

Bachelor / Master Thesis

Fingerprint Presentation Attack Detection with Optical Sensors and Fingerphotos

da/sec

da/sec is the biometrics and internet security research group and is affiliated with the Center for Research in Security and Privacy (CRISP). It 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 <http://www.dasec.h-da.de/>.

Motivation & Goals

The deployment of biometric recognition systems has increased over the past decades in a wide variety of scenarios, ranging from access control to smartphone and laptop unlocking. Recent security and privacy concerns have fostered the development new methods to detect and prevent different attacking strategies, such as presentation attacks (a.k.a. spoofing). Fingerprint has been considered one of the most secure and accurate strategies. In this project, novel presentation attack detection techniques will be developed to increase the security of optic commercial sensors and novel fingerphoto based systems. This is a joint research project with the Norwegian University of Science and Technology (<http://www.ntnu.no/>) and the Swiss Idiap Research Institute (www.idiap.ch).



Tasks

- Implementation of Presentation Attack Detection (PAD) algorithms
- Evaluation and benchmark of the implemented systems

Requirements

- High motivation
- Interest in security technologies and biometrics
- Strong interest in research
- Good programming skills (Python) are of advantage.

Start / Period

Immediately / by appointment

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