

## عنوان مقاله:

Towards E-coaching and Enhancing the Training Motivations in Taekwondo via an ExerGame with Ability to Record and Evaluate the Real Strikes

## محل انتشار:

دومین کنفرانس ملی بازیهای رایانهای؛ فرصتها و چالشها (سال: 1395)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Seyed Mehran Amiri - *Master of Sport Engineering, Biomedical Engineering Department, Faculty of Engineering, University of Isfahan, Isfahan, Iran*

Javad Rasti - *Biomedical Engineering Department, Faculty of Engineering, University of Isfahan, Isfahan, Iran*

Hadi Abbasi - *Biomedical Engineering Department, Faculty of Engineering, University of Isfahan, Isfahan, Iran*

## خلاصه مقاله:

Nowadays many health problems have been appeared due to the lack of movement in people playing video games for a long time. Hence, some designers are working on ideas towards the games in which players must move to play, which can increase excitement and motivation as well as ongoing exercise. The idea of this study is to design an ExercisingGame (ExerGame) in martial arts (specialized for taekwondo), which can excite and motivate the athletes, as well as logging precise information about his/her skills, strengths and weaknesses. The hardware of this game consists of a dummy and special huggos containing shockers and magnetic and ultrasound sensors. It is connected to a PC game which can be considered as an electronic coach, with an attractive animated interface. Based on the training program, the software decides which region of the dummy must be stroked, which is shown by blue LEDs on its corresponding hugo. The player must hit that region as fast as possible, which visually is displayed in the corresponding opponent in the PC game. Also, the player can be attacked by the virtual opponent in order to modify the defense guard. In this case, he/she must stiff-arm, which is detected by distance sensors, or hit the opposite direction of the dummy. This system can be used in martial arts clubs and camps, as an exciting training approach, which can record and monitor the athletes' abilities, to help the coaches to design targeted training programs. It can also be used in game clubs as an exciting device to encourage people to exercise while playing a video game.

## کلمات کلیدی:

ExerGame, Electronic Coaching, Martial Arts, Taekwondo

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/600416>

