

Localization through omnivision for a tour-guide robot

Título Localization through omnivision for a tour-guide robot

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Abstract The localization of a mobile robot in a real environment is a complex task. In this paper, an algorithm that solves the global localization is presented. The proposal is based on a merit function that ranks different possible poses obtained from the acquired image, together with an iterative process for the minimization of that function using a particle filter. Landmark detection has been done with an omnidirectional camera pointing to the ceiling, combined with an infrared passband filter which extracts the lights. Several real experiments, both for global localization and the kidnapped robot problem, have been done in a museum. Results show a high accuracy, robustness, and real-time execution in this complex and crowded environment.

Palabras clave Global localization, omnivision, tour-guide robot, kidnapping problem

DESCARGAS

 Referencia BibTex

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