

A FastSLAM Algorithm for Omnivision

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Abstract Omnidirectional cameras have a wide field of view, which makes them specially suitable for Simultaneous Localization and Mapping (SLAM) tasks. In this paper, we present a proposal for SLAM based on the well-known FastSLAM algorithm [1]. Our approach uses omnivision to detect the lights placed on the ceiling of indoor environments. As the sensor is bearing-only and the landmarks are indistinguishable among each other, the proposal includes a hierarchical data association method based on maximum likelihood and a delayed initialization of the landmarks. The proposal has been tested on a real environment with a Pioneer 3-DX robot

Palabras clave Simultaneous Localization and Mapping; Fast-SLAM; Omnidirectional camera; Omnivision;

DESCARGAS

 Referencia BibTex

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