## عنوان مقاله:

New Approaches to Fingerprint Authentication Using Software Methods Based on Fingerprint Texture

## محل انتشار:

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## خلاصه مقاله:

Fingerprint recognition systems are used in many government and military application programs. Fake fingerprints are considered a major threat to such systems. A method of coping with the invasion of fingerprint forging is to detect whether the fingerprint texture is alive or not. Among various such methods, Local Binary Patterns (LBP) operator is considered one of the best. However, the original LBP was spatially-limited and noise-sensitive, and the binary pattern was also long. Therefore, this paper introduces Multi-Scale Center-Symmetric Local Binary Patterns (MS-CS-LBP) operator as a new anti-spoofing method which is a combination of Center-Symmetric Local Binary Patterns (CS-LBP) and Multi-Scale Local Binary Patterns (MSLBP) operators. The proposed method overcame all three limitations of the original LBP. A second method was also proposed in a way that MS-LBP and CS-LBP operators were separately applied to the image. The features resulting from both operators were then combined with each other. The results of the proposed methods were compared to those of previous approaches. The proposed methods were tested on the available fingerprints in ATVS database. The results indicated that the proposed methods improved in terms of time .and accuracy in comparison with previous approaches

## کلمات کلیدی:

fingerprint; Liveness detection; MSLBP; Authentication

## لینک ثابت مقاله در پایگاه سیویلیکا: