Faculty of Engineering and Technology

Department of Computer Science

Project Proposal

Brain Waves as a Biometric Property

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- **Introduction**
  - *Biometric authentication and it's necessity*
    - A brief intro to the biometrical systems
    - Why biometric authentication
  - *An overview of the structure of the research*
    - What is it exactly we are going to discuss in this paper
  - *Thesis:*
    We all **think** differently, **react** differently, and **feel** differently, and sometimes we **behave** in the same way every time we encounter a person, scenario, or a sensation. *Why so?*

- **Body**
  - *Brain waves*
    - What are brain waves
    - Types of brain waves
  - *Authentication*
    - What is an EGG? How does it work?
    - How are brain prints identified
    - Authentication process
    - Appropriate environments to obtain the best authentication output
  - *Experiment*
    - Overview the experiment (e.g. environment, subjects, etc…)
    - Data collection and identification methods
    - Authentication and data comparison
    - Data analysis and results
  - *Validity as a biometric system*
    - The quality of brain waves in consideration of the characteristics metric (Universality, Distinctiveness, Permanence, Collectability, Performance, Acceptability, Circumvention)

- **Conclusion**
  - *Revision of biometric aspects in brain waves*
  - *Brain waves and authentication*
  - *Brain waves: Can we really use them?*