Title (en)

A ROBOT PATH PLANNING METHOD WITH STATIC AND DYNAMIC COLLISION AVOIDANCE IN AN UNCERTAIN ENVIRONMENT

Title (de)

VERFAHREN ZUR ROBOTERPFADPLANUNG MIT STATISCHER UND DYNAMISCHER KOLLISIONSVERMEIDUNG IN UNSICHERER UMGEBUNG

Title (fr)

PROCÉDÉ DE PLANIFICATION DE TRAJET DE ROBOT AVEC ÉVITEMENT DE COLLISION STATIQUE ET DYNAMIQUE DANS UN ENVIRONNEMENT INCERTAIN

Publication

**EP 4157589 A1 20230405 (EN)**

Application

**EP 20937802 A 20200526**

Priority

US 2020034493 W 20200526

Abstract (en)

[origin: WO2021242215A1] The present disclosure relates to robot path planning. Depth information of a plurality of obstacles in an environment of a robot are obtained at a first time instance. A static distance map is generated based on the depth information. A path is computed for the robot based on the static distance map. At a second time instant, depth information of one or more obstacles is obtained. A dynamic distance map is generated based on the one or more obstacles, wherein for each obstacle that satisfies a condition: a vibration range of the obstacle is computed based on a position of the obstacle and the static distance map, and the obstacle is classified as a dynamic obstacle or a static obstacle based on a criterion associated with the vibration range. A repulsive speed of the robot is computed based on the dynamic distance map to avoid the dynamic obstacles.

IPC 8 full level

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