
– Master-/Bachelor Thesis –

Presentation Attack Detection based on Laser Speckle Contrast Imaging

da/sec



da/sec is the biometrics and internet security research group and is affiliated with University of Applied Sciences Darmstadt and the Center for Research in Security and Privacy (CRISP). The group is led by Prof. Dr. Harald Baier and Prof. Dr. Christoph Busch. The focus of the group is on highly innovative and applied IT security research in the special fields of biometrics, internet security, and digital forensics. Read more on www.dasec.h-da.de.

Motivation & Goal

Biometric systems are often used for unsupervised authentication in order to accelerate the processing and save personnel expenses. Attacks directed to the sensor can be carried out by eventually any person, without having any knowledge about how the system works. To prevent artificial presentations (i.e. gummy fingers), presentation attack detection (PAD) is of utmost importance. To that end, Laser Speckle Contrast Imaging (LSCI) is able to detect the blood-flow within the living finger.

Tasks

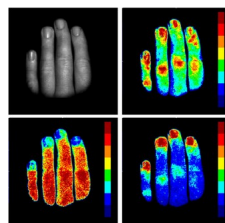
- Analysing LSCI finger data
- Implementation of PAD algorithms for fingerprint
- Evaluation of the implemented system

Requirements

- High motivation and creativity
- Strong interest in research
- Good programming skills
- Good English skills
- Knowledge of machine learning is of advantage



By Date



By appointment



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