



Electric Vehicle Routing Problem with Heterogeneous Vehicles and Partial Charge

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References

- [1] Afroditi, Anagnostopoulou, et al. "Electric vehicle routing problem with industry constraints: trends and insights for future research." *Transportation Research Procedia* 3 (2014): 452-459.
- [2] Bruglieri, Maurizio, et al. "A matheuristic for the electric vehicle routing problem with time windows." arXiv preprint arXiv:1506.00211 (2015).
- [3] Bruglieri, Maurizio, et al. "A Variable Neighborhood Search Branching for the Electric Vehicle Routing Problem with Time Windows." *Electron. Notes Discret. Math.* 47 (2015): 221-228.
- [4] Bunsen, Till, et al. "Global EV Outlook 2018: Towards cross-modal electrification." (2018).
- [5] Cano, Jose Alejandro, Alexander Alberto Correa-Espinal, and Rodrigo Andrés Gómez-Montoya. "An evaluation of picking routing policies to improve warehouse efficiency." *Int. J. Ind. Eng. Manag* 8.4 (2017): 229-238.
- [6] Demir, Emrah, Tolga Bektaş, and Gilbert Laporte. "A review of recent research on green road freight transportation." *European Journal of Operational Research* 237.3 (2014): 775-793.
- [7] Desaulniers, Guy, et al. "Exact algorithms for electric vehicle-routing problems with time windows." *Operations Research* 64.6 (2016): 1388-1405.
- [8] Ding, Nan, Rajan Batta, and Changhyun Kwon. "Conflict-free electric vehicle routing problem with capacitated charging stations and partial recharge." Technical Report. Department of Industrial and Systems Engineering, University at Buffalo, US and Department of Industrial and Management Systems Engineering, University of South Florida, US, 2015.
- [9] Felipe, Ángel, et al. "A heuristic approach for the green vehicle routing problem with multiple technologies and partial recharges." *Transportation Research Part E: Logistics and Transportation Review* 71 (2014): 111-128.
- [10] Hiermann, Gerhard, et al. "The electric fleet size and mix vehicle routing problem with time windows and recharging stations." *European Journal of Operational Research* 252.3 (2016): 995-1018.
- [11] Jie, Wanchen, et al. "The two-echelon capacitated electric vehicle routing problem with battery swapping stations: Formulation and efficient methodology." *European Journal of Operational Research* 272.3 (2019): 879-904.
- [12] Júnior, Alvaro Neuenfeldt, and Lucas Rebouças Guimarães. "A greedy randomized adaptive search procedure application to solve the travelling salesman problem." *Int. J. Ind. Eng. Manag.* 10 (2019).
- [13] Keskin, Merve, and Bülent Çatay. "Partial recharge strategies for the electric vehicle routing problem with time windows." *Transportation Research Part C: Emerging Technologies* 65 (2016): 111-127.
- [14] Keskin, Merve, and Bülent Çatay. "A matheuristic method for the electric vehicle routing problem with time windows and fast chargers." *Computers & Operations Research* 100 (2018): 172-188.
- [15] Koç, Çağrı, et al. "The electric vehicle routing problem with shared charging stations." *International Transactions in Operational Research* 26.4 (2019): 1211-1243.
- [16] Lin, Canhong, et al. "Survey of green vehicle routing problem: past and future trends." *Expert systems with applications* 41.4 (2014): 1118-1138.
- [17] Lin, Jane, Wei Zhou, and Ouri Wolfson. "Electric vehicle routing problem." *Transportation Research Procedia* 12. Supplement C (2016): 508-521.
- [18] Macrina, Giusy, et al. "The green mixed fleet vehicle routing problem with partial battery recharging and time windows." *Computers & Operations Research* 101 (2019): 183-199.
- [19] Montoya, Alejandro, et al. "The electric vehicle routing problem with nonlinear charging function." *Transportation Research Part*

B: Methodological 103 (2017): 87-110.

- [20] Morosini, Enzo. "Simulation-Based Analysis of Integrated Production and Transport Scheduling." *Int. J. Ind. Eng. Manag* 4.3 (2013): 109-116.
- [21] Santa Chávez, Jhon Jairo, et al. "A metaheuristic ACO to solve the multi-depot vehicle routing problem with backhauls." *Int. J. Ind. Eng. Manag* 6.2 (2015): 49-58.
- [22] Sassi, Ons, Wahiba Ramdane Cherif-Khettaf, and Ammar Oulamara. "Iterated tabu search for the mix fleet vehicle routing problem with heterogenous electric vehicles." *Modelling, Computation and Optimization in Information Systems and Management Sciences*. Springer, Cham, 2015. 57-68.
- [23] Schiffer, Maximilian, and Grit Walther. "The electric location routing problem with time windows and partial recharging." *European Journal of Operational Research* 260.3 (2017): 995-1013.
- [24] Senn, L. A. N. F. R. A. N. C. O., et al. "Sviluppare la mobilità elettrica: tecnologie, ambiente, infrastrutture, mercato e regole." (2011).
- [25] Shao, Sai, et al. "Electric vehicle routing problem with charging time and variable travel time." *Mathematical Problems in Engineering* 2017 (2017).
- [26] Torres, Diamantino, Ana Raquel Xambre, and Leonor Teixeira. "Development of synchronized logistics scenarios." *Int. J. Ind. Eng. Manag* 7.2 (2016): 85-93.
- [27] Wen, Min, et al. "An adaptive large neighborhood search heuristic for the electric vehicle scheduling problem." *Computers & Operations Research* 76 (2016): 73-83.
- [28] Xiao, Yiyong, and Abdullah Konak. "The heterogeneous green vehicle routing and scheduling problem with time-varying traffic congestion." *Transportation Research Part E: Logistics and Transportation Review* 88 (2016): 146-166.
- [29] Zuo, Xiaorong, et al. "Using AMPL/CPLEX to model and solve the electric vehicle routing problem (EVRP) with heterogeneous ed fleet." 2017 29th Chinese Control And Decision Conference (CCDC). IEEE, 2017.