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**"Novas Abordagens para o Problema de Recobrimento de Rotas"**

The Covering Tour Problem is a job sequencing problem and it is defined on a graph  $G=(V \cup W, E)$ , where  $W$  is a set of vertices that must be covered. The problem consists of determining a minimum length Hamiltonian cycle on a subset of  $V$  such that every vertices of  $W$  is within a distance  $d$  from at least one node in the cycle. Being a generalization of the Traveling Salesman Problem, this problem is NP-Hard. This work presents a new mathematical formulation based on flow variables, reduction rules for the associated graph and original metaheuristic algorithms to solve a generalized version of the Covering Tour Problem approximately.