Abstract

This paper aims to introduce a new metaheuristic: The Water-Tank Fish Algorithm, modeled after the workings of the swim bladder in fish, to non-deterministically compute the optima for numerical optimization problems. To balance the explorative-exploitative behavior of a search, the proposed method uses a search localization routine which, after a general exploration, restricts the search to certain areas of the graph and intensifies it as the algorithm advances. The proposed method is tested over 40 benchmark mathematical functions and the results were found to be very encouraging.

References


Index Terms

Computer Science

Algorithms

Keywords

Fish, Buoyancy, Metaheuristic, Nature Inspired, Optimization