



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

Post-Quantum Protection for Biometric Systems

OBJECTIVES & GOALS:

Biometric data is considered sensitive personal and can be used to identify individuals over long periods of time. Therefore, long-term protection is required to secure biometric templates. In terms of cryptographic algorithms, applying post-quantum cryptography yields protection of the biometric data even if an attacker had access to a quantum computer. This protection is vital as of today, as it is also feasible for an attacker to record classically protected biometric templates today, and reverse them later using a quantum computer.

TASKS:

- Select a post-quantum algorithm
- Upgrade a classically protected system to post-quantum security
- Benchmark computational efficiency in the encrypted domain

PREREQUISITES:

- High motivation and creativity
- Strong interest in research
- Programming experience

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