

Abstract

The analysis of the human behavior from video is a wide field of the vision by computer. In this work we are interested in the analysis of the crowd behavior and its entities in a dense scene. These scenes are characterized by the presence of a great number of people in the camera's field of vision. A major problem is the development of an autonomous approach for the management of a great number of anomalies which is almost impossible to carry out by operators. We present in this paper a new approach for the anomalies detection very dense scenes relaying on the speed of both the individuals and the whole group. The various anomalies are detected by switching in a dynamic way between two approaches: the artificial neurons networks "ANN" for the management of group anomalies of people, and the Density Based Spatial Clustering of Application with Noise "DBSCAN" in the case of entities. For more robustness and effectiveness, we introduced two routines that serve to eliminate the shades and the management of occlusions.