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## - Master Thesis -

### Feature Extraction and Representation for 2D/3D Ear Recognition

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#### Motivation & Goal

The outer ear is an emerging biometric modality, which has gained increasing attention in the last ten years. Using the ear as a biometric modality has some advantages compared to the face, such as the absence to facial expressions or ageing.

During the master thesis you will investigate various existing shape and object recognition techniques with respect to their applicability for feature extraction from 2D and 3D ear images. Special interest will be put on feature extraction, describing the ear's morphology in 2D and 3D at the same time. In the next step you will implement a proof of concept of your proposed method and investigate its accuracy under different conditions.

#### Tasks

- Investigation of existing approaches to 2D/3D ear recognition
- Research different feature extraction approaches and analyze their applicability to 2D/3D ear recognition.

#### Requirements

- Motivation and creativity
- Experience in literature research
- Basic Programming skills (preferably in MATLAB)
- Interest in biometrics and computer vision
- Ability to compass and analyze complex ideas

#### Contact

If you are interested, please contact Anika Pflug

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