

عنوان مقاله:

Robot Motion Vision Part II: Implementation

محل انتشار:

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خلاصه مقاله:

The idea of Fixation introduced a direct method for general recovery of shape and motion from images without using either feature correspondence or optical flow [1,2]. There are some parameters which have important effects on the performance of fixation method. However, the theory of fixation does not say anything about the autonomous and correct choice of those parameters. This paper presents the effect of those parameters on the experimental results of implementing some of the fixation algorithms on real images where the motion is a combination of translation and rotation. The results show that important motion components can be estimated accurately if the right parameters are used. Some of the critical issues involved in the implementation of autonomous robot motion vision are also discussed. Among these are the criteria for autonomously choosing an optimum size for the fixation patch, and appropriate choice of the fixation point location. Finally, a calibration method is described for precisely determining the location of real rotation axis in imaging systems.

کلمات کلیدی:

Active Vision, computer vision, Feature Correspondence, Fixation, Motion Vision, Optical Flow, Pixel Shifting, Robot Vision

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