

– Master-/Bachelor Thesis – Cross-Spectral Iris Recognition

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

The iris is well known as an accurate biometric trait. Recent datasets for iris recognition and its applications in the mobile biometrics scenario tend to capture images in visible wavelengths. However, in less constrained settings when capturing under visible wavelength light it is hard to capture iris images with enough quality for reliable recognition. The cross spectrum iris imaging allows us to maintain backward compatibility with existing databases and devices but at the same time to meet the demand of robust iris recognition capabilities; in mobile devices for example. One open challenge is to reliably match iris images (see figures) acquired in different spectra in order to cross-match identities between different datasets.

Tasks

- Design/Implementation of cross-spectral iris recognition system (extension/adaptation of existing iris recognition toolkit)

We offer

- Incentives for the student to work on this project (work within scientific context, international collaboration, work on project in collaboration with companies)

Requirements

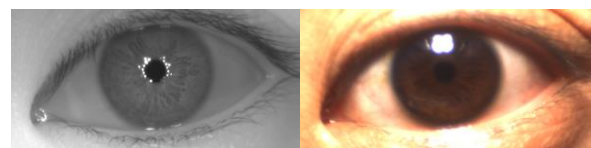
- High motivation and creativity
- Good programming skills
- Interest in biometric recognition

By Date

By now / by appointment

Contact

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near-infrared (left) and visible wavelength (right) iris images of a single eye

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