

## عنوان مقاله:

Action recognition system based on human body tracking with depth images

## محل انتشار:

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## نویسندگان:

m Martínez-Zarzuela - *University of Valladolid Valladolid, Spain*

F.J Díaz-Pernas - *University of Valladolid Valladolid, Spain*

a Tejeros-de-Pablos - *University of Valladolid Valladolid, Spain*

d González-Ortega

## خلاصه مقاله:

When tracking a human body, action recognition tasks can be performed to determine what kind of movement the person is performing. Although a lot of implementations have emerged, state-of-the-art technology such as depth cameras and intelligent systems can be used to build a robust system. This paper describes the process of building a system of this type, from the construction of the dataset to obtain the tracked motion information in the front-end, to the pattern classification backend. The tracking process is performed using the Microsoft(R) Kinect hardware, which allows a reliable way to store the trajectories of subjects. Then, signal processing techniques are applied on these trajectories to build action patterns, which feed a Fuzzy-based Neural Network adapted to this purpose. Two different tests were conducted using the proposed system. Recognition among 5 whole body actions executed by 9 humans achieves 91.1% of success rate, while recognition among 10 actions is done with an accuracy of 81.1%.

## کلمات کلیدی:

Body-tracking, action recognition, Kinect depth sensor, 3D skeleton, joint trajectories

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/245336>

