

# Biogeography-Based Optimization Algorithm for solving the set covering problem

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Biogeography-Based Optimization Algorithm (BBOA) is a kind of new global optimization algorithm inspired by biogeography. It mimics the migration behavior of animals in nature to solve optimization and engineering problems. In this paper, BBOA for the Set Covering Problem (SCP) is proposed.

SCP is a classic combinatorial problem from NP-hard list problems. It consist to find a set of solutions that cover a range of needs at the lowest possible cost following certain constraints. In addition, we provide a new feature for improve performance of BBOA, improving stagnation in local optimum. With this, the experiment results show that BBOA is very good at solving such problems.

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Biogeography-Based Optimization Algorithm

Set Covering Problem

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Improve performance

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Set covering problem

Optimization