Application of harmonic functions through Modified SOR (MSOR) method for robot path planning in indoor structured environment

ABSTRACT

This paper presents the application of harmonic functions computed through MSOR iterative method to solve path planning problem in indoor environment. It is known that harmonic functions are very suitable to be used as a global approach for robot path planning. There exist a number of numerical techniques for obtaining the harmonic functions. This paper conducts an investigation of using MSOR method to discover its efficiency in computing the harmonic functions. It is found that MSOR method offer faster approach to the computation of harmonic functions, thus improve the overall performance of the path planning algorithm.