Abstract

ACO is one of all-powerful meta-heuristics algorithms and some researchers have expressed the strength of some applications with the algorithm the evacuation route planning is the key aspect in case of fire disaster. Ant Colony Optimization (ACO) can be used in rescue planning. Altered ACO applied as the algorithm to demonstrate the potential path during emergency rescue. Physical interference during building rescue such as blockage or disaster complication has been studied in transitional probability rule of ACO. There exits multiple route from source of fire to the exit, hence the selection of shortest path is the fundamental objective of evacuation route planning. The objective of the algorithm is to minimizes the entire rescue time of all evacuees. The ant colony optimization algorithm is used to solve the complications of shortest route planning. Presented paper gives a comparative overview of various emergency scenarios using ant colony optimization algorithm.

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**Index Terms**

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