

Bachelor / Master Thesis

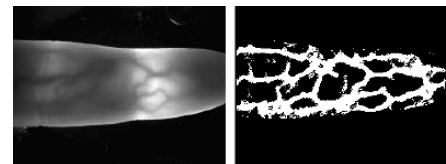
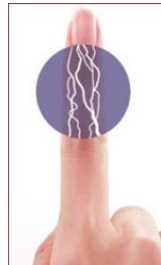
Fingervein Recognition Enhancement

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. In spite of its numerous advantages over traditional password based authentication systems, new attacking strategies have been devised: for instance, gummy fingers can be used to fool the system. For that reason, other modalities, not so easy to forge, are being introduced into high security applications, including banking operations. One example is fingervein patterns. However, there are still some issues which need to be resolved in order to increase both the recognition accuracy and decrease the time needed to output a decision: whether the subject is accepted or rejected. This project thus focuses on tackling such issues, and in particular fingervein samples alignment.



Tasks

- Survey the state of the art literature on fingervein recognition
- Improve current fingervein alignment methods (and other weaknesses discovered)

Requirements

- High motivation
- Interest in security technologies and biometrics
- Knowledge in Python is a plus

Start / Period

Immediately / By appointment

Contact

Dr. Marta Gomez-Barrero
marta.gomez-barrero@h-da.de

h_da
Faculty of Computer Science
CRISP – Center for Research in Security and Privacy
Schöfferstraße 8b
64295 Darmstadt