

Reviewer #2: This article deals with the "Hampered Travelling Salesman with Neighbourhoods (H-TSPN)".

A variant of the Classic TSP in which areas and not specific points must be reached by the vehicle (drone).

The problem also involves the presence of barriers.

The problem is very interesting and can certainly be used to model surveillance problems or problems related to the reading of sensors equipped with RFID antennas.

The paper first proposes a polynomial approach for the H-SPPN, a variant of the problem based on the Shortest Path and not on the TSP.

Subsequently, an exact approach is provided for the H-TSPN problem based on a mathematical model.

The work is incredibly interesting, many ideas are valid, and it certainly contributes to enriching the literature.

The paper is clear and well-structured.

Unfortunately, for various reasons, the work is not acceptable for publication.

This paper would like to solve the Hampered Travelling Salesman with Neighbourhoods, but instead only solves a specific case of the problem in which a barrier is always present between each pair of targets (H-TSPN).

The presence of a barrier between each pair of targets makes the problem less applicable to real cases but still interesting from a theoretical point of view.

Unfortunately, neither the abstract nor introduction make it clear that the problem addressed is a particular, very niche case of the problem.

To understand that the general version of the problem is not solved, one must pay attention to Page 4, line 6.

On Page 2, line 60, the problem (Hampered Traveling Salesman with Neighbourhoods) is described as H-TSPN, while then only on Page 5, line 45, it is said that the general case of the problem is called H-TSPVN and that H-TSPN represents only a special case in which property A4 is valid.

This causes enormous confusion.

This certainly less important variant of the (H-TSPN) does not seem suitable for a journal such as EJOR.

Page 2, line 49 states that there are no exact approaches, whereas it should be specified that for the TSPN, at least in cases where the target is represented by a circle, the exact algorithm proposed by Coutinho (2016) for the Close-Enough Travelling Salesman Problem (CETSP) could be used.

The many papers proposing upper and lower bounds for CETSP, Carrabs (2020) were also not considered. In general, all literature concerning CESTP is absent.

Darle la vuelta al paper.
Construir caso general
y explicar el particular.

Cambiar nombre los problemas

Aclarar trabajos caso general
justificamos el particular

Añadir literatura.

It would have been interesting to adapt the reference instances proposed in the literature for the CETSP to the problem studied, perhaps by adding barriers.

Mennell 2009 "Heuristics for solving three routing problems: Close-enough traveling salesman problem, close-enough vehicle routing problem, sequence-dependent team orienteering problem"

Coutinho et al. 2016 "A branch-and-bound algorithm for the close-enough traveling salesman problem."

Carrabs et al. 2020 "An Adaptive Heuristic Approach to Compute Upper and Lower Bounds for the Close-Enough Traveling Salesman Problem"

En introduction.