



Fingerprint based authentication has been gaining popularity on mobile devices. However, it has also been demonstrated that these fingerprint sensors can be easily attacked using spoofed fingerprints. The problem with fingerprint matching based authentication systems is that they only perform the matching of fingerprint, but do not consider the source of it. Different materials such as gelatin or latex exhibit similar texture to human skin, and therefore, allow authentication using a spoofed fingerprint. In order to solve this problem, I<sup>2</sup>R developed a system which works on top of an authentication scheme, to detect spoofed fingerprints.

## Features

- Hassle-free solution; does not require additional hardware or invasive user cooperation
- Easily integrable with existing Fingerprint Authentication System
- Robust across multiple sensors and different fake fingerprint materials
- High speed, light-weight solution

## Fingerprint Liveness Detection



- ✓ *Unique discriminative features*
- ✓ *Novel Score Level Integration Module*
- ✓ *Equal Error Rate of 4.2% over LivDet 2013 database*

## Applications

- Applicable for home and office's security
- Immigration
- Mobile phone authentication
- Internet, E-Commerce

## Benefits

- Strengthens existing fingerprint based authentication systems against spoof attack
- Improves robustness of mobile fingerprint based authentication system without compromising computational time
- Does not require invasive user cooperation