## A Global Optimization Method Using Chaotic Dynamics with Local Search Processes

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Abstract : Many meta-heuristic methods with chaotic dynamics have been studied to solve the global optimization problem. These methods exploit the sensitive dependence of initial conditions in the chaotic dynamics to search the solution extensively. However, since the chaotic trajectory must be often generated to converge to the global optimal or sub-optimal solution, it is extremely difficult to control the trajectory for each optimization problem. Thus, in this paper we propose a new method in which local search processes are incorporated into the chaotic global search process. Throughout the method, the global search finds promising initial points for the local search without convergence, while the local search is executed form each initial point. Some computational experiments show the effectiveness of proposed method.