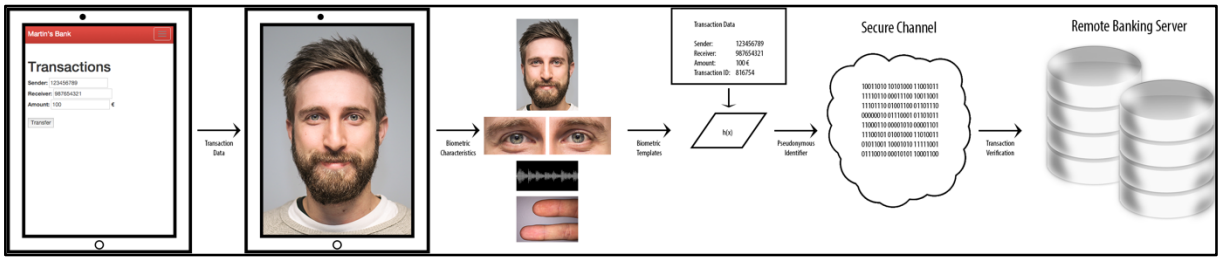
Norwegian Biometrics Laboratory (NBL) is a distinguished research lab contributing actively to the biometrics research across Europe. NBL spans its expertise over physiological and behavioral biometrics including 2D & 3D face, iris, fingerprint, hand vein, gait, keystroke, gesture and mouse dynamics recognition.

Master Thesis

Biometric Transaction Authentication Protocols for Smartphones

OBJECTIVES & GOALS:
Recent developments in sensor technology has made possible biometrics enabled smartphones which in turn facilitates improved authentication solutions for several applications. Areas that can benefit are banking, e-Government and other online services. We see technologies such as FIDO UAF[1] making big strides in the space, further validating the need for new and improved solutions.

One of the major concerns with biometrics is user privacy. In contrast to passwords and PINs there are no simple ways of generating new biometric characteristics. We therefore need to have solutions in place which will properly protect the biometric data. With this project we aim to develop secure and privacy preserving biometric authentication protocols for use-cases such as online banking and e-Government. If this sounds interesting do not hesitate to get in contact.



TASKS:

- Work with state-of-the-art biometric technologies on smartphones
- Develop and evaluate biometric authentication protocols for online banking
- Analyze security properties of developed protocols

PREREQUISITES:

- Interest in security, cryptography, image processing.
- Proficiency in C++/Objective-C/Java
- Experience with Android/iOS development

FURTHER READING:

- Biometric Transaction Authentication Protocols

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NOTE: Highly qualified foreign students can get financial support to cover cost of an internship

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[1] https://fidoalliance.org/specifications/overview/