

عنوان مقاله:

Sensor Placement in WSN using the Cellular Genetic Algorithm

محل انتشار:

همایش ملی پژوهش های کاربردی در علوم و مهندسی (سال: 1392)

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خلاصه مقاله:

In this paper, we develop a robust and scalable algorithm for solving the sensor placement in distributed sensor networks for target location under constraints of the cost limitation and complete coverage. The problem is NP-complete for arbitrary sensor fields. The proposed algorithm is based on the Cellular Genetic Algorithm approach, that this algorithm is growing which combines GAs with Cellular Automata. The individuals are distributed in a grid landscape and their genetic operator is restricted to within neighborhood. The proposed method on sensors surrounding is examined in different area and the new method performs more efficiently compared to the Simulated Annealing Algorithm and Genetic Algorithm. The experimental result indicated that CGA can improve convergence speed and maintain diversity of population

کلمات کلیدی:

Cellular Genetic Algorithm, Distributed Sensor Networks, Sensor Placement

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