A comparative study of newly developed metaheuristics for the discrete uncapacitated p-median problem

As one of the most prominent variants of the facility location problem, the p-median problem aims to determine the best locations for establishing p number of facilities such that the aggregate customers' transportation cost is minimized. Since the p-median problem is classified as NP-hard, the application of metaheuristics to solve it is inevitable. Considering the fast development in metaheuristics, choosing the most appropriate algorithm to solve this problem is a difficult task. Therefore, this work presents a comparative study of several classical and recently developed nature-inspired optimization algorithms to solve the discrete uncapacitated p-median problem on several randomly generated test instances with different sizes and specifications.