

University of Baghdad

| | | | |
|----------------------------------|--|---|---|
| College Name | College of dentistry | | |
| Department | Basic sciences | | |
| Full Name as written in Passport | Woud majid abed | | |
| e-mail | Woud80_majid@yahoo.com | | |
| Career | <input type="radio"/> Assistant Lecturer | <input checked="" type="radio"/> Lecturer | <input type="radio"/> Assistant Professor |
| | <input checked="" type="radio"/> Master | <input type="radio"/> PhD | |
| Thesis Title | Shortest path planning in amobile robot two-dimension static enviroment using genetic algorithm | | |
| Year | 2005 | | |
| Abstract | <p>One aspect of interest in robotics is planning the optimum path for a mobile robot or the optimum trajectory for link movement of a stationary robot in order to increase it's efficiency. Optimum path planning has been a popular topic of research because of its wide ranging applications.</p> <p>In this research we use genetic algorithms (GA) for finding the shortest path in static environment avoiding the collision with the existing obstacles by applying two algorithms; Michalwicz algorithm for global path planning and Konar algorithm for local path planning. We have improved the performance of these two algorithms by introducing two point crossover and adaptive mutation and by doing an extensive parametric study.</p> <p>By using the same environment were found paths shorter than the paths concluded by previous algorithm.and we implemented our algorithm on different maps with different complexity.</p> <p>Finally the proposed algorithms are programmed in (Delphi Language) to show the results and effects of solving the path planning problem using genetic algorithms(GA).</p> | | |