

## Path Planning for Collision Detection between two Polyhedra

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**Abstract :** This study aimed to propose, a different architecture of a Path Planning using the NECMOP. where several nonlinear objective functions must be optimized in a conflicting situation. The ability to detect and avoid collision is very important for mobile intelligent machines. However, many artificial vision systems are not yet able to quickly and cheaply extract the wealth information. This network, which has been particularly reviewed, has enabled us to solve with a new approach the problem of collision detection between two convex polyhedra in a fixed time ( $O(1)$  time). We used two types of neurons linear and threshold logic, which simplified the actual implementation of all the networks proposed. This article represents a comprehensive algorithm that determine through the AMAXNET network a measure (a mini-maximum point) in a fixed time, which allows us to detect the presence of a potential collision.

**Keywords :** path planning, collision detection, convex polyhedron, neural network

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