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Title

Polyhedral approaches to arc routing problems

Abstract

From the pioneering works of Dantzig, Edmonds and others, polyhedral (linear programming-based) methods have been successfully applied to the resolution of many combinatorial optimization problems. Roughly speaking, the method consists of trying to formulate the problem as a linear program and using the existing powerful methods of linear programming to solve it. Arc routing problems (ARPs) are no exception and it can be said that LP-based methods are currently among the most effective ones for solving NP-hard ARPs. These methods rely for their effectiveness upon a good understanding of the polyhedron associated with the problem under study. This talk is concerned with the application of polyhedral theory to the construction of effective optimization algorithms for the solution of arc routing problems.