Abstract

Over the last decade, evolutionary and meta-heuristic algorithms have been extensively developed and used as search and optimization tools in various problem domains, including science, commerce, and engineering. Their broad applicability, ease of use, and global
Navigational Path Planning of Multi-Robot using Honey Bee Mating Optimization Algorithm (HBMO)

perspective may be considered as the primary reason for their success. The honey-bees mating process may also be considered as a typical swarm-based approach to optimization, in which the search algorithm is inspired by the process of real honey-bees mating. In this paper we present an alternative approach for navigational path plan of multi robot using HBMO algorithm. We reveal that this proposed optimization scheme outperforms other Evolutionary algorithms like Particle swarm optimization, Differential Evolutionary algorithm in the task of navigation.

Reference


Index Terms
Navigational Path Planning of Multi-Robot using Honey Bee Mating Optimization Algorithm (HBMO)

Computer Science

Fuzzy Systems

Key words

Multi Robot Path Planning

Honey Bee Mating Optimization

algorithm

Centralized Planning