

Identifying Parking Enforcement Tours via Arc Routing Problems

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The Parking Enforcement Routing Problem (PERP) is defined to generate daily walking tours for parking enforcement officers (PEO), a problem faced by EMEL company. PEOs must ensure that users pay the fees and respect parking rules. The duration of the tours must be compatible with PEO daily work schedules. Each street cannot be supervised in consecutive hours, or simultaneously by two PEOs. PERP is an Arc Routing Problem with profits ([1], [2]), aiming to maximize a function that represents the need for streets' enforcement. A mixed integer linear programming, heuristics and computational results based on real data are discussed.

References

- [1] CORBERÁN, Á., LAPORTE, G., *Arc Routing: Problems, Methods, and Applications*, MOS-SIAM Series on Optimization (2014).
- [2] MOURÃO, M.C., PINTO, L.S., *An Updated Annotated Bibliography on Arc Routing*, Networks 70(3), 144-194 (2014).

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