# Features-Based Moving Objects Tracking for Smart Video Surveillances: A Review

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INTERNATIONAL JOURNAL ON ARTIFICIAL INTELLIGENCE TOOLS
**Volume:** 27 **Issue:** 2
**Article Number:** 1830001
**DOI:** 10.1142/S0218213018300016
**Published:** MAR 2018
**Document Type:** Review
View Journal Impact

## Abstract

Video surveillance is one of the most active research topics in the computer vision due to the increasing need for security. Although surveillance systems are getting cheaper, the cost of having human operators to monitor the video feed can be very expensive and inefficient. To overcome this problem, the automated visual surveillance system can be used to detect any suspicious activities that require immediate action. The framework of a video surveillance system encompasses a large scope in machine vision, they are background modelling, object detection, moving objects classification, tracking, motion analysis, and require fusion of information from the camera networks. This paper reviews recent techniques used by researchers for detection of moving object detection and tracking in order to solve many surveillance problems. The features and algorithms used for modelling the object appearance and tracking multiple objects in outdoor and indoor environment are also reviewed in this paper. This paper summarizes the recent works done by previous researchers in moving objects tracking for single camera view and multiple cameras views. Nevertheless, despite of the recent progress in surveillance technologies, there still are challenges that need to be solved before the system can come out with a reliable automated video surveillance.

## Keywords

**Author Keywords:** Video surveillance system; object detection; visual tracking; modelling; features
**KeyWords Plus:** COLOR HISTOGRAMS; CAMERAS; ALGORITHM; GRADIENTS; FUSION; MODEL

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## Funding

| Funding Agency | Grant Number |
|---|---|
| Fundamental Research Grant Scheme (FRGS) under the Ministry of Higher Education of Malaysia (MOHE) | FRGS13-030-0271 |

View funding text

## Publisher

WORLD SCIENTIFIC PUBL CO PTE LTD, 5 TOH TUCK LINK, SINGAPORE 596224, SINGAPORE

## Categories / Classification

**Research Areas:** Computer Science

**Web of Science Categories:** Computer Science, Artificial Intelligence; Computer Science, Interdisciplinary Applications

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