

**Document category** : Scopus

**Title** : Enhancement of background subtraction approach for image segmentation

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**Abstract** : In this paper an enhanced background subtraction approach for image segmentation is proposed in order to precisely detect and represent the objects in the images. It is based on automatic detection of the background by estimating the background and then subtracting it from the original image. This step is incorporated in the background subtraction approach in order to reduce the computational cost and overcome the problems where the environment is complex such as underwater images and when there are many kinds of objects. The segmentation results using this enhanced approach are compared with the recent background subtraction techniques in terms of speed and accuracy in order to show the efficiency and the effectiveness of the proposed approach. © 2010 IEEE.

**Subject** : Automatic Detection; Background subtraction; Background subtraction techniques; Computational costs; Original images; Segmentation results; Underwater image; Information science; Signal detection; Signal processing; Image segmentation

**Type** : Conference Paper

**Source title** : 10th International Conference on Information Sciences, Signal Processing and their Applications, ISSPA 2010

**ISSN** :

**ISBN** : 9781-4244-7167-6

**Publisher** :

**Year issue** : 2010

**Language** : English