Abstract

Use of chaotic sequences as part of optimization algorithms is a novel approach to the problem. In this paper, we present, review, discuss and analyze the main chaos optimization algorithms used when the objective function is defined in a compact domain. We found that the algorithms developed in the literature are composed by one or several building blocks: the first wave carrier block, the second wave carrier block and a gradient-based optimization block. Experimentation, allows us to conclude that first wave carrier block is unnecessary, and the successful of algorithms is due to the combination of second wave carrier block and gradient-based optimization.

Keywords

Chaos optimization algorithms, nonlinear test functions, minimization, evaluation of algorithms.