metaevolutionary approach in searching of the best combination of crossover operators for the tsp. *Electrical Engineering*, 5:32–36, 2000.
- [50] P. Merz and B. Freisleben. Genetic local search for the TSP: new results. Proceedings of 1997 IEEE International Conference on Evolutionary Computation (ICEC '97), (Fb 12):159–164, 1997.
- [51] Peter Merz and Bernd Freislaben. Memetic Algorithms For The Traveling Salesman Problem. Complex Systems, 13(4):297–345, 1997.
- [52] Kelly Easton Michael Trick. The Traveling Tournament Problem. Principles and Practice of Constraint Programming—CP 2001, pages 580–584, 2001.
- [53] Angel Goñi Moreno. Solving Tracelling Salesman Problem In a Simulation Of Genetic Algorithms With DNA. International Journal, 15(C):357–363, 2008.

- [54] Richard E Mowe and Bryant A Julstrom. A Web-Based Evolutionary Algorithm Demonstration using the Traveling Salesman Problem. World Wide Web Internet And Web Information Systems, 2001.
- [55] Hung Dinh Nguyen, Ikuo Yoshihara, Kunihito Yamamori, and Moritoshi Yasunaga. Implementation of an effective hybrid GA for large-scale traveling salesman problems. *IEEE transactions on systems,* man, and cybernetics. Part B, Cybernetics : a publication of the IEEE Systems, Man, and Cybernetics Society, 37(1):92–9, February 2007.
- [56] Ender Ozcan. A Brief Review of Memetic Algorithms for Solving Euclidean 2D Traveling Salesrep Problem. Proc. of the 13th Turkish Symposium on Artificial Intelligence and Neural Networks, pages 99—-108, 2004.
- [57] Christos Papadimitriou and Martha Sideri. On the Floyd-Warshall Algorithm for Logic Programs. Journal of Logic Programming, 41(1):129–137, 1999.
- [58] R. C. Prim. Shortest Connection Networks And Some Generalisations. Bell System Technical Journal, 36(6):1389–1401, 1957.
- [59] Shubhra Sankar Ray, Sanghamitra Bandyopadhyay, and Sankar K Pal. New Genetic Operators for Solving TSP: Application to Microarray Gene Ordering. *Pattern Recognition and Machine Intelligence*, pages 605–610, 2005.
- [60] César Rego and Fred Glover. Local Search and Metaheuristics, pages 309–368. 2002.
- [61] H Sengoku and I Yoshihara. A Fast TSP Solver Using GA on JAVA. In Third International Symposium on Artificial Life, and Robotics, pages 283–288, 1998.
- [62] R Thamilselvan and P Balasubramanie. A Genetic Algorithm with a Tabu Search (GTA) for Traveling Salesman Problem. International Journal of Recent Trends in Engineering, 1:607–610, 2009.
- [63] Master Thesis and Fach Computational Engineering. Visualization of Evolutionary Algorithms. Master thesis, University Erlangen Nurnberg, 1976.
- [64] Stutzle Thomas. Local Search Algorithms for Combinatorial Problems Analysis, Improvements, and New Applications. PhD thesis, University of Darmstadt, 1998.
- [65] R. S. Chuck Tiberio. Facility Location Problems. DIMACS, 2003.
- [66] Marko Urh. Proactive Police Patrolling In Traffic : A GIS Approach. In 16th International Symposium on Electronics in Transport, 2008.
- [67] Matthew Bartschi Wall. A Genetic Algorithm for Resource-Constrained Scheduling by. PhD thesis, Massachusetts Institute of Technology, 1996.
- [68] Shuzhen Wang, Baobao Wang, and Xiangjun Li. Grafted Genetic Algorithm and Its Application. 7th International Conference on Computer-Aided Industrial Design and Conceptual Design, 3(3):1–4, 2006.
- [69] Christopher White and A. A Hybrid Evolutionary algorithm for Traveling Salesman Problem. In Congress on Evolutionary Computation IEEE Cat, pages 1473–1478, 2005.
- [70] Paul Seymour William Cook. Tour Merging via Branch-decomposition. INFORMS Journal on Computing, 15(3):233-248, 2003.
- [71] Fang-Geng Zhao, Jiang-Sheng Sun, Su-Jian Li, and Wei-Min Liu. A Hybrid Genetic Algorithm for the Traveling Salesman Problem with Pickup and Delivery. *International Journal of Automation and Computing*, 6(1):97–102, 2009.
- [72] Gang Zhao, Wenjuan Luo, Huiping Nie, and Chen Li. A Genetic Algorithm Balancing Exploration and Exploitation for the Travelling Salesman Problem. 2008 Fourth International Conference on Natural Computation, pages 505–509, October 2008.