Abstract

Feature detection is the initial step in any image analysis procedure and is essential for the performance of computer vision applications like stereo vision, object recognition, object tracking systems. Research concerning the detection of feature points for different camera motion images in efficient and fast way. In this work, techniques of corner detection, geometric moments and random sampling are presented to simply and accurately locate the important feature points in image. For each extracted feature in image, a descriptor is calculated and based on the homograph transformation the matching is done. The results of experiments conducted on images taken by handheld camera and compared with the most famous SIFT method. The results show that the proposed algorithm is accurate, fast, efficient and robust under noise, transformation and compression circumstances.

References

Invariants Feature Points Detection based on Random Sample Estimation


Index Terms

Computer Science
Pattern Recognition
Keywords
Corner detection, geometrical moments, random sampling, features extraction, matching