NTNU

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

Workload Reduction for Biometric Identification in the Encrypted Domain

OBJECTIVES & GOALS:

Biometric identification over a large reference database introduces significant computational requirements. Adding biometric information protection by cryptographic means increases this overhead even further. Therefore, computational workload reduction is desired for protected biometric identification. The challenge of this task is to combine workload reduction techniques like preselection and feature transformation with the respective encryption scheme, maintaining the security of the biometric data.

TASKS:

- Select a workload reduction approach for biometric identification
- Apply the approach in the encrypted domain
- Benchmark computational efficiency

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.